

X-Ways Forensics 16.2 SR-5

Test Results for Digital Data Acquisition Tool

November 18, 2013



Science and Technology

This report was prepared for the Department of Homeland Security Science and Technology Directorate Cyber Security Division by the Office of Law Enforcement Standards of the National Institute of Standards and Technology.

For additional information about the Cyber Security Division and ongoing projects, please visit <u>http://www.dhs.gov/cyber-research</u>.

November 2013

Test Results for Digital Data Acquisition Tool: X-Ways Forensics 16.2 SR-5

Contents

Introduction1		
How to Read This Report		
1 Results Summary 2		
2 Test Case Selection	3	
3 Results by Test Assertion	4	
3.1 Cloned or Restored NTFS Partitions	6	
3.2 Restoring Images of Partitions With FAT32 and exFAT	6	
3.3 Acquiring a Logical Drive Does Not Acquire Volume Slack	7	
4 Testing Environment	7	
4.1 Execution Environment	7	
4.2 Test Computers	7	
4.3 Support Software	8	
4.4 Test Drive Creation	8	
4.4.1 Source Drive	8	
4.4.2 Media Drive	9	
443 Destination Drive	9	
4.5 Test Drive Analysis	9	
4.6 Note on Test Drives	9	
5 Test Results	10	
5 1 Test Results Report Key	10	
5.7 Test Details	10	
5.2 1 DA-01-ATA28	10	
5.2.1 DA 01 ATA48	13	
5.2.2 DA 01 R1R40	15	
5.2.5 DA-01-1 W	17	
5.2.4 DA-01-5ATA20	10	
5.2.5 DA-01-SATA+0	1) 21	
5.2.0 DA-01-SCS1	21	
5.2.7 DA-01-05D	25	
5.2.0 DA-02-CF	23	
5.2.9 DA-02-DAFAT	27	
5.2.10 DA-02-F12	29	
5.2.11 DA-02-F10	22	
5.2.12 DA-02-F52	25	
5.2.15 DA-02-F52A	22	
5.2.14 DA-02-N1	37 20	
5.2.15 DA-02-THUMB	39	
5.2.10 DA-04	41	
5.2.17 DA-06-ATA28	43	
5.2.18 DA-06-A1A48	45	
5.2.19 DA-U0-FW	4/	
5.2.20 DA-06-SATA28	49	
5.2.21 DA-06-SATA48	51	
5.2.22 DA-06-SCSI	53	

5.2.23	DA-06-USB	55
5.2.24	DA-07-CF	. 57
5.2.25	DA-07-EXFAT	. 59
5.2.26	DA-07-F12	61
5.2.27	DA-07-F16	63
5.2.28	DA-07-F32	65
5.2.29	DA-07-F32X	. 67
5.2.30	DA-07-NT	. 69
5.2.31	DA-07-NT-ALT	. 70
5.2.32	DA-07-THUMB	. 72
5.2.33	DA-09	. 74
5.2.34	DA-10-COMPRESSED	. 79
5.2.35	DA-10-E01	81
5.2.36	DA-10-ENCRYPTED	. 83
5.2.37	DA-13	. 85
5.2.38	DA-14-ATA28	. 87
5.2.39	DA-14-ATA48	. 89
5.2.40	DA-14-CF	. 90
5.2.41	DA-14-COMPRESSED	. 92
5.2.42	DA-14-E01	. 93
5.2.43	DA-14-ENCRYPTED	. 94
5.2.44	DA-14-EXFAT	. 95
5.2.45	DA-14-F12	. 97
5.2.46	DA-14-F16	. 99
5.2.47	DA-14-F32	101
5.2.48	DA-14-F32-ALT	102
5.2.49	DA-14-F32X	104
5.2.50	DA-14-FW	106
5.2.51	DA-14-HOT1	108
5.2.52	DA-14-NT 1	109
5.2.53	DA-14-NT-ALT 1	110
5.2.54	DA-14-SATA281	113
5.2.55	DA-14-SATA481	114
5.2.56	DA-14-SCSI1	116
5.2.57	DA-14-THUMB1	118
5.2.58	DA-14-USB 1	119
5.2.59	DA-17 1	121

Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the National Institute of Justice (NIJ), the Department of Homeland Security (DHS), and the National Institute of Standards and Technology Law Enforcement Standards Office (OLES) and Information Technology Laboratory (ITL). CFTT is supported by other organizations, including the Federal Bureau of Investigation, the U.S. Department of Defense Cyber Crime Center, U.S. Internal Revenue Service Criminal Investigation Division Electronic Crimes Program, and the U.S. Department of Homeland Security's Bureau of Immigration and Customs Enforcement, U.S. Customs and Border Protection and U.S. Secret Service. The objective of the CFTT program is to provide measurable assurance to practitioners, researchers, and other applicable users that the tools used in computer forensics investigations provide accurate results. Accomplishing this requires the development of specifications and test methods for computer forensics tools and subsequent testing of specific tools against those specifications.

Test results provide the information necessary for developers to improve tools, users to make informed choices, and the legal community and others to understand the tools' capabilities. The CFTT approach to testing computer forensics tools is based on well-recognized methodologies for conformance and quality testing. The specifications and test methods are posted on the CFTT Web site (<u>http://www.cftt.nist.gov/</u>) for review and comment by the computer forensics community.

This document reports the results from testing X-Ways Forensics Version 16.2 SR-5 against the *Digital Data Acquisition Tool Assertions and Test Plan Version 1.0*, available at the CFTT Web site (<u>http://www.cftt.nist.gov/DA-ATP-pc-01.pdf</u>).

Test results from other tools can be found on NIJ's computer forensics tool testing Web page, http://www.ojp.usdoj.gov/nij/topics/technology/electronic-crime/cftt.htm.

How to Read This Report

This report is divided into five sections. The first section is a summary of the results from the test runs. This section is sufficient for most readers to assess the suitability of the tool for the intended use. The remaining sections of the report describe how the tests were conducted, discuss any anomalies that were encountered and provide documentation of test case run details that support the report summary. Section 2 gives justification for the selection of test cases from the set of possible cases defined in the test plan for Digital Data Acquisition tools. The test cases are selected, in general, based on features offered by the tool. Section 3 describes in more depth any anomalies summarized in the first section. Section 4 lists hardware and software used to run the test cases with links to additional information about the items used. Section 5 contains a description of each test case run. The description of each test run lists all test assertions used in the test case, the expected result and the actual result. Please refer to the vendor documentation for guidance on using the tool.

Test Results for Digital Data Acquisition Tool

Tool Tested:	X-Ways Forensics
Software Version:	16.2 SR-5
Runtime Environment	Windows XP and Windows 7
Supplier:	X-Ways Software Technology AG
Address:	X-Ways AG Agrippastr. 37-39 50676 Cologne Germany
Tel:	+49 221-420 486 5
Fax:	+49 3212-123 2029
E-mail:	mail@x-ways.com
WWW:	http://www.x-ways.com

1 Results Summary

X-Ways Forensics version 16.2 SR-5 is designed to image, clone and restore data from hard drives and other secondary storage. Except for three test cases involving NTFS partitions, the tool acquired test media completely and accurately. When the tool cloned an NTFS partition (test case DA-02-NT) and when the images of previously acquired NTFS partitions were restored (test cases DA-14-NT and DA-14-NT-ALT), some sectors on the target partitions did not match the partitions that were acquired. The differences appear to be changes made by *Windows*; an artifact of the tool's operating environment (Windows 7 and Windows XP). The tool had no control over these changes. The vendor references this issue in the X-Ways user manual; "An image is usually preferable to a clone, as all data (and metadata such as timestamps) in an image file is protected from the operating system."

Additional observations:

• The tool allows the user to restore the image of a partition. For FAT32 and exFAT file system types, if the user selects a Windows drive letter (e.g., c: or e:) or a partition containing a file system as the destination, Windows may make some changes to file system metadata on the destination partition causing a difference of several sectors between the source partition and the destination partition it was restored to. No changes are made if a partition with no file system is selected as the destination. *This is not an issue with the tool*; this result is noted to make the reader aware of the difference between restoring an image of a partition to a logical drive vs. restoring an image of a partition to an unformatted with a file system vs. restoring an image of a partition to an unformatted destination partition.

• Selecting to acquire a Windows drive letter or logical drive (e.g., c: or e:) does not acquire volume slack. To acquire volume slack the partition must be selected and not the drive letter. This result is noted to make the reader aware of the difference between choosing a logical vs. a partition acquisition.

Refer to sections 3.1, 3.2 and 3.3 for more details.

2 Test Case Selection

Test cases used to test disk imaging tools are defined in *Digital Data Acquisition Tool Assertions and Test Plan Version 1.0.* To test a tool, test cases are selected from the *Test Plan* document based on the features offered by the tool. Not all test cases or test assertions are appropriate for all tools. There is a core set of base cases (e.g., DA-06 and DA-07) that are executed for every tool tested. Tool features guide the selection of additional test cases. If a given tool implements a feature then the test cases linked to that feature are run. Table 1 lists the testable features of X-Ways Forensics 16.2 SR-5 and the linked test cases selected for execution. Table 2 lists the features not available in X-Ways Forensics 16.2 SR-5 and the test cases not executed.

Supported Optional Feature	Cases selected for execution
Create a clone during acquisition	01
Create an unaligned clone from a digital source	02
Create a truncated clone from a physical device	04
Base Cases	06 & 07
Read error during acquisition	09
Create an image file in more than one format	10
Destination Device Switching	13
Create a clone from an image file	14 & 17

Table 1. Selected Test Cases

Table 2. Omitted Test Cases

Unsupported Optional Feature	Cases omitted (not executed)
Create cylinder aligned clones	03, 15, 21 & 23
Device I/O error generator available	05, 11 & 18
Create an image of a drive with hidden sectors	08
Insufficient space for image file	12
Create a clone from a subset of an image file	16
Fill excess sectors on a clone acquisition	19
Detect a corrupted (or changed) image file	24 & 25
Fill excess sectors on a clone device	20, 21, 22 & 23
Convert an image file from one format to	26
another	

Some test cases have different forms to accommodate parameters within test assertions. These variations cover the acquisition interface to the source media, the type of digital object acquired, image file format and the execution environment. In addition, the types of hash algorithms calculated, image file segment size and the type of hardware write blocker used were varied between test cases.

The following source access interfaces were tested: ATA28, ATA48, SATA28, SATA48, SCSI, FW, and USB. These are noted as variations on test cases DA-01, DA-06 and DA-14.

The following digital sources were tested: partitions (FAT12, FAT16, FAT32, FAT32X, exFAT, NTFS), compact flash (CF), and thumb drive (Thumb). There are two FAT 32 variations testing acquisition of both FAT 32 partition codes 0x0B (FAT32) and 0x0C (FAT32X). These digital source types are noted as variations on test cases DA-02 and DA-07.

The following image file types are supported by the tool: E01, compressed and encrypted. These were tested as alternate image file formats and are noted as variations on test case DA-10.

3 Results by Test Assertion

A test assertion is a verifiable statement about a single condition after an action is performed by the tool under test. A test case usually checks a group of assertions after the action of a single execution of the tool under test. Test assertions are defined and linked to test cases in *Digital Data Acquisition Tool Assertions and Test Plan Version 1.0*.

Table 3 summarizes the test results for all the test cases by assertion. The column labeled **Assertions Tested** gives the text of each assertion. The column labeled **Tests** gives the number of test cases that use the given assertion. The column labeled **Anomaly** gives the section number in this report where any observed anomalies are discussed.

Assertions Tested	Tests	Anomaly
AM-01 The tool uses access interface SRC-AI to access	36	
the digital source.		
AM-02 The tool acquires digital source DS.	36	
AM-03 The tool executes in execution environment XE.	56	
AM-04 If clone creation is specified, the tool	16	
creates a clone of the digital source.		
AM-05 If image file creation is specified, the tool	20	
creates an image file on file system type FS.		
AM-06 All visible sectors are acquired from the		3.3
digital source.		
AM-08 All sectors acquired from the digital source		3.1
are acquired accurately.		
AM-09 If unresolved errors occur while reading from		
the selected digital source, the tool notifies the		
user of the error type and location within the		
digital source.		
AM-10 If unresolved errors occur while reading from	1	

Table 3. Assertions Tested

Assertions Tested	Tests	Anomaly
the selected digital source, the tool uses a benign		
fill in the destination object in place of the		
inaccessible data.		
AO-01 If the tool creates an image file, the data	20	
represented by the image file is the same as the data		
acquired by the tool.		
AO-02 If an image file format is specified, the tool	3	
creates an image file in the specified format.		
AO-04 If the tool is creating an image file and there	1	
is insufficient space on the image destination device		
to contain the image file, the tool shall notify the		
user.		
AO-05 If the tool creates a multi-file image of a	20	
requested size then all the individual files shall be		
no larger than the requested size.		
AO-10 If there is insufficient space to contain all	1	
files of a multi-file image and if destination device		
switching is supported, the image is continued on		
another device.		
AO-11 If requested, a clone is created during an	16	
acquisition of a digital source.		
AO-12 If requested, a clone is created from an image		
file.		
AO-13 A clone is created using access interface DST-		
AI to write to the clone device.		
AO-14 If an unaligned clone is created, each sector	35	3.1, 3.2
written to the clone is accurately written to the		
same disk address on the clone that the sector		
occupied on the digital source.		
AO-17 If requested, any excess sectors on a clone	12	
destination device are not modified.		
AO-19 If there is insufficient space to create a	2	
complete clone, a truncated clone is created using		
all available sectors of the clone device.		
AO-20 If a truncated clone is created, the tool	2	
notifies the user.		
AO-23 If the tool logs any log significant		
information, the information is accurately recorded		
in the log file.		
AO-24 If the tool executes in a forensically safe	36	
execution environment, the digital source is		
unchanged by the acquisition process.		

Two test assertions only apply in special circumstances. The assertion AO-22 is checked only for tools that create block hashes. The assertion AO-24 is only checked if the tool is executed in a run time environment that does not modify attached storage devices, such as MS-DOS. In normal operation, an imaging tool is used in conjunction with a write block device to protect the source drive. Table 4 lists the assertions that were not tested, usually due to the tool not supporting some optional feature, e.g., creation of cylinder-aligned clones.

Table 4. Assertions not Tested

Assertions not Tested
AM-07 All hidden sectors are acquired from the digital source.
AO-03 If there is an error while writing the image file, the tool
notifies the user.
AO-06 If the tool performs an image file integrity check on an image
file that has not been changed since the file was created, the tool
shall notify the user that the image file has not been changed.
AO-07 If the tool performs an image file integrity check on an image
file that has been changed since the file was created, the tool shall
notify the user that the image file has been changed.
AO-08 If the tool performs an image file integrity check on an image
file that has been changed since the file was created, the tool shall
notify the user of the affected locations.
AO-09 If the tool converts a source image file from one format to a
target image file in another format, the acquired data represented in
the target image file is the same as the acquired data in the source
image file.
AO-15 If an aligned clone is created, each sector within a contiguous
span of sectors from the source is accurately written to the same disk
address on the clone device relative to the start of the span as the
sector occupied on the original digital source. A span of sectors is
defined to be either a mountable partition or a contiguous sequence of
sectors not part of a mountable partition. Extended partitions, which
may contain both mountable partitions and unallocated sectors, are not
mountable partitions.
AO-16 If a subset of an image or acquisition is specified, all the
subset is cloned.
AO-18 If requested, a benign fill is written to excess sectors of a
clone.
AO-21 If there is a write error during clone creation, the tool
notifies the user.
AO-22 If requested, the tool calculates block hashes for a specified
block size during an acquisition for each block acquired from the
digital source.

3.1 Cloned or Restored NTFS Partitions

When the tool cloned an NTFS partition, test case DA-02-NT, and when the image files of previously acquired NTFS partitions were restored, test cases DA-14-NT and DA-14-NT-ALT, some sectors on the target partitions did not match the partitions that were acquired. These changes were made by the Windows operating system, not X-Ways; an artifact of the tool's operating environment (Windows 7 and Windows XP). In test case DA-14-NT where the tool was run from Windows 7, 43,961 sectors differed. In test cases DA-02-NT and DA-14-NT-ALT where the tool was run from Windows XP, 147 and 139 sectors differed.

3.2 Restoring Images of Partitions With FAT32 and exFAT

X-Ways can be used to restore the image of a partition. In testing the tool three methods were used:

1) the image was restored to a logical drive

- 2) the image was restored to a partition formatted with a file system
- 3) the image was restored to an unformatted partition

When images of FAT32 and exFAT partitions were restored using methods 1 and 2 three sectors differed between the images and the target partitions. These were changes to file system metadata made by the Windows operating system. When method 3 was used all sectors matched. This is not an issue with the tool; this result is noted to make the reader aware of the difference between restoring an image of a partition to a logical drive vs. restoring an image of a partition to a partition to a partition an image of a partition to an unformatted partition.

3.3 Acquiring a Logical Drive Does Not Acquire Volume Slack

Selecting to acquire a Windows drive letter or logical drive (e.g., c: or e:) does not acquire volume slack. To acquire volume slack the partition must be selected and not the drive letter. In test case DA-07-NT where the tool user selected to acquire the Windows drive letter, eight unused sectors at the end of the partition containing the NTFS file system were not acquired. The partition had 27,744,192 sectors but the tool acquired only 27,744,184 sectors, skipping the last eight sectors of volume slack. When the partition was selected instead of the logical drive, test cases DA-02-NT and DA-07-NT-ALT, all sectors were acquired. This is not an issue with the tool; this result is noted to make the reader aware of the difference between choosing a logical vs. a partition acquisition.

4 Testing Environment

The tests were run in the NIST CFTT lab. This section describes the selected test execution environments, computers available for testing, using the support software, and notes on other test hardware.

4.1 Execution Environment

The tool was executed in the MS Windows XP Pro 32-bit (Version 5.1.2600) and MS Windows 7 Ultimate 32-bit (Version 6.1.7600) environments.

4.2 Test Computers

Four computers were used to run the tool: Freddy, Frank, DeathStar and Nihilus.

Freddy and Frank have the following configuration:

Intel Desktop Motherboard D865GB/D865PERC (with ATA-6 IDE on board controller) BIOS Version BF86510A.86A.0053.P13 Adaptec SCSI BIOS V3.10.0 Intel® Pentium[™] 4 CPU 3.4Ghz 2577972KB RAM SONY DVD RW DRU-530A, ATAPI CD/DVD-ROM drive 1.44 MB floppy drive Two slots for removable IDE hard disk drives Two slots for removable SATA hard disk drives Two slots for removable SCSI hard disk drives

DeathStar and Nihilus have the following configuration:

TCP Custom built ULT U12-40670 ULTRA PRODUCTS FULL TOWER ATX 2 ASU P8Z68VPRO/G ASUS P8Z68-V PRO/GEN3 SOCKET 1155 MB INT CORE i5 2500 INTEL CORE I5 2500 3.3GHZ CPU CRU 4GBD3-1333 CRUCIAL 4GB DDR3-1333 8 GIG RAM EVGA 01GP31526K EVGA GT520 1GB PCI-E Dual DVI display card CRU 8400-5000-0 CRU DATAPORT V FRAME SATA TCP SO CRU DATAPORT V IDE, SAM SH-S222AB SAMSUNG 22X SATA DVD RW SII NN830112 SIIG 3 PORT FIREWIRE 800 PCI STA PCIIDE2 STARTECH 2 CHANNEL IDE CONTROLLER PCI IOC SY-PEX40040 I/O CREST 1 + 1 PORT SATA/ESATA III CARD CM EXTREME600W COOLERMASTER EXTREME 600W PS

4.3 Support Software

A package of programs to support test analysis, FS-TST Release 2.0, was used. The software can be obtained from: <u>http://www.cftt.nist.gov/diskimaging/fs-tst20.zip</u>.

4.4 Test Drive Creation

There are three ways that a hard drive may be used in a tool test case: as a source drive that is imaged by the tool, as a media drive that contains image files created by the tool under test, or as a destination drive on which the tool under test creates a clone of the source drive. In addition to the operating system drive formatting tools, some tools (**diskwipe** and **diskhash**) from the FS-TST package are used to setup test drives.

4.4.1 Source Drive

The setup of most source drives follows the same general procedure, but there are several steps that may be varied depending on the needs of the test case.

- 1. The drive is filled with known data by the **diskwipe** program from FS-TST. The **diskwipe** program writes the sector address to each sector in both C/H/S and LBA format. The remainder of the sector bytes is set to a constant fill value unique for each drive. The fill value is noted in the **diskwipe** tool log file.
- 2. The drive may be formatted with partitions as required for the test case.
- 3. An operating system may optionally be installed.
- 4. A set of reference hashes is created by the FS-TST **diskhash** tool. These include both SHA1 and MD5 hashes. In addition to full drive hashes, hashes of each partition may also be computed.
- 5. If the drive is intended for hidden area tests (DA-08), an HPA, a DCO or both may be created. The **diskhash** tool is then used to calculate reference hashes of just the visible sectors of the drive.

The source drives for DA-09 are created such that there is a consistent set of faulty sectors on the drive. Each of these source drives is initialized with **diskwipe** and then their faulty sectors are activated. For each of these source drives, a duplicate drive, with no faulty sectors, serves as a reference drive for comparison.

4.4.2 Media Drive

To setup a media drive, the drive is formatted with one of the supported file systems. A media drive may be used in several test cases.

4.4.3 Destination Drive

To setup a destination drive, the drive is filled with known data by the **diskwipe** program from FS-TST. Partitions may be created if the test case involves restoring from the image of a logical acquire.

4.5 Test Drive Analysis

For test cases that create a clone of a physical device, e.g., DA-01, DA-04, etc., the destination drive is compared to the source drive with the **diskcmp** program from the FS-TST package; for test cases that create a clone of a logical device, i.e., a partition, e.g., DA-02, DA-20, etc., the destination partition is compared to the source partition with the **partcmp** program. For a destination created from an image file, e.g., DA-14, the destination is compared, using either **diskcmp** (for physical device clones) or **partcmp** (for partition clones), to the source that was acquired to create the image file. Both **diskcmp** and **partcmp** note differences between the source and destination. If the destination is larger than the source it is scanned and the excess destination sectors are categorized as either, undisturbed (still containing the fill pattern written by **diskwipe**), zero filled or changed to something else.

For test case DA-09, imaging a drive with known faulty sectors, the program **anabad** is used to compare the faulty sector reference drive to a cloned version of the faulty sector drive.

For test cases such as DA-06 and DA-07 any acquisition hash computed by the tool under test is compared to the reference hash of the source to check that the source is completely and accurately acquired.

4.6 Note on Test Drives

The testing uses several test drives from a variety of vendors. The drives are identified by an external label that consists of a two digit hexadecimal value and an optional tag, e.g., 25-SATA. The combination of hex value and tag serves as a unique identifier for each drive. The two digit hex value is used by the FS-TST **diskwipe** program as a sector fill value. The FS-TST compare tools, **diskcmp** and **partcmp**, count sectors that are filled with the source and destination fill values on a destination that is larger than the original source.

5 Test Results

The main item of interest for interpreting the test results is determining the conformance of the device with the test assertions. Conformance with each assertion tested by a given test case is evaluated by examining the **Log Highlights** box of the test report.

5.1 Test Results Report Key

The following table presents an explanation of each section of the test details in section 5.2. The Tester Name, Test Host, Test Date, Drives, Source Setup and Log Highlights sections for each test case are populated by excerpts taken from the log files produced by the tool under test and the FS-TST tools that were executed in support of test case setup and analysis.

Heading	Description	
First Line:	Test case ID, name, and version of tool tested.	
Case Summary:	Test case summary from <i>Digital Data Acquisition Tool</i>	
	Assertions and Test Plan Version 1.0.	
Assertions:	The test assertions applicable to the test case, selected from	
	Digital Data Acquisition Tool Assertions and Test Plan	
	Version 1.0.	
Tester Name:	Name or initials of person executing test procedure.	
Test Host:	Host computer executing the test.	
Test Date:	Time and date that test was started.	
Drives:	Source drive (the drive acquired), destination drive (if a	
	clone is created) and media drive (to contain a created	
	image).	
Source Setup:	Layout of partitions on the source drive and the expected	
	hash of the drive.	
Log Highlights:	Information extracted from various log files to illustrate	
	conformance or non-conformance to the test assertions.	
Results:	Expected and actual results for each assertion tested.	
Analysis:	Whether or not the expected results were achieved.	

5.2 Test Details

The test results are presented in this section.

5.2.1 DA-01-ATA28

Test Case DA-	01-ATA28 X-Ways Forensics 16.2 SR-5
Case	DA-01 Acquire a physical device using access interface AI to an unaligned
Summary:	clone.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	AM-04 If clone creation is specified, the tool creates a clone of the
	digital source.
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	AO-11 If requested, a clone is created during an acquisition of a digital
	source.

Test Case DA-01-ATA28 X-Ways Forensics 16.2 SR-5			
	AO-13 A clone is created using access interface	e DST-AI to write to the	
	AO-14 If an unaligned clone is created, each so accurately written to the same disk address on	ector written to the clone is the clone that the sector	
	occupied on the digital source. A0-17 If requested, any excess sectors on a clone destination device are		
	Not modified. AO-22 If requested, the tool calculates block i	nashes for a specified block	
	size during an acquisition for each block acqu AO-23 If the tool logs any log significant info	ired from the digital source. ormation, the information is	
	A0-24 If the tool executes in a forensically st	afe execution environment,	
	the digital source is unchanged by the acquisi	tion process.	
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Wed Feb 15 06:36:04 2012		
Drives:	src(12-IDE) dst (IC-SATA) other (none)	1062270888267 >	
Setup:	src hash (MD5): < ACAFB6838330FD24221199512A6	1D565 >	
	14592/254/63 (max cyl/hd values)		
	14593/255/63 (number of cyl/hd)		
	Model (00JB-00REA0) serial # (WD-WCA	NMD0605)	
Log	===== Destination drive setup =====		
Highlights:	234441648 sectors wiped with 1C		
	====== Comparison of original to clone drive ==	====	
	Sectors compared: 234441648		
	Sectors match: 234441648		
	Sectors differ: 0		
	Bytes differ: 0		
	0 source read errors, 0 destination read errors		
	===== Tool Settings: =====		
	start-sector 0		
	Write Block: 4 FastBloc IDE		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Extract from X-Ways logfile.txt file ===	====	
	Source device> Destination device		
	WDC WDI200JB-00REA0> WDC WDI200JD-00GBB0		
	251,111,010 Dector(b) Successfully copied.		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source IS type DS.	as expected	
	AM-04 A clone is created.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	AO-11 A clone is created during acquisition.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	A0-17 Excess sectors are unchanged.	as expected	
	AU-22 Tool calculates hashes by block.	option not available	
	AU-25 LOgged Information is correct.	as expected	
	AU-24 Source is unchanged by acquisition.	HOU CHECKED	
Analysis:	Expected results achieved		

November 2013

5.2.2 DA-01-ATA48

Test Case DA-01-ATA48 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-01 Acquire a physical device using access interface AI to an unaligned clone.	
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process. 	
Tester Name:	irr	
Test Host:	freddy	
Test Date:	Mon May 21 10:45:48 2012	
Drives:	<pre>src(4F) dst (5D-SATA) other (none)</pre>	
Source Setup:	<pre>src hash (SHA1): < 51FE53FD6BF7B7B69A875EDBD9AC01D41194C78C > src hash (MD5): < A98DF276339451CE9E701D087E2BFC95 > 488397168 total sectors (250059350016 bytes) 30400/254/63 (max cyl/hd values) 30401/255/63 (number of cyl/hd) IDE disk: Model (WDC WD2500JB-00EVA0) serial # (WD-WMAEH2681554) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 268413957 0000/001/01 1023/254/63 Boot 07 NTFS 2 P 00000000 00000000 0000/000/00 000 empty entry 3 P 00000000 00000000 0000/000/00 00 empty entry 4 P 00000000 00000000 0000/000/00 000 empty entry 1 268413957 sectors 137427945984 bytes</pre>	
Log Highlights:	<pre>====== Destination drive setup ====== 625142448 sectors wiped with 5D ====== Comparison of original to clone drive ====== Sectors compared: 488397168 Sectors match: 488397168 Sectors differ: 0 Bytes differ: 0 Diffs range Source (488397168) has 136745280 fewer sectors than destination (625142448) Zero fill: 0 Src Byte fill (4F): 0 Dst Byte fill (5D): 136745280 Other fill: 0 Cher fill: 0 Seco fill range: Src fill range: Src fill range: 488397168-625142447 Other fill range: Other not filled range: 0 source read errors, 0 destination read errors ====== Tool Settings: ======</pre>	
	fill none	

Test Case DA-01-ATA48 X-Ways Forensics 16.2 SR-5		
	start-sector 0	
	Write Block: 4 FastBloc IDE	
	US: Microsoft Windows XP [Version 5.1.2600]	
	====== Extract from X-Ways logfile txt file ==	====
	Source device> Destination device	
	WDC WD2500JB-00EVA0> WDC WD3200AAKS-00V6A0	
	488,397,168 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.3 DA-01-FW

Test Case DA-	-01-FW X-Ways Forensics 16.2 SR-5
Case Summary:	DA-01 Acquire a physical device using access interface AI to an unaligned clone.
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Fri Mar 16 15:20:51 2012
Drives:	src(07-SATA) dst (1C-SATA) other (none)
Source	src hash (SHA256): <
Setup:	CE65C4A3C3164D3EBAD58D33BB2415D29E260E1F88DC5A131B1C4C9C2945B8A9 > src hash (SHA1): < 655E9BDDB36A3F9C5C4CC8BF32B8C5B41AF9F52E > src hash (MD5): < 2EAF712DAD80F66E30DEA00365B4579B > 156301488 total sectors (80026361856 bytes) Model (WDC WD800JD-32HK) serial # (WD-WMAJ91510044) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 156280257 0000/001/01 1023/254/63 Boot 07 NTFS 2 P 000000000 00000000 0000/000/00 0000/000/00 00
Log Highlights:	===== Destination drive setup ===== 234441648 sectors wiped with 10
	<pre>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>></pre>

Test Case DA-01-FW X-Ways Forensics 16.2 SR-5			
	fill none		
	start-sector 0		
	Write Block: 56 Tableau Forensic SATA/IDE Brid	ge	
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Extract from X-Ways logfile.txt file ==	====	
	Source device> Destination device		
	WDC WD800JD-32HKA0> WDC WD1200JD-00GBB0		
	156,301,488 sector(s) successfully copied.		
Demulter			
Results:	Aggention (Emperhad Depult	Actual Desult	
	Assertion & Expected Result	Actual Result	
	AM-UI Source acquired using interface AL.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-04 A clone is created.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	AO-11 A clone is created during acquisition.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AO-17 Excess sectors are unchanged.	as expected	
	AO-22 Tool calculates hashes by block.	option not available	
	AO-23 Logged information is correct.	as expected	
	AO-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

5.2.4 DA-01-SATA28

Test Case DA	-01-SATA28 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-01 Acquire a physical device using access is clone.	nterface AI to an unalig	gned
Assertions:	AM-01 The tool uses access interface SRC-AI to	access the digital sour	rce.
	AM-02 The tool acquires digital source DS.		
	AM-03 The tool executes in execution environme	nt XE.	
	AM-04 If clone creation is specified, the tool	creates a clone of the	
	digital source.		
	AM-06 All visible sectors are acquired from th	e digital source.	1
	AM-08 All sectors acquired from the digital so	urce are acquired accura	ately.
	AU-II II requested, a crone is created during	an acquisición or a digi	LLAI
	AO-13 A clone is created using access interfac	e DST-AI to write to the	- clone
	device.		
	AO-14 If an unaligned clone is created, each s	ector written to the clo	one is
	accurately written to the same disk address on	the clone that the sect	cor
	occupied on the digital source.		
	AO-17 If requested, any excess sectors on a cl	one destination device a	are not
	modified.		
	AO-22 If requested, the tool calculates block	hashes for a specified k	olock
	size during an acquisition for each block acqu	ired from the digital so	ource.
	A0-23 If the tool logs any log significant inf	ormation, the informatio	on is
	accurately recorded in the log file.	of oversition environment	at the
	digital source is unchanged by the acquisition	are execution environmen	it, the
	argitar source is unchanged by the acquisition	process.	
Tester	irr		
Name:	5		
Test Host:	freddy		
Test Date:	Mon Dec 12 13:46:16 2011		
Drives:	<pre>src(01-SATA) dst (50-IDE) other (none)</pre>		
Source	src hash (SHA256): <		
Setup:	1AA01FEAE55F5CD55185D2B1A1359B3F913E7093FEF1D1	ADA220CAC456BA40D8 >	
	src hash (SHA1): < 4951236428C36B944E62E8D6586	2DCBEF05F282C >	
	src hash (MD5): < 0A49B13D91FA9DA87CEEE9D006C	B6FD6 >	
	156301488 total sectors (80026361856 bytes)		
	Model (UJD-32HKAU) serial # (WD-WMAJ9144	8529)	
Loa	====== Destination drive setup ======		
Highlights:	156301488 sectors wiped with 50		
5 5	L		
	====== Comparison of original to clone drive =	=====	
	Sectors compared: 156301488		
	Sectors match: 156301488		
	Sectors differ: 0		
	Bytes differ: 0		
	Diffs range		
	U SOURCE READ ERRORS, U DESTINATION READ ERROR	5	
	====== Tool Settings: ======		
	fill none		
	start-sector 0		
	Write Block: none		
	OS: Microsoft Windows [Version 6.1.7600]		
	===== Extract from X-Ways logfile.txt file ==	====	
	Source device> Destination device		
	WDC WD8000D-32HKA0 $= >$ WDC WD8000JB-000JC0		
	150,501,400 Beccor(b) Buccessiuity copied.		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-04 A clone is created.	as expected	

Test Case DA-01-SATA28 X-Ways Forensics 16.2 SR-5		
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.5 DA-01-SATA48

Test Case DA-01-SATA48 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-01 Acquire a physical device using access i clone.	nterface AI to an unaligned
Assertions:	 AM-01 The tool uses access interface SRC-AI to AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environme AM-04 If clone creation is specified, the tool digital source. AM-06 All visible sectors are acquired from th AM-08 All sectors acquired from the digital so AO-11 If requested, a clone is created during source. AO-13 A clone is created using access interface device. AO-14 If an unaligned clone is created, each s accurately written to the same disk address on occupied on the digital source. AO-17 If requested, any excess sectors on a cl modified. AO-22 If requested, the tool calculates block size during an acquisition for each block acque AO-23 If the tool logs any log significant inf accurately recorded in the log file. AO-24 If the tool executes in a forensically s digital source is unchanged by the acquisition 	<pre>access the digital source. nt XE. creates a clone of the e digital source. urce are acquired accurately. an acquisition of a digital e DST-AI to write to the clone ector written to the clone is the clone that the sector one destination device are not hashes for a specified block ired from the digital source. ormation, the information is afe execution environment, the process.</pre>
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Tue Dec 13 15:56:42 2011	
Drives:	src(0B-SATA) dst (2C-SATA) other (none)	
Source Setup:	<pre>src hash (SHA256): < 0026805624818CAEDAD12019DCDB16E79DE3C47CFE1C71 src hash (SHA1): < DA892EE968DD828F2F1B6825C1D src hash (MD5): < 1873847F597A69D0F5DB991B67E 488397168 total sectors (250059350016 bytes) 30400/254/63 (max cyl/hd values) 30401/255/63 (number of cyl/hd) Model (00JD-22FYB0) serial # (WD-WMAEH267</pre>	7193F9880B3DB32A9F > 3EF35062A0737 > 84F92 > 7545)
Log Highlights:	===== Destination drive setup ===== 488397168 sectors wiped with 2C	
	<pre>===== Comparison of original to clone drive = Sectors compared: 488397168 Sectors match: 488397168 Sectors differ: 0 Bytes differ: 0 Diffs range 0 source read errors, 0 destination read error</pre>	===== S
	===== Tool Settings: ===== fill none start-sector 0 Write Block: none	
	OS: Microsoft Windows [Version 6.1.7600]	
	Source device> Destination device WDC WD2500JD-22FYB0> WDC WD2500AAKS-00VSA0 488,397,168 sector(s) successfully copied.	
Degultz	====== Source drive rehash ====== Rehash (SHA1) of source: DA892EE968DD828F2F1B6	825C1D3EF35062A0737
RESULLS.	Assertion & Expected Result	Actual Result

Test Case DA-01-SATA48 X-Ways Forensics 16.2 SR-5		
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	A0-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.6 DA-01-SCSI

Test Case DA-	01-SCSI X-Ways Forensics 16.2 SR-5
Case Summary:	DA-01 Acquire a physical device using access interface AI to an unaligned clone.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source.
	AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source.
	AO-13 A clone is created using access interface DST-AI to write to the clone device.
	accurately written to the same disk address on the clone that the sector occupied on the digital source.
	AO-17 If requested, any excess sectors on a clone destination device are not modified.
	AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file.
	AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Fri Mar 23 15:37:19 2012
Drives:	<pre>src(E0) dst (05-SATA) other (none)</pre>
Source Setup:	<pre>src hash (SHA1): < 4A6941F1337A8A22B10FC844B4D7FA6158BECB82 > src hash (MD5): < A97C8F36B7AC9D5233B90AC09284F938 > 17938985 total sectors (9184760320 bytes) Model (ATLAS10K2-TY092J) serial # (169028142436)</pre>
Log Highlights:	===== Destination drive setup ===== 156301488 sectors wiped with 5
	====== Comparison of original to clone drive ====== Sectors compared: 17938985 Sectors match: 17938985 Sectors differ: 0
	Bytes differ: 0
	Diffs range
	Source (17938985) has 138362503 fewer sectors than destination (156301488) Zero fill: 0 Src Byte fill (E0): 0
	Dst Byte fill (05): 138362503
	Other fill: 0
	Other no fill: 0
	Src fill range:
	Dst fill range: 17938985-156301487
	Other fill range:
	Other not filled range:
	o source read errors, o desernation read errors
	===== Tool Settings: =====
	start-sector 0
	OS: Microsoft Windows XP [Version 5.1.2600]
	===== Extract from X-Ways logfile.txt file ======
	Source device> Destination device
	UCANIUM AILASIUKZ-TYU92J> WDC WD800JD-32HKAU 17,938,985 sector(s) successfully copied.

Test Case DA-	01-SCSI X-Ways Forensics 16.2 SR-5	
	====== Source drive rehash ====== Rehash (SHA1) of source: 4A6941F1337A8A22B10FC	844B4D7FA6158BECB82
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.7 DA-01-USB

Test Case DA	-01-USB X-Ways Forensics 16.2 SR-5
Case Summary:	DA-01 Acquire a physical device using access interface AI to an unaligned clone.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	Amoust in clone creation is specified, the tool creates a clone of the
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	AO-11 If requested, a clone is created during an acquisition of a digital
	source. A0-13 A clone is created using access interface DST-AI to write to the clone
	device.
	AO-14 If an unaligned clone is created, each sector written to the clone is
	accurately written to the same disk address on the clone that the sector
	AO-17 If requested any excess sectors on a clone destination device are not
	modified.
	AO-22 If requested, the tool calculates block hashes for a specified block
	size during an acquisition for each block acquired from the digital source.
	AO-23 If the tool logs any log significant information, the information is
	accurately recorded in the log file.
	digital source is unchanged by the acquisition process.
Tester	jrr
Name:	freddyr
Test Date:	Fri Dec 16 15:07:11 2011
Drives:	src(63-fu2) dst (61-USB) other (none)
Source	<pre>src hash (SHA256): <</pre>
Setup:	EC8EF011494BA6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D >
	<pre>src hash (SHA1): < F7069EDCBEAC863C88DECED82159F22DA96BE99B > </pre>
	src nasn (MD5): < EE21/BC4FAF45JDE4021D29B05AA9EC >
	Model (SP0612N) Serial # ()
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P 000000063 004192902 0000/001/01 0260/254/63 Boot 06 Fat16
	2 X 004192965 113097600 0261/000/01 1023/254/63 0F extended
	3 S 000000063 113097537 0261/001/01 1023/254/63 0B Fat32
	4 S 00000000 00000000 000/00/00 0000/00/00 000 000/00/
	6 P 00000000 00000000 0000/00 0000/00 000/00 00
	1 004192902 sectors 2146765824 bytes
	3 113097537 sectors 57905938944 bytes
T	Deskinski a Juise astau
LOG Highlights:	===== Destination drive setup ===== 117304992 sectors wiped with 61
	====== Comparison of original to clone drive ======
	Sectors compared: 117304992
	Sectors match: 117304992
	Sectors differ: 0
	Diffs range
	0 source read errors, 0 destination read errors
	Tool Settings'
	fill none
	start-sector 0
	Write Block: 18 UltraBlock-USB
	OC: Migrosoft Windows [Norgion 6 1 7600]
	03. MICLOSOLU WINDOWS [VEISION 0.1./000]
	===== Extract from X-Ways logfile.txt file ======
	Source device> Destination device

Test Case DA-01-USB X-Ways Forensics 16.2 SR-5		
	SAMSUNG SP0612N> SAMSUNG SP0612N	
	117,304,992 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	A0-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
		·
Analysis:	Expected results achieved	

5.2.8 DA-02-CF

Test Case DA	-02-CF X-Ways Forensics 16.2 SR-5
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	AM-04 If clone creation is specified, the tool creates a clone of the
	digital source.
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	A0-11 If requested, a clone is created during an acquisition of a digital
	source.
	device
	AO-14 If an unaligned clone is created, each sector written to the clone is
	accurately written to the same disk address on the clone that the sector
	occupied on the digital source.
	AO-17 If requested, any excess sectors on a clone destination device are not
	modified.
	AO-22 If requested, the tool calculates block hashes for a specified block
	size during an acquisition for each block acquired from the digital source.
	A0-23 If the tool logs any log significant information, the information is
	accurately recorded in the log file.
	A0-24 If the tool executes in a forensically safe execution environment, the
	digital source is unchanged by the acquisition process.
Tester	jrr
Name:	
Test Host:	freddy
Test Date:	Tue Mar 27 10:03:24 2012
Drives:	<pre>src(C1-CF) dst (C2-CF) other (none)</pre>
Source	src hash (SHA256): <
Setup:	C7CF0218222DF80D5316511D6814266C7FA507C13F795AD3D323BB73C1590D80 >
	src hash (SHA1): < 5B8235178DF99FA307430C088F81746606638A0B >
	src hash (MD5): < 776DF8B4D2589E21DEBCF589EDC16D78 >
	503808 total sectors (257949696 bytes)
	Model (CF) serial # ()
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P //6153908 1141509031 035//110/40 035//032/45 BOOL /2 OLHER
	2 P 1869891465 193602819 0366/032/33 0357/032/43 Boot 03 Other
	4 P 2885681152 000055499 0322/097/50 0000/010/00 Boot 0D other
	1 1141509631 sectors 584452931072 bytes
	2 1936028240 sectors 991246458880 bytes
	3 1936028192 sectors 991246434304 bytes
	4 000055499 sectors 28415488 bytes
Log	===== Destination drive setup =====
Highlights:	503808 sectors wiped with C2
	Comparison of evicinal to along duing
	Sectors comparison of original to clone drive =====
	Sectors match: 503808
	Sectors differ: 0
	Bytes differ: 0
	Diffs range
	0 source read errors, 0 destination read errors
	===== Tool Settings: ======
	till none
	start-sector U
	Write Block: 7 IlltraBlock Forencia Card Pooder
	MILLE PIOCK. / DICTUDIOCK LOIGHDIC CALG KEAGEL
	OS: Microsoft Windows [Version 6.1.7600]
	- ''
	===== Extract from X-Ways logfile.txt file ======

Test Case DA-02-CF X-Ways Forensics 16.2 SR-5			
	Source device> Destination device ICSI CF Card CF> Generic 503,808 sector(s) successfully copied.	CF	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-04 A clone is created.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	A0-11 A clone is created during acquisition.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	A0-17 Excess sectors are unchanged.	as expected	
	AO-22 Tool calculates hashes by block.	option not available	
	AO-23 Logged information is correct.	as expected	
	A0-24 Source is unchanged by acquisition.	as expected	
Analysis:	Expected results achieved		

5.2.9 DA-02-EXFAT

Case DA-02 Acquire a digital source of type DS to an unaligned clone. Assertions: M-02 The tool acquires digital source DS. M-03 The tool executes in execution environment XZ. M-04 Aff clone creating digital source DS. M-03 The tool acquires digital source DS. M-03 The tool acquires digital source DS. M-04 Aff clone creating and the digital source. M-06 Aff visible sectors are acquired from the digital source. M-04 Aff requested, a clone is created during an acquisition of a digital source. A0-13 A clone is created using access interface DST-Af to write to the clone device. A0-14 Aff requested, all clone is created during an acquisition of a digital source. A0-14 Aff requested, any excess sectors on a clone destination device are not modified. A0-12 Aff requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. A0-24 Aff the tool caguing for achieve the information, the information is accurately recorded in the log file. A0-24 Aff the tool caguistion process. Tester isr Test Date: Coursel Stock (SDS) Closes (SDS) Addition (MC) Source Stock (SDS) Addition (MC) Source Stock (SDS) Addition (SDS) (SDS) Source Stock (SDS) Addition (SDS) (S	Test Case DA-02-EXFAT X-Ways Forensics 16.2 SR-5	
Assertions: AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XI. AM-04 Th folce creating is specified, the tool creates a clone of the digital source. AM-05 AI requested, a clone is created during an acquisition of a digital source. AD-01 If requested, a clone is created during an acquisition of a digital source. AD-11 If requested, any excess sectors on a clone destination device are not device. AD-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AD-21 If requested, any excess sectors on a clone destination device are not accurately recorded in the log file. AD-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AD-24 If the tool logs any log significant information, the information is accurately recorded in the log file. AD-24 If the tool excest an a forensically safe execution environment, the digital source (8002636186 bytes) Source sc hash (Mb51) < 308AP/48707320555E073Du40055 > 15530488 total sectors (8002636186 bytes) Setup: sr hash (Mb51) < 308AP/48707320555E073Du40055 > 15530488 total sectors 30878053040101017/2464 as 31 Linux 3 P 016354170 007807590 1018/000/01 10123/254/653 B1 Linux 3 P 016354170 007807590 1018/000/01 10123/254/653 B1 Linux 3 P 016354170 00	Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.
Test Name: jrr Name: Test Host: freddy Test Host: Tue Apr 24 11:24:48 2012	Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.
Test Host: freddy Test Date: Tue Apr 24 11:24:48 2012 Drives: src(49-SATA) dst (02-IDE) other (none) Source src hash (SHA1): < 6EC98F42EE5914D1F9D1661COB0A3660569F95B > Setup: src hash (SHA1): < 6EC98F42EE5914D1F9D1661COB0A3660569F95B > Setup: src hash (STA005558CB073DD4D0D5E > 155301488 total sectors (80026361856 bytes) Model (ST380815AS) serial # (5Q25TD8Y) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000002048 010485760 0000/32/33 0652/213/09 07 NTFS 2 P 010490445 005863725 0653/000/01 1017/254/63 83 Linux 3 P 016354170 007807590 1018/000/01 1023/254/63 83 Linux 3 Linux 4 P 00000000 0000000 0000/000/00 0000/000 000 00 empty entry 1 10485760 sectors 300227200 bytes 3 007807590 sectors 3097486080 bytes 2 005863725 sectors 3097486080 bytes 3 007807590 sectors 3097486080 bytes 49-SATAEXFAT-shalsum 10485760 3D44F34844E82F9DEDD5D5C33E18EC066CF1EAB 49-SATAEXFAT-shalsum 10485760 B45782BF9358629D0115B70EEDE2C616 Log ===== Destination drive setup ====== 78165360 sectors wiped with 2 #Iighlights: 78165360 sectors wiped with 2 ===== Comparison of	Tester Name:	jrr
Test Date: Tue Apr 24 11:24:48 2012 Drives: src(49-SATA) dst (02-IDE) other (none) Source src hash (SHA]: < 6EC98F42EB5914D1F9D1661C0BB0A3660569F95B > Setup: 156301488 total sectors (80026361856 bytes) Model (ST380815AS)) serial # (5025TD8Y) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000002048 010485760 000/032/33 0652/213/09 07 NTFS 2 2 P 010490445 005863725 0653/000/01 1017/254/63 83 Linux 3 D 16354170 007807590 1018/000/01 1023/254/63 83 Linux 4 P 00000000 00000000 0000/000 00000/000000	Test Host:	freddy
Drives: src(49-SATA) dst (02-IDE) other (none) Source src hash (SHAl): < 6C98F42EB5914D1F9D1661C0BBDA3660569F95B > Setup: src hash (MD5): < 30BAP47F67783C0555ECBD73DD4D0D5E > I56301488 total sectors (80026361856 bytes) Model (ST380815AS) serial # (5025TD8Y) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00002048 010485760 0000/032/33 0652/213/09 07 NTFS 2 P 010490445 005863725 0653/000/01 1017/254/63 83 Linux 3 P 016354170 007807590 1018/000/01 1023/254/63 83 Linux 4 P 00000000 00000000 0000/000/00 0000/000/00 000 empty entry 1 010485760 sectors 3002227200 bytes 2 005863725 sectors 300222700 bytes 3 007807590 sectors 3997486080 bytes 49-SATAEXFAT-shalsen 10485760 10485760 1309F5D1C2RC16E0279C87A6ACBD79308F636B34DC002081757C4564A1373497 49-SATAEXFAT-shalsen 10485760 E85782BF9358629DD115B70EEDE2C616 Log ===== Destination drive setup ====== Highlights: 78165360 sectors wiped with 2 Sectors match: 10485760 Sectors differ: 0 Diffs range: 0 Bytes differ: 0 Diffs range: 0 Diffs range: <	Test Date:	Tue Apr 24 11:24:48 2012
Source src hash (SHA1): < 6EC98F42EB5914D1F9D1661C0B00A3660569F95B > Setup: src hash (MD5): < 30BAB74F67783C0555BCBD73DD4D05E > 156301488 total sectors (80026361856 bytes) Model (ST380815AS) serial # (5Q25TD8Y) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000002048 010485760 0000/032/33 0652/213/09 07 NTFS 2 P 010490445 005863725 0653/000/01 1017/254/63 83 Linux 3 P 016354170 007807590 1018/000/01 1023/254/63 83 Linux 4 P 00000000 0000000 0000/00 000 0000/00 000 empty entry 1 010485760 sectors 5368709120 bytes 2 005863725 sectors 3002227200 bytes 3 007807590 sectors 3997486080 bytes 49-SATAEXFAT-sha256 10485760 1309F5D1C2EC16E02F9C87A6AC8D79308F636B34DC002081757C4564A1373497 49-SATAEXFAT-sha1sun 10485760 E85782BF9358629DD015B70EEDE2C616 Log ====== Destination drive setup ====== Highlights: 78165360 sectors wiped with 2 sectors differ: 0 Diffs range: 0 run start Tue Apr 24 13:35:10 2012 run start Tue Apr 24 13:39:30 2012 elapsed time 0:4:20 Normal exit	Drives:	src(49-SATA) dst (02-IDE) other (none)
Log ====== Destination drive setup ====== Highlights: 78165360 sectors wiped with 2 ====== Comparison of original to clone drive ====== Sectors compared: 10485760 Sectors match: 10485760 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Tue Apr 24 13:35:10 2012 run finish Tue Apr 24 13:39:30 2012 elapsed time 0:4:20 Normal exit	Source Setup:	<pre>src hash (SHA1): < 6EC98F42EB5914D1F9D1661C0BB0A3660569F95B > src hash (MD5): < 30BAB74F67783C0555BCBD73DD4D0D5E > 156301488 total sectors (80026361856 bytes) Model (ST380815AS) serial # (</pre>
====== Tool Settings: ===== fill none Write Block: 56 Tableau Forensic SAT/IDE Bridge	Highlights:	<pre>78165360 sectors wiped with 2 ====== Comparison of original to clone drive ====== Sectors compared: 10485760 Sectors match: 10485760 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Tue Apr 24 13:35:10 2012 run finish Tue Apr 24 13:39:30 2012 elapsed time 0:4:20 Normal exit ====== Tool Settings: ====== fill none Write Block: 56 Tableau Forensic SAT/IDE Bridge</pre>

Test Case DA-02-EXFAT X-Ways Forensics 16.2 SR-5		
	OS: Microsoft Windows [Version 6.1.7600]	
	===== Extract from X-Ways logfile.txt file ==	====
	Source device> Destination device	
	Drive E:> Drive D:	
	10,485,760 sector(s) successfully copied.	
D		
Results:	Aggention (Expected Degult	Actual Decult
		Actual Result
	AM-UI Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.10 DA-02-F12

Test Case DA-	02-F12 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.	
	AM-02 The tool acquires digital source DS.	
	AM-04 If clone creation is specified, the tool creates a clone of the	
	digital source.	
	AM-06 All visible sectors are acquired from the digital source.	
	AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source.	
	AO-13 A clone is created using access interface DST-AI to write to the clone device.	
	AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector	
	AO-17 If requested, any excess sectors on a clone destination device are	
	AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is	
	accurately recorded in the log file.	
	the digital source is unchanged by the acquisition process.	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Thu Dec 22 14:39:42 2011	
Drives:	src(01-IDE) dst (08-IDE) other (none)	
Setup:	src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E > 78165360 total sectors (40020664320 bytes) Model (0BB-00JHC0)) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	I P 000000063 020980827 0000/001/01 1023/254/63 OC Fat32X 2 X 02080890 057175335 1023/000/01 1023/254/63 OF extended	
	3 S 00000063 000032067 1023/001/01 1023/254/63 01 Fat12	
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended	
	5 S 000000063 002104452 1023/001/01 1023/254/63 06 Fat16	
	7 S 000000063 004192902 1023/000/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9 S 00000063 008401932 1023/001/01 1023/254/63 OB Fat32	
	10 x 014731605 010490445 1023/000/01 1023/254/63 05 extended	
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux	
	13 S 000000063 004209050 1023/000/01 1023/254/63 82 Linux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended	
	15 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS	
	16 S 000000000 00000000 0000/000/00 0000/000/00 00	
	17 P 00000000 00000000 0000/000/00 0000/000/00 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 000000000 00000000 00000000 000000000 000000000 000000000 000000000 000000000 000000000 000000000 000000000 000000000 000000000 000000000 0000000000 000000000 0000000000 000000000000000000000000000000000000	
	1 020980827 sectors 10742183424 bytes	
	3 000032067 sectors 16418304 bytes	
	5 002104452 sectors 1077479424 bytes	
	9 008401932 sectors 4301789184 bytes	
	11 010490382 sectors 5371075584 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 U27744192 sectors 14205026304 bytes	
	01F12 mas 16418303 F8B72B65436DE3BD394ACFF71D405D0389C0E9B7	
Loq	===== Destination drive setup ======	
Highlights:	78165360 sectors wiped with 8	
	====== Comparison of original to clone drive ======	

Test Case DA-	02-F12 X-Ways Forensics 16.2 SR-5	
	Sectors compared: 32067 Sectors match: 32067 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Fri Dec 23 15:11:16 2011 run finish Fri Dec 23 15:11:19 2011 elapsed time 0:0:3 Normal exit	
	<pre>===== Tool Settings: ====== fill none start-sector 0 Write Block: 57 Tableau T35e OS: Microsoft Windows [Version 6.1.7600] ===== Extract from X-Ways logfile.txt file == Source device> Destination device Drive 0:> Drive E: 32,067 sector(s) successfully copied.</pre>	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
		·

5.2.11 DA-02-F16

Test Case DA-	02-F16 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.	
	AM-02 The tool acquires digital source DS.	
	AM-03 THE LOOT executes IN execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the	
	digital source.	
	AM-06 All visible sectors are acquired from the digital source.	
	AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital	
	source.	
	AO-13 A clone is created using access interface DST-AI to write to the	
	AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector	
	occupied on the digital source.	
	not modified.	
	AO-22 If requested, the tool calculates block hashes for a specified block	
	size during an acquisition for each block acquired from the digital source.	
	AU-23 II the tool logs any log significant information, the information is accurately recorded in the log file.	
	AO-24 If the tool executes in a forensically safe execution environment,	
	the digital source is unchanged by the acquisition process.	
Tester Name:	irr	
Test Host:	freddy	
Test Date:	Fri Dec 23 19:19:44 2011	
Drives:	<pre>src(01-IDE) dst (08-IDE) other (none)</pre>	
Source Setup:	<pre>src hash (SHAL): < A488B5665D6DC5/C22DB68E2F/23DA9AA8DF82B9 > src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E ></pre>	
beeup	78165360 total sectors (40020664320 bytes)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended	
	3 S 00000063 000032067 1023/001/01 1023/254/63 01 Fat12	
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended	
	$5 \times 000000063 002104452 1023/001/01 1023/254/63 06 Fat16$ 6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended	
	7 S 000000063 004192902 1023/001/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9 S 00000063 008401932 1023/001/01 1023/254/63 OB Fat32	
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux	
	12 x 025222050 004209030 1023/000/01 1023/254/63 05 extended	
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended 15 s 000000063 027744192 1023/001/01 1023/254/63 07 NTES	
	16 S 00000000 00000000 0000/00 0000/00 0000/000 00 empty entry	
	17 P 000000000 00000000 0000/000/00 0000/000/00 00	
	18 P 000000000 00000000 0000/000/00 0000/000/00 00	
	3 000032067 sectors 16418304 bytes	
	5 002104452 sectors 1077479424 bytes	
	7 004192902 sectors 2146765824 bytes	
	9 008401932 sectors 4301789184 bytes 11 010490382 sectors 5371075584 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 027744192 sectors 14205026304 bytes	
	01F16-md5 1077479423 8B24F3D793188AF2473F69B267AFDA42	
	OILIO-PHAT IN//4/2472 N/4DYOZIDINI27L4RLAKSOUKUR2/CR/LFL467C/D	
Log	===== Destination drive setup ======	
Highlights:	78165360 sectors wiped with 8	
	===== Comparison of original to clone drive ======	

November 2013

X-Ways Forensics 16.2 SR-5
Test Case DA-	02-F16 X-Ways Forensics 16.2 SR-5	
	Sectors compared: 2104452 Sectors match: 2104452 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Tue Dec 27 20:45:38 2011 run finish Tue Dec 27 20:48:08 2011 elapsed time 0:2:30 Normal exit	
	<pre>===== Tool Settings: ====== fill none start-sector 0 Write Block: 57 Tableau T35e OS: Microsoft Windows [Version 6.1.7600] ===== Extract from X-Ways logfile.txt file == Source device> Destination device Drive N:> Drive F: 2,104,452 sector(s) successfully copied.</pre>	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
		as expected
	AU-1/ Excess sectors are unchanged.	us expected
	AO-17 Excess sectors are unchanged. AO-22 Tool calculates hashes by block.	option not available
	AO-17 Excess sectors are unchanged. AO-22 Tool calculates hashes by block. AO-23 Logged information is correct.	option not available as expected
	AO-17 Excess sectors are unchanged. AO-22 Tool calculates hashes by block. AO-23 Logged information is correct. AO-24 Source is unchanged by acquisition.	option not available as expected not checked
	A0-17 Excess sectors are unchanged. A0-22 Tool calculates hashes by block. A0-23 Logged information is correct. A0-24 Source is unchanged by acquisition.	option not available as expected not checked

5.2.12 DA-02-F32

Test Case DA	-02-F32 X-Ways Forensics 16.2 SR-5
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	AM-04 If clone creation is specified, the tool creates a clone of the
	digital source.
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	AO-11 If requested, a clone is created during an acquisition of a digital
	source.
	Aurica device
	λ_{0-1} if an unaligned clone is greated each sector written to the clone is
	accurately written to the same disk address on the clone that the sector
	accurated on the digital source
	AO-17 If requested, any excess sectors on a clone destination device are not
	modified.
	AO-22 If requested, the tool calculates block hashes for a specified block
	size during an acquisition for each block acquired from the digital source.
	AO-23 If the tool logs any log significant information, the information is
	accurately recorded in the log file.
	AO-24 If the tool executes in a forensically safe execution environment, the
	digital source is unchanged by the acquisition process.
Tester	jrr
Name:	2 . X.
Test Host:	Ireday
Test Date:	Wed Jan 11 09:54:52 2012
Drives:	src(UI-IDE) dst (24-SATA) other (none)
Source	STC MASH (SHAI): < A48BB5005DbUC5/C22DB082E7/23DA9A8DF82B9 >
secup.	SIC Hash (MDS) < FtSoro/Sog4/SSFA0AUELOBOELOSO40E >
	Model (DRE-0.0.1HCO) serial $\#$ (WD-WMAMC74171)
	N Start IBA Length Start C/H/S End C/H/S boot Partition type
	1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X
	2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended
	3 S 000000063 000032067 1023/001/01 1023/254/63 01 Fat12
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended
	5 S 000000063 002104452 1023/001/01 1023/254/63 06 Fat16
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended
	7 S 000000063 004192902 1023/001/01 1023/254/63 16 other
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended
	9 S 000000063 008401932 1023/001/01 1023/254/63 0B Fat32
	$10 \times 014731605 010490445 1023/000/01 1023/254/63 05$ extended
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux
	12 x 023222030 004209050 1023/000/01 1023/254/65 05 extended
	14 v 029431080 027744255 1022/001/01 1023/254/63 02 Lillux Swap
	15 S 000000063 02774439 1023/001/01 1023/254/63 07 NTES
	16 S 00000000 00000000 000/000/00 0000/000/
	17 P 00000000 000000000 000/00/00 0000/00 00
	18 P 000000000 000000000 0000/000/00 0000/000/00 00
	1 020980827 sectors 10742183424 bytes
	3 000032067 sectors 16418304 bytes
	5 002104452 sectors 1077479424 bytes
	7 004192902 sectors 2146765824 bytes
	9 008401932 sectors 4301789184 bytes
	11 010490382 sectors 5371075584 bytes
	13 004208967 sectors 2154991104 bytes
	15 U2//44192 sectors 14205026304 bytes
	UIF32-MMC5 43UI/89183 BFF/DC64C54339DA2A9D/9/2C0/6B514
	01E37-2P37E 4301/03103 R00TDAFAA4E3A/200R404EER0A3EE0ADEC0A0C0R0
	CAE3A4CC33D59548063255D2AA4016940AC712DD96985AD9R94FF271CC3E943E
Log	===== Destination drive setup ======

Test Case DA-	-02-F32 X-Ways Forensics 16.2 SR-5		
Highlights:	156301488 sectors wiped with 24		
	<pre>===== Comparison of original to clone drive = Sectors compared: 8401932 Sectors match: 8401932 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Thu Jan 12 06:10:24 2012 run finish Thu Jan 12 06:13:48 2012 elapsed time 0:3:24 Normal exit</pre>		
	<pre>===== Tool Settings: ====== fill none start-sector 0 Write Block: 4 FastBlock IDE OS: Microsoft Windows [Version 6.1.7600] ===== Extract from X-Ways logfile.txt file === Source device> Destination device Drive Q:> Drive G: 8,401,932 sector(s) successfully copied.</pre>		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-04 A clone is created.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	AO-11 A clone is created during acquisition.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AO-17 Excess sectors are unchanged	as expected	
	A0-22 Tool calculates hashes by block	option not available	
	A0-22 logged information is correct	as expected	
	A0-23 hogged information is correct.	as expected	
	AV-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

5.2.13 DA-02-F32X

Test Case DA-	-02-F32X X-Ways Forensics 16.2 SR-5
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-11 If requested, a clone is created during an acquisition of a digital source. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the
	digital source is unchanged by the acquisition process.
Name:	jrr
Test Host:	freddy
Test Date:	Wed Feb 29 13:16:52 2012
Source	src hash (SHA256): <
Setup:	2658F47603DE6B1D883B64823E9733F578658D08D06A4BB8C053C4F57BDC615E >
	Site Hash (MDS): C BC39C3F/EE/ASUE/ASUE/ASAEEF/2 78125000 total sectors (400000000 bytes) Model (0BB-75JHC0)) serial # (WD-WMAMC46588) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 x 020980890 057143205 1023/000/01 1023/254/63 0F extended 3 S 00000063 00032067 1023/001/01 1023/254/63 0F extended 5 S 00000063 002104452 1023/001/01 1023/254/63 06 Fat16 6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 S 00000063 008401995 1023/000/01 1023/254/63 05 extended 9 S 00000063 008401932 1023/001/01 1023/254/63 05 extended 11 S 00000063 010490445 1023/000/01 1023/254/63 05 extended 11 S 00000063 010490382 1023/001/01 1023/254/63 83 Linux 12 x 025222050 004209030 1023/000/01 1023/254/63 83 Linux 12 x 025422050 004209030 1023/000/01 1023/254/63 82 Linux swap 14 x 029431080 027712125 1023/000/01 1023/254/63 05 extended 15 S 000000063 027712062 1023/001/01 1023/254/63 07 NTFS 16 S 000000000 00000000 0000/000 0000/000/
	3 000032067 sectors 16418304 bytes 5 002104452 sectors 1077479424 bytes 7 004192902 sectors 2146765824 bytes 9 008401932 sectors 4301789184 bytes 11 010490382 sectors 5371075584 bytes 13 004208967 sectors 2154991104 bytes 15 027712062 sectors 14188575744 bytes 43F32x-md5sum 10742183424 5980CB0FA68E9862C65765DF50F00906 43F32x-shalsum 10742183423 379C1AC47AF956FC8C80389C2A7427A7F8FB4E89 43F32x-shalsum 10742183423 379C1AC47AF956FC8C80389C2A7427A7F8FB4E89

Test Case DA-	-02-F32X X-Ways Forensics 16.2 SR-5	
Log Highlighta:	===== Destination drive setup =====	
inigini ignes.	SUCCESS WIPER WITH ST	
	<pre>===== Comparison of original to clone drive = Sectors compared: 20980827 Sectors match: 20980827 Sectors differ: 0 Bytes differ: 0 Diffs range: run start Wed Feb 29 16:07:42 2012 run finish Wed Feb 29 16:16:32 2012 elapsed time 0:8:50 Normal exit</pre>	====
	===== Tool Settings: ====== fill none start-sector 0	
	Write Block: 4 FastBloc IDE	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file == Source device> Destination device Drive D:> Drive E: 20,980,827 sector(s) successfully copied.	====
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.14 DA-02-NT

Test Case DA-	02-NT X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS.	
	AM-03 The tool executes in execution environment XE.	
	AM-04 If clone creation is specified, the tool creates a clone of the	
	digital source. AM-06 All visible sectors are acquired from the digital source.	
	AM-08 All sectors acquired from the digital source are acquired accurately.	
	AO-11 If requested, a clone is created during an acquisition of a digital source.	
	AO-13 A clone is created using access interface DST-AI to write to the clone device.	
	AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source.	
	AO-17 If requested, any excess sectors on a clone destination device are	
	AO-22 If requested, the tool calculates block hashes for a specified block	
	size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is	
	accurately recorded in the log file.	
	the digital source is unchanged by the acquisition process.	
Tester Name:	irr	
Test Host:	frank	
Test Date:	Tue Jul 16 10:40:23 2013	
Drives:	<pre>src(01-IDE-96) dst (08-IDE) other (none)</pre>	
Source	<pre>src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 ></pre>	
secup.	78165360 total sectors (40020664320 bytes)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	1 P 000000063 020980827 0000/001/01 1023/254/63 OC Fat32X	
	2 X 020980890 05/1/5335 1023/000/01 1023/254/63 OF extended 3 S 000000063 000032067 1023/001/01 1023/254/63 OI Fat12	
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended	
	5 S 00000063 002104452 1023/001/01 1023/254/63 06 Fat16	
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended	
	7 S 00000063 004192902 1023/001/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9 5 000000005 008401932 1023/001/01 1023/254/63 05 Fattended	
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux	
	12 x 025222050 004209030 1023/000/01 1023/254/63 05 extended	
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended	
	15 S 00000063 027744192 1023/001/01 1023/254/63 07 NTFS	
	16 S 000000000 00000000 0000/000/00 0000/000/00 00	
	17 P 00000000 00000000 0000/00/00 0000/00 0000/00 00	
	1 020980827 sectors 10742183424 bytes	
	3 000032067 sectors 16418304 bytes	
	5 002104452 sectors 1077479424 bytes	
	7 004192902 sectors 2146765824 bytes	
	9 008401932 sectors 4301789184 bytes	
	11 ULU49U302 Sectors $33/10/3584$ Dytes 13 004208967 sectors 2154991104 bytes	
	15 027744192 sectors 14205026304 bytes	
	01NT-md5 14205026303 92B27B30BEE8B0FFBA8C660FA1590D49	
Tioa	===== Destination drive setup ======	
Highlights:	78165360 sectors wiped with 8	
	====== Comparison of original to clone drive ======	
	Sectors compared: 27744192	

Test Case DA-	02-NT X-Ways Forensics 16.2 SR-5	
	Sectors match: 27744045	
	Sectors differ: 147	
	Bytes differ: 50507	
	Diffs range: 6160368-6160455, 6291448, 629145	6-6291479,
	6291504-6291519, 9759488, 9760000, 13872088-13	872095,
	13872168-13872175	
	Source (27744192) has 1622565 fewer sectors the	an destination (29366757)
	Zero fill: 0	
	Src Byte fill (01): 0	
	Dst Byte fill (08): 1622565	
	Other fill: 0	
	Other no fill: 0	
	Zero fill range:	
	Src IIII range: 27744102 20266756	
	DSt 1111 range: 2//44192-29300/50	
	Other filled renge:	
	$\begin{array}{c} \text{Other not fifted range} \\ \text{run start Tuo Tul 16 09:29:52 2012} \end{array}$	
	run finish Tue Jul 16 08.51.32 2013	
	elapsed time 0:12:40	
	Normal exit	
	Write Block: 56 Tableau Forensic SATA/IDE Bridg	ge
	OS: Microsoft Windows XP [Version 5.1.2600]	
	====== Extract from X-Ways logfile.txt file ===	====
	Hard disk 6. Partition 8> Hard disk 1. Part	ition 2
	Sector 0> Sector 0	
	27,744,192 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	147 sectors differ
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
		· · · · · · · · · · · · · · · · · · ·
Analysis:	Expected results not achieved	

5.2.15 DA-02-THUMB

Test Case DA-02-THUMB X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-02 Acquire a digital source of type DS to an unaligned clone.	
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-04 If clone creation is specified, the tool creates a clone of the digital source. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. 	
	AO-11 If requested, a clone is created during an acquisition of a digital source. AO-13 A clone is created using access interface DST-AI to write to the clone device	
	AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source.	
	AO-17 If requested, any excess sectors on a clone destination device are not modified.	
	AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the divided executes in a forensically safe execution environment,	
	the digital source is unchanged by the acquisition process.	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	wed Jun 13 13:40:52 2012 src(D5-THIMB) dst (D6-THIMB) other (none)	
Source Setup:	<pre>src hash (SHA1): < D68520EF74A336E49DCCF83815E7E08FDC53E38A > src hash (MD5): < C843593624B2B3B878596D8760B19954 > 505856 total sectors (258998272 bytes) Model (usb2.0Flash Disk) serial # ()</pre>	
Log Highlights:	===== Destination drive setup ===== 4001760 sectors wiped with D6	
	<pre>===== Comparison of original to clone drive ===== Sectors compared: 505856 Sectors match: 505856 Sectors differ: 0 Bytes differ: 0</pre>	
	Diffs range Source (505856) has 3495904 fewer sectors than destination (4001760) Zero fill: 0 Src Byte fill (D5): 0 Dst Byte fill (D6): 3495904	
	Other fill:0Other no fill:0Zero fill range:Src fill range:	
	Dst fill range: 505856-4001759 Other fill range: Other not filled range: O source read errors, O destination read errors	
	====== Tool Settings: ====== fill none start-sector 0	
	Write Block: 18 Tableau Forensic USB Bridge	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file ====== Source device> Destination device	

Test Case DA-	02-THUMB X-Ways Forensics 16.2 SR-5	
	CRUCIAL usb2.0Flash Disk> SanDisk Cruzer Ti	tanium
	505,856 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-04 A clone is created.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-11 A clone is created during acquisition.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.16 DA-04

Test Case DA-04 X-Ways Forensics 16.2 SR-5		
Case	DA-04 Acquire a physical device to a truncated clone.	
Summary:		
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.	
	AM-02 The tool acquires digital source DS.	
	AM-03 The tool executes in execution environment XE.	
	AM-04 If clone creation is specified, the tool creates a clone of the	
	digital source.	
	AM-06 All visible sectors are acquired from the digital source.	
	AM-08 All sectors acquired from the digital source are acquired accurately.	
	AO-11 If requested, a clone is created during an acquisition of a digital	
	source.	
	AO-13 A clone is created using access interface DST-AI to write to the clone	
	device.	
	AO-14 If an unaligned clone is created, each sector written to the clone is	
	accurately written to the same disk address on the clone that the sector	
	occupied on the digital source.	
	AO-19 If there is insufficient space to create a complete clone, a truncated	
	clone is created using all available sectors of the clone device.	
	AO-20 If a truncated clone is created, the tool notifies the user.	
	AO-22 If requested, the tool calculates block hashes for a specified block	
	size during an acquisition for each block acquired from the digital source.	
	A0-23 If the tool logs any log significant information, the information is	
	accurately recorded in the log file.	
	A0-24 If the tool executes in a forensically safe execution environment, the	
	digital source is unchanged by the acquisition process.	
Tester	irr	
Name:	5	
Test Host:	freddy	
Test Date:	Fri Jan 13 05:36:13 2012	
Drives:	src(41) dst (66) other (none)	
Source	src hash (SH1256): <	
Setup:		
Decupi	arc hash (SH1): < 15C111307771160183726688580035C45551CC9 >	
	Src hash (MD5): < 0.64.8FF78BDC14F2026710D8CCB5607C >	
	78125000 total sectors (40000000000 bytes)	
	(5534/015/63) (max cyl/hd values)	
	65537/016/63 (number of cyl/hd)	
	TDE disk: Model (WDC WD40088-75.THC0) serial # (WD-WMAMC4658355)	
	N Start IBI Length Start C/U/S End C/U/S bot Dartition type	
	1 P 00000063 078107967 0000/001/01 1023/254/63 Boot 07 NTES	
	2 P 00000000 00000000 0000/00 000/00 000/00 00	
	1 078107967 sectors 30091279104 bites	
	1 0/010/JUL SECCOLS JJJJ12/JUL Bytes	
Log	Destination drive gotup	
LUG	1002F800 constant winds with 66	
nightights.	19923000 Sectors wiped with 00	
	Tool Sottings:	
	the next of a	
	start-sector 0	
	Write Plack: A FactPlac TPF	
	WITTE BIOCK. 4 LASTRIOC TOP	
	OS: Migrogoft Windows (Version 6.1.7600)	
	US. MICLOSOFT WINDOWS [VEISION 6.1.7000]	
	No X Ways logfile tot file groated	
	NO A-Ways logille.lxt lile created ======	
	Tool Mogazao:	
	1001 MESSAYE, =====	

X-Ways Forensics	
Invalid input. Destination disk too small.	
Ōĸ	
Desultat	
Assertion & Expected Result Actual Result	1
AM-01 Source acquired using interface AI. as expected	1
AM-02 Source is type DS. as expected	1
AM-03 Execution environment is XE. as expected	1
AM-04 A clone is created. as expected	1
AM-06 All visible sectors acquired. as expected	1
AM-08 All sectors accurately acquired. as expected	
AO-11 A clone is created during acquisition. as expected	1
AO-13 Clone created using interface AI. as expected	
AO-14 An unaligned clone is created. as expected	1
AO-19 Truncated clone is created. as expected	1
AO-20 User notified that clone is truncated. as expected	1
AO-22 Tool calculates hashes by block. Option not available	1
AO-23 Logged information is correct. as expected	1
AO-24 Source is unchanged by acquisition. not checked]
Analysis: Expected results achieved	

5.2.17 DA-06-ATA28

Test Case DA-06-ATA28 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-06 Acquire a physical device using access interface AI to an image file.	
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process. 	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Fri Jan 13 15:17:34 2012	
Drives:	<pre>src(43) dst (none) other (58-IDE)</pre>	
Source Setup:	<pre>src hash (SHA256): < 2658F47603DEGB1D883B64823E9733F578658D08D06A4BB8C053C4F57BDC615E > src hash (SHA1): < 888E2F77AD237DC7A732281DD93F325065E5871 > src hash (MD5): < BC39C3F7EF7A50E77B9BA1E65A5AEEF7 > 78125000 total sectors (4000000000 bytes) Model (0BB-75JHC0) serial # (WD-WMAMC46588) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057143205 1023/000/01 1023/254/63 0J Fat12 4 x 000032130 00012067 1023/001/01 1023/254/63 05 extended 3 s 00000063 000032067 1023/001/01 1023/254/63 05 extended 5 s 00000063 002104515 1023/000/01 1023/254/63 05 extended 7 s 00000063 004192902 1023/001/01 1023/254/63 05 extended 7 s 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 s 00000063 004192902 1023/001/01 1023/254/63 05 extended 11 s 00000063 010490382 1023/001/01 1023/254/63 05 extended 11 s 00000063 010490382 1023/001/01 1023/254/63 05 extended 13 s 00000063 004208967 1023/001/01 1023/254/63 05 extended 14 x 029431080 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 004208967 1023/01/01 1023/254/63 05 extended 15 s 000000063 004208967 1023/001/01 1023/254/63 05 extended 15 s 000000063 004208967 1023/001/01 1023/254/63 05 extended 15 s 000000063 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 027712125 1023/001/01 1023/254/63 05 extended 15 s 000000063 02771245 2023/001/01 1023/254/63 05 extended 15 s 00000006 0000/000/00 0000/000/00 000 empty entry 17 P 00000000 00000000 0000/000/00 000 empty entry 18 P 00000000 0000/000/00 0000/000/00 000 empty entry 18 P 000000000 0000/000/00 0000/000/00 00 empty entry 18 P 000000000 0000/000/00 0000/000/00 000 empty entry 18 P 000000000 0000/000/00 0000/000/00 000 empty entry 18 P 000000000 0000/000/00 0000/000/00 000 empty entry 19 002980827 sectors 10742183424 bytes 13 004208967 sect</pre>	
Log Highlights:	====== Tool Settings: ====== hash SHA-1 re-verify yes start-sector 0 image-format e01 compression none	

Test Case DA-06-ATA28 X-Ways Forensics 16.2 SR-5 Write Block: 4 FastBloc IDE OS: Microsoft Windows XP [Version 5.1.2600] ===== Image file segments ====== 1 40009789329 2012-01-17 23:01 da-06-ata28.e01 2 5011 2012-01-17 23:29 da-06-ata28.txt ===== Extract from X-Ways logfile.txt file ====== Source: Hard disk 0 Sectors 0-78124999 Destination: D:\da-06-ata28.e01 Model: WDC WD400BB-75JHC0 Total capacity: 40,000,000,000 bytes = 37.3 GB Sector count: 78,125,000 [user accessible] Sector count: 78,125,000 [actual] Hash of source data: 888E2E7F7AD237DC7A732281DD93F325065E5871 (SHA-1) Results: Assertion & Expected Result Actual Result AM-01 Source acquired using interface AI. as expected AM-02 Source is type DS. as expected AM-03 Execution environment is XE. as expected AM-05 An image is created on file system type FS. as expected AM-06 All visible sectors acquired. as expected AM-08 All sectors accurately acquired. as expected AO-01 Image file is complete and accurate. as expected AO-05 Multifile image created. as expected option not available AO-22 Tool calculates hashes by block. AO-23 Logged information is correct. as expected A0-24 Source is unchanged by acquisition. not checked Analysis: Expected results achieved

5.2.18 DA-06-ATA48

Test Case DA-	J6-ATA48 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-06 Acquire a physical device using access interface AI to an image file.		
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.		
	AM-02 The tool acquires digital source DS.		
	AM-03 The tool executes in execution environment XE.		
	AM-05 II IMage IIIe creation is specified, the tool	creates an image file	
	AM-06 All visible sectors are acquired from the dig	ital source.	
	AM-08 All sectors acquired from the digital source a	are acquired accurately.	
	AO-01 If the tool creates an image file, the data re	epresented by the image	
	file is the same as the data acquired by the tool.		
	AO-05 If the tool creates a multi-file image of a re	equested size then all	
	the individual files shall be no larger than the red	quested size.	
	AU-22 II requested, the tool calculates block hashes	from the digital source	
	AO-23 If the tool logs any log significant information	ion, the information is	
	accurately recorded in the log file.		
	AO-24 If the tool executes in a forensically safe ex	xecution environment,	
	the digital source is unchanged by the acquisition p	process.	
Test Host	jrr freddy		
Test Date:	Fri Jun 8 14:48:24 2012		
Drives:	src(4E) dst (none) other (5A-SATA)		
Source	src hash (SHA1): < 7DDFF1A74B2E2B7E7EE43C41CD9066E2	7986644D >	
Setup:	<pre>src hash (MD5): < 62C9436930204E0F38921771ACA1BB88</pre>	>	
	488397168 total sectors (250059350016 bytes)		
	30400/254/63 (max cyl/hd values)		
	JU4U1/255/63 (number of Cyl/nd)	WMAED1925256)	
	N Start LBA Length Start C/H/S End C/H/S bo	ot Partition type	
	1 P 000000063 488375937 0000/001/01 1023/254/63 Bod	ot 07 NTFS	
	2 P 00000000 00000000 0000/000/00 0000/00/0	00 empty entry	
	3 P 00000000 00000000 0000/00/00 0000/00/00	00 empty entry	
	4 P 00000000 00000000 0000/00/00 0000/00/00	00 empty entry	
	1 4883/593/ sectors 2500484/9/44 bytes		
Log			
Highlights:	===== Tool Settings: ======		
	Hash SHA-1		
	start-sector 0		
	image-format dd		
	compression none		
	Write Block: 4 FastBloc IDE		
	Og. Nigwogoft Windows VD [Newsion F 1 2000]		
	0.5. MICLOSOLU WINDOWS AP [VERSION 5.1.2000]		
	====== 1 age file segments ======	21	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
	===== Extract from X-Ways logfile.txt file ======		
	Source: Hard disk 0		
	Sectors 0-488397167		
	Destination: J:\da-Ub-ata48\da-Ub-ata48.001 Model: WDC WD2500.TB-22FUA0		
	Total capacity: $250,059,350,016$ bytes = 233 GB		
	Sector count: 488,397,168 [user accessible]		
	Sector count: 488,397,168 [actual]		
	Hash of source data: 7DDFF1A74B2E2B7E7EE43C41CD9066	E27986644D (SHA-1)	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	

Test Case DA-0	6-ATA48 X-Ways Forensics 16.2 SR-5	
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.19 DA-06-FW

Test Case DA-06-FW X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-06 Acquire a physical device using access interface AI to an image file.	
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process. 	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Tue Apr 10 14:53:05 2012	
Drives:	src(63-FU2) dst (none) other (29-SATA)	
Setup:	EC8EF011494BA6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069EDCBEAC863C88DECED82159F22DA96BE99B > src hash (MD5): < EE217BC4FA4F3D1B4021D29B065AA9EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 004192902 0000/001/01 0260/254/63 Boot 06 Fat16 2 x 004192965 113097600 0261/000/01 1023/254/63 0F extended 3 s 00000063 113097537 0261/001/01 1023/254/63 0B Fat32 4 s 00000000 00000000 0000/000/00 0000/000/00 00	
Log Highlights:	<pre>====== Tool Settings: ====== hash MD-5 re-verify yes start-sector 0 image-format e01 compression none Write Block: 64 Tableau Forensic FireWire Bridge OS: Microsoft Windows XP [Version 5.1.2600] ====== Image file segments ====== 1 60074843391 2012-04-11 14:56 da-06-fw.e01 2 1865 2012-04-11 15:12 da-06-fw.e01 2 1865 2012-04-11 15:12 da-06-fw.txt ====== Extract from X-Ways logfile.txt file ====== Source: Hard disk 7 Sectors 0-117304991 Destination: D:\da-06-fw\da-06-fw.e01 Model: DMI SAMSUNG SP0612N Total capacity: 60,060,155,904 bytes = 55.9 GB Sector count: 117,304,992 Sector count: 4,192,902 Hash of source data: EE217EC4FA4F3D1B4021D29B065AA9EC (MD5)</pre>	

Test Case DA-	Test Case DA-06-FW X-Ways Forensics 16.2 SR-5		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-05 An image is created on file system type FS.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	AO-01 Image file is complete and accurate.	as expected	
	AO-05 Multifile image created.	as expected	
	AO-22 Tool calculates hashes by block.	option not available	
	AO-23 Logged information is correct.	as expected	
	A0-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

5.2.20 DA-06-SATA28

Test Case DA-06-SATA28 X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-06 Acquire a physical device using access interfa	ace AI to an image file.	
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process. 		
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Mon Feb 6 13:33:08 2012		
Drives:	<pre>src(01-SATA) dst (none) other (23-IDE)</pre>		
Source	<pre>src hash (SHA256): <</pre>		
Setup:	<pre>1AA01FEAE55F5CD55185D2B1A1359B3F913E7093FEF1D1ADA220CAC456BA40D8 > src hash (SHA1): < 4951236428C36B944E62E8D65862DCBEF05F282C > src hash (MD5): < 0A49B13D91FA9DA87CEEE9D006CB6FD6 > 156301488 total sectors (80026361856 bytes) Model (0JD-32HKA0) serial # (WD-WMAJ91448529)</pre>		
Log			
Highlights:	<pre>hash SHA-256 re-verify yes start-sector 0 image-format e01 compression none Write Block: none OS: Microsoft Windows XP [Version 5.1.2600] ====== Image file segments ====== 1 80045929063 2012-02-06 20:17 da-06-sata28.e01 2</pre>		
	Destination: D:\da-06-sata28\da-06-sata28.e01 Model: WDC WD800JD-32HKA0 Total capacity: 80,026,361,856 bytes = 74.5 GB Sector count: 156,301,488 [user accessible] Sector count: 156,301,488 [actual] Hash of source data: 1AA01FEAE55F5CD55185D2B1A1359B3F913E7093FEF1D1ADA220 ====== Source drive rehash ====== Rehash (SHA1) of source: 4951236428C36B944E62E8D6580)CAC456BA40D8 (SHA-256) 52DCBEF05F282C	
Peculta:			
RESULLS:	Assertion & Expected Result	Actual Pegult	
	AM-01 Source acquired using interface AT	ac expected	
	AM-02 Source is type DS	as expected	
	AM-03 Execution environment is VE	as expected	
	In the incompany convergence to AE.	as capeceed	

Test Case DA-06-SATA28 X-Ways Forensics 16.2 SR-5		
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.21 DA-06-SATA48

Test Case DA-	06-SATA48 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-06 Acquire a physical device using access interfa	ace AI to an image file	2.
Assertions:	AM-01 The tool uses access interface SRC-AI to acces	ss the digital source.	
	AM-02 The tool acquires digital source DS.		
	AM-03 The tool executes in execution environment XE.		
	AM-05 If image file creation is specified, the tool	creates an image file	on
	AM-06 All visible sectors are acquired from the dig	ital source	
	AM-08 All sectors acquired from the digital source a	are acquired accurately	<i>.</i>
	AO-01 If the tool creates an image file, the data re	epresented by the image	2
	file is the same as the data acquired by the tool.		
	AO-05 If the tool creates a multi-file image of a re	equested size then all	
	the individual files shall be no larger than the red	quested size.	
	AU-22 If requested, the tool calculates block hashes	s for a specified block	2
	A0-23 If the tool logs any log significant information	ion the information is	
	accurately recorded in the log file.		-
	AO-24 If the tool executes in a forensically safe ex	ecution environment, t	he
	digital source is unchanged by the acquisition proce	ess.	
Togtor	irr		
Name:			
Test Host:	freddy		
Test Date:	Tue Feb 7 10:18:09 2012		
Drives:	src(UB-SATA) dst (none) other (66-SATA)		
Source Setup:	STC HASH (SHA250) · < 0026805624818CAEDAD12019DCDB16E79DE3C47CFE1C717193F	9880B3DB32A9F >	
beeup	src hash (SHA1): < DA892EE968DD828F2F1B6825C1D3EF35()62A0737 >	
	src hash (MD5): < 1873847F597A69D0F5DB991B67E84F92	>	
	488397168 total sectors (250059350016 bytes)		
	30400/254/63 (max cyl/hd values)		
	30401/255/63 (number of cyl/nd) Model (00.TD-22EVED)) cerial # (WD-WMNEH2677545)		
	Model (000D 22F1B0) Selial # (WD WMAE12077545)		
Log			
Highlights:	===== Tool Settings: =====		
	nash SHA-256		
	start-sector 0		
	image-format dd		
	compression none		
	Write Block: none		
	WITCE BIOCK. Hole		
	OS: Microsoft Windows [Version 6.1.7600]		
	====== Image file segments ======		
	1 250059350016 2012-02-07 18:25 da-06-sata48.001		
	2 1098 2012-02-08 10:35 da-06-sata48.txt		
	====== Extract from X-Ways logfile.txt file ======		
	Source: Hard disk 2		
	Sectors 0-488397167		
	Destination: I:\da-06-sata48\da-06-sata48.001		
	Model: WDC WD2500JD-22FYB0		
	Sector count: 488 397 168 [user accessible]		
	Sector count: 488,397,168 [actual]		
	Hash of source data:		
	0026805624818CAEDAD12019DCDB16E79DE3C47CFE1C717193F	9880B3DB32A9F (SHA-256)	
	====== Source drive rehash ======		
	Rehash (SHA1) of source: DA892EE968DD828F2F1B6825C1	D3EF35062A0737	
Pogulta			
RESULLS.	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
		-	

Test Case DA-06-SATA48 X-Ways Forensics 16.2 SR-5		
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.22 DA-06-SCSI

Test Case DA-0	06-SCSI X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-06 Acquire a physical device using access interf	ace AI to an image file.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.	
	AM-02 The tool acquires digital source DS.	
	AM-03 The tool executes in execution environment XE	
	AM-05 If image file creation is specified, the tool	creates an image file
	on file system type FS.	ital gourge
	AM-06 All visible sectors are acquired from the digital source	are acquired accurately
	AO-01 If the tool creates an image file, the data r	epresented by the image
	file is the same as the data acquired by the tool.	
	AO-05 If the tool creates a multi-file image of a r	equested size then all
	the individual files shall be no larger than the re-	quested size.
	AO-22 If requested, the tool calculates block hashe	s for a specified block
	size during an acquisition for each block acquired :	from the digital source.
	accurately recorded in the log file	ION, the information is
	AO-24 If the tool executes in a forensically safe e	xecution environment,
	the digital source is unchanged by the acquisition	process.
		-
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Mon Mar 26 16:00:16 2012	
Drives.	$\operatorname{Src}(\operatorname{EU})$ ast (none) other (US-SAIA)	
Setup:	src hash (MD5): < A97C8F36B7AC9D5233B90AC09284F938	>
Decap	17938985 total sectors (9184760320 bytes)	
	Model (ATLAS10K2-TY092J) serial # (169028142436)	
Log		
Highlights:	===== Tool Settings: =====	
	nash MD-5	
	start-sector 0	
	image-format e01	
	compression none	
	Write Block: none	
	OC: Missesset Windows VD [Mansien 5 1 2000]	
	US: Microsoft Windows XP [Version 5.1.2000]	
	===== Image file segments =====	
	1 9187008111 2012-03-26 21:23 da-06-scsi.e01	
	2 849 2012-03-26 21.26 da-06-SCSI.LXL	
	===== Extract from X-Ways logfile.txt file ======	
	Source: Hard disk 2	
	Sectors 0-17938984	
	Destination: E:\da-06-scsi\da-06-scsi.e01	
	Model: QUANTUM ATLAS10K2-TY092J	
	Total capacity: 9,184,760,320 bytes = 8.6 GB	
	Sector count: 17,938,985	29 (MDE)
	Hash of Source data: A97CorsoB7AC9D5253B90AC09204r9	(CUM) 6C
	===== Source drive rehash ======	
	Rehash (SHA1) of source: 4A6941F1337A8A22B10FC844B4	D7FA6158BECB82
Results:	Aggertion & Evposted Desult	Actual Pagult
	ABSEILION & EXPECTED RESULT	as expected
	AM-02 Source is type DS	as expected
	AM-03 Execution environment is XE	as expected
	AM-05 An image is created on file system type FS	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected

Test Case DA-06-SCSI X-Ways Forensics 16.2 SR-5		
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	as expected
Analysis:	Expected results achieved	

5.2.23 DA-06-USB

Case DA-06 Acquire a physical device using access interface AI to an image file. Ameson in the tool uses access interface SRC-AI to access the digital source. Am-02 The tool acquires digital source DS. Ameson in tool image file contention is specified, the tool creates an image file on if the specified, the tool creates an image file. Ameson in the specified, the tool creates an image file on if the specified, the distal source. Am-06 All stable sources are acquired from the digital source. Am-06 All sectors acquired from the digital source accurately. Am-07 All sectors acquired from the digital source. Am-07 All sectors acquired from the digital source. Am-07 All sectors acquired from the digital source. Am-07 All sectors acquired from the digital source. Am-07 All sectors acquired from the digital source. Am-07 All sectors acquired from the requested size. AM-02 If the tool creates an uniti-file image of a requested size. Amos acquires in the base of the digital source. Amos in the acquisition for each block acquired from the digital source. Amos acquires in the sequestion process. Amos in the acquires in a foremically safe execution environment, the digital source is unchanged by the acquisition process. Amos acquires is unchanged by the acquisition process. Test bace: Med Feb s l4:46:08 2012 Amos acquires is unchanged by the acquires is unchanged by the acquires is unchange is unchange is unchanged is acquires is unchanged is uncha	Case DA-06 Acquir	e a physical device using access interface AI to an image file.
Assertions: NH-01 The tool acquires digital source 55. NH-02 The tool acquires digital source 55. NH-03 The tool acquires digital source 55. NH-03 The tool acquires digital source 55. NH-06 All sectors acquired from the digital source. NH-07 The tool operation of the tool creates an image file. No-01 If the tool creates an image file. No-02 If requested, the tool calculates block hashes for a specified block size during an acquired inch block acquired from the digital source. AD-22 If requested, the tool calculates block hashes for a specified block size during an acquired inch block acquired from the digital source. AD-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AD-21 If requesting the digital source (80-502) Test back: Yer Name: Test toat: Source sor (63-F02) dst (non- other (80-502) EckBr011494B65018F74C47547C3874F7180585096A830r9247A99ErF613BB1D > ser chash (SHA15): < F7069802BBA265308BA26543109247A99ErF613BB1D > ser chash (SHA15): < F7069802BBA265308BA26543109247A99ErF613BB1D > ser chash (SHA15): < F7069802BBA265308BA2654311730492454313000 06 frait6	Summary.	
Tester jrr Name: Ifreddy Test Host: freddy Test Date: Wed Feb & 14:46:08 2012 Drives: src (hash (SHA256): < Source src hash (SHA256): < Setup: ECOEFD11494BacholBer74C37547C3874F7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069EDCEEAC663C8BDECD82159F22DA96BE99B > src hash (SHA1): < F7069EDCEEAC663C8BDECD82159F22DA96BE99B > src hash (SHA1): < F7069EDCEEAC663C8BDECD82159F22DA96BE99B > src hash (MD5): < EE217BC4FA4F3D1B4021D29B065AA9EC > 117304992 total sectors (60060155904 bytes) Nodel (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 004192002 0000/001/01 023/254/63 DOF extended 3 S 000000063 113097537 0261/001/01 1023/254/63 DOF extended 3 S 00000000 000000000 0000/000/00 0000/000/00 000 empty entry 5 P 000000000 00000000 0000/000/00 0000/000/00 000 empty entry 6 P 000000000 000000000 0000/000/00 0000/000/00 00	Assertions: AM-01 The to AM-02 The to AM-03 The to AM-03 The to AM-05 If ima file system AM-06 All vi AM-08 All se AO-01 If the file is the AO-05 If the the individu AO-22 If req size during AO-23 If the accurately r AO-24 If the digital sour	ol uses access interface SRC-AI to access the digital source. ol acquires digital source DS. ol executes in execution environment XE. ge file creation is specified, the tool creates an image file on type FS. sible sectors are acquired from the digital source. ctors acquired from the digital source are acquired accurately. tool creates an image file, the data represented by the image same as the data acquired by the tool. tool creates a multi-file image of a requested size then all al files shall be no larger than the requested size. uested, the tool calculates block hashes for a specified block an acquisition for each block acquired from the digital source. tool logs any log significant information, the information is ecorded in the log file. tool executes in a forensically safe execution environment, the ce is unchanged by the acquisition process.
Test Host: freddy Test Date: Wed Feb 8 14:46:08 2012 Drives: src(63-FU2) dst (none) other (80-FU2) Source src hash (SHA256): Setup: src(bala) src hash (SHA156): ECGEFU2) Source src hash (MD5): < F217BC762C65A2683C88DECD8215972DA966E598> src hash (MD5): Set17BC4FA4F3D1B4021D298065A39EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start (//S End C/H/S End C/H/S bot D Fat16 2 x 004192965 113097600 0261/000/01 1023/254/63 0F extended 3 s 00000000 00000000 0000/000/00 0000/000/00 00	Tester jrr Name:	
Test Date: Wed Feb 8 14:46:08 2012 Drives: src(63-FU2) dst (none) other (80-FU2) Source src (63-FU2) dst (none) other (80-FU2) Source src (63-FU2) dst (none) other (80-FU2) Setup: EC8FF011494BA6DA18F74C47547C3874E7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069BCDEAEC863C8BECED82159F22DA96EB9B > src hash (SHA1): < F7069BCDEAEC863C8BECED82159F22DA96EB9B > src hash (SHA1): < F7069BCDEAEC863C8BECED82159F22DA96EB9B > src hash (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 D00000063 004152902 0000/001/10 023/254/63 Boot 06 Fat16 2 x 004192955 113097507 0261/01011 023/254/63 Boot 06 Fat23 4 S 00000000 00000000 0000/000/00 0000/000/00 000 empty entry 5 P 00000000 00000000 0000/000/00 0000/000/00 00 empty entry 5 P 00000000 00000000 0000/000/00 0000/000/00 00 empty entry 1 004192902 sectors 57905938944 bytes Log ===== Tool Settings: ====== size 1024MB hash MD5 re-verify yes start-sector 0 image-format e01 compression none Write Block: 18 UltraBlock USB (T8) OS: Microsoft Windows XP [Version 5.1.2600] ====== Image file segments ===== 1074004597 2012-02-08 15:12 da-06-usb.e01	Test Host: freddy	
Drives: src(53-FU2) dst (none) other (80-FU2) Source src hash (SHA256): < ECSEF011494BA6DA18F74C47547C3874E7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069EDCEEAC863C8B0ECB215972DA96BE99B > src hash (MD5): < EE217BC4FA4FD1B4021D29B065AA9EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 004192902 0000/001/01 0260/254/63 Boot 06 Fat16 2 X 004192965 113097600 0261/001/01 1023/254/63 OF extended 3 S 00000000 000000000 0000/000/00 0000/000/00 00	Test Date: Wed Feb 8 14	:46:08 2012
<pre>Solution Site Hash (SHALS) - S Betup: Setup: BCCBEF011494BA6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D > src hash (SHAL): < F7069EDCEBEC0863C8BECED215972DA96EE99B > src hash (MDS): < EE217Bc4FA4F31DH4021298065AA9EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 004192902 0000/001/01 0236/254/63 OB Fat32 4 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>	Drives: src(63-FU2)	dst (none) other (80-FU2)
Log Highlights: ===== Tool Settings: ===== size 1024MB hash MD5 re-verify yes start-sector 0 image-format e01 compression none Write Block: 18 UltraBlock USE (T8) OS: Microsoft Windows XP [Version 5.1.2600] ===== Image file segments ===== 1 1074008478 2012-02-08 15:12 da-06-usb.e01 2 1074004597 2012-02-08 15:14 da-06-usb.e02 3 1074004597 2012-02-08 15:16 da-06-usb.e03 55 1074004597 2012-02-08 17:04 da-06-usb.e55 56 1004601449 2012-02-08 17:06 da-06-usb.e56 57 1862 2012-02-08 17:56 da-06-usb.txt ===== Extract from X-Ways logfile.txt file ====== Source: Hard disk 7	Setup: EC8EF011494E src hash (SH src hash (M 117304992 tc Model (SP061 N Start L 1 P 0000000 2 x 0041929 3 S 0000000 4 S 0000000 5 P 0000000 6 P 0000000 1 004192902 3 113097537	A6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D > A1): < F7069EDCBEAC863C88DECED82159F22DA96BE99B > D5): < EE217BC4FA4F3D1B4021D29B065AA9EC > tal sectors (60060155904 bytes) 2N) serial # () BA Length Start C/H/S End C/H/S boot Partition type 63 004192902 0000/001/01 0260/254/63 Boot 06 Fat16 65 113097600 0261/000/01 1023/254/63 OF extended 63 113097537 0261/001/01 1023/254/63 OB Fat32 00 00000000 0000/000/00 0000/000 00 empty entry 00 00000000 0000/000/00 0000/000/00 00 empty entry 00 00000000 0000/000/00 0000/000/00 00 empty entry sectors 2146765824 bytes
Sectors U-II/304991	Log Highlights: ===== Tool size 1024MB hash MD5 re-verify ye start-sector image-format compression Write Block: OS: Microsof ===== Image 1 1074008478 2 1074004597 3 1074004597 55 1074004597 55 107400459 56 100460144 57 186 ===== Extra Source: Hard Sectors 0-11	<pre>Settings: ====== s 0 0 e01 none 18 UltraBlock USB (T8) t Windows XP [Version 5.1.2600] file segments ===== 2012-02-08 15:12 da-06-usb.e01 2012-02-08 15:14 da-06-usb.e02 2012-02-08 15:16 da-06-usb.e03 7 2012-02-08 17:06 da-06-usb.e55 9 2012-02-08 17:56 da-06-usb.etxt ct from X-Ways logfile.txt file ====== disk 7 7304991</pre>

Test Case DA-	06-USB X-Ways Forensics 16.2 SR-5	
	Model: SAMSUNG SP0612N	
	Total capacity: 60,060,155,904 bytes = 55.9 GB	
	Sector count: 117,304,992	
	Sector count: 4,192,902	
	Hash of source data: EE217BC4FA4F3D1B4021D29B065AA9	EC (MD5)
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.24 DA-07-CF

Test Case DA-07-CF X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.		
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.		
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Thu May 10 10:02:42 2012		
Drives:	<pre>src(C1-CF) dst (none) other (D6-THUMB)</pre>		
Source Setup:	src hash (SHA256): Src hash (SHA256): (C7CF0218222DF80D5316511D6814266C7FA507C13F795AD3D323BB73C1590D80 > src hash (SHA1): Src hash (SHA1): 50808 total sectors (257949696 bytes) Model (CF) serial # () N Start LBA Length Start C/H/S box 10157/116/40 Dis7/032/45 Boot 72 Other 1 P 168689522 Dis6028102 00055499 0372/097/50 000055499 0372/097/50 000055499 sectors 28415488 bytes		
Log Highlights:	<pre>====== Tool Settings: ====== hash SHA-1 re-verify yes image-format e01 compression none Write Block: 7 UltraBlock Forensic Card Reader OS: Microsoft Windows [Version 6.1.7600] ====== Image file segments ====== 1 258015758 2012-05-10 14:25 da-07-cf.e01 2 1283 2012-05-10 14:25 da-07-cf.txt ====== Extract from X-Ways logfile.txt file ====== Source: Removable medium 7 Sectors 0-503807 Destination: I:\da-07-cf\da-07-cf.e01 Total capacity: 257,949,696 bytes = 246 MB Hash of source data: 5B8235178DF99FA307430C088F81746606638A0B (SHA-1)</pre>		
Results:	Assertion & Expected Result AM-01 Source acquired using interface AI. AM-02 Source is type DS.	Actual Result as expected as expected	
í	Lin the Source is directed.		

Test Case DA-07-CF X-Ways Forensics 16.2 SR-5		
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.25 DA-07-EXFAT

Test Case DA-07-EXFAT X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-07 Acquire a digital source of type DS to an ima	ge file.
Assertions:	AM-01 The tool uses access interface SRC-AI to acce AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE AM-05 If image file creation is specified, the tool file system type FS. AM-06 All visible sectors are acquired from the dig AM-08 All sectors acquired from the digital source AO-01 If the tool creates an image file, the data r file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a r the individual files shall be no larger than the re AO-22 If requested, the tool calculates block hashe size during an acquisition for each block acquired AO-23 If the tool logs any log significant informat accurately recorded in the log file. AO-24 If the tool executes in a forensically safe e digital source is unchanged by the acquisition proc	ss the digital source. creates an image file on ital source. are acquired accurately. epresented by the image equested size then all quested size. s for a specified block from the digital source. ion, the information is xecution environment, the ess.
Name:	Jrr	
Test Host:	frank	
Test Date:	Tue Jul 31 10:25:38 2012	
Source	src hash (SHA1): < 6EC98F42EB5914D1F9D1661C0BB0A366	0569F95B >
Setup:	<pre>src hash (MD5): < 30BAB74F67783C0555BCBD73DD4D0D5E 156301488 total sectors (80026361856 bytes) Model (ST380815AS) serial # (5QZ5 N Start LBA Length Start C/H/S End C/H/S bo 1 P 000002048 010485760 0000/032/33 0652/213/09 2 P 010490445 005863725 0653/000/01 1017/254/63 3 P 016354170 007807590 1018/000/01 1023/254/63 4 P 00000000 00000000 000/000/00 0000/000/</pre>	<pre>> TD8Y) ot Partition type 07 NTFS 83 Linux 83 Linux 00 empty entry C4564A1373497 CDC33E18EC066CF1EAB 0EEDE2C616</pre>
Log Highlights:	<pre>===== Tool Settings: ====== hash SHA-256 re-verify yes image-format e01 compression none Write Block: 56 Tableau Forensic SATA/IDE Bridge OS: Microsoft Windows [Version 6.1.7600] ====== Image file segments ====== 1 5370023807 2012-07-31 16:15 da-07-exFAT.e01 2 819 2012-07-31 16:17 da-07-exFAT.e01 2 819 2012-07-31 16:17 da-07-exFAT.txt ===== Extract from X-Ways logfile.txt file ====== Source: Drive F: Sectors 0-10485759 Destination: D:\da-07-exFAT\da-07-exFAT.e01 Total capacity: 5,368,709,120 bytes = 5.0 GB Hash of source data: 1309F5D1C2BC16E02F9C87A6AC8D79308F636B34DC002081757</pre>	C4564A1373497 (SHA-256)
Results:	Assertion & Expected Result	Actual Result

November 2013

Test Case DA-07-EXFAT X-Ways Forensics 16.2 SR-5		
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	Not checked
Analysis:	Expected results achieved	

5.2.26 DA-07-F12

Test Case DA-	07-F12 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Thu Apr 12 15:56:41 2012	
Drives:	<pre>src(UI-IDE) dst (none) other (58-IDE) </pre>	
Setup:	SIC HASH (SHAI) < A40880000000000000000000000000000000000	
Setup:	<pre>src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E > 78165360 total sectors (40020664320 bytes) Model (0BF-00JHC0) serial # (WD-WMAMC74171) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057175335 1023/000/01 1023/254/63 01 Fat12 4 x 000032130 002104515 1023/001/01 1023/254/63 05 extended 5 S 00000063 002104452 1023/001/01 1023/254/63 05 extended 6 x 002136645 004192905 1023/000/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 S 00000063 0044932 1023/001/01 1023/254/63 05 extended 11 S 00000063 0044932 1023/001/01 1023/254/63 05 extended 11 S 00000063 010490382 1023/001/01 1023/254/63 05 extended 11 S 00000063 010490382 1023/001/01 1023/254/63 05 extended 11 S 00000063 004208967 1023/001/01 1023/254/63 05 extended 13 S 00000063 027744255 1023/001/01 1023/254/63 05 extended 14 x 029431080 027744255 1023/001/01 1023/254/63 05 extended 15 S 000000063 027744255 1023/001/01 1023/254/63 05 extended 15 S 000000063 004208967 1023/001/01 1023/254/63 05 extended 15 S 000000063 007744192 1023/001/01 1023/254/63 05 extended 15 S 000000063 007744192 1023/001/01 1023/254/63 05 extended 15 S 000000063 007744255 1023/001/01 1023/254/63 05 extended 15 S 000000063 007744192 1023/001/01 1023/254/63 05 extended 15 S 000000060 0000/000/00 0000/000/00 000 empty entry 17 P 00000000 00000000 0000/000/00 000 empty entry 18 P 00000000 00000000 0000/000/00 000 empty entry 18 P 00000000 00000000 0000/000/00 000/000/</pre>	
Highlights:	====== Tool Settings: ====== hash SHA-1 re-verify yes image-format dd compression none	
	Write Block: 4 FastBloc IDE	

Test Case DA-	07-F12 X-Ways Forensics 16.2 SR-5	
	OS: Microsoft Windows [Version 6.1.7600]	
	<pre>===== Image file segments ====== 1 16418304 2012-04-13 13:29 da-07-f12.001 2 864 2012-04-13 13:29 da-07-f12.txt ===== Extract from X-Ways logfile.txt file ====== Source: Drive E: Sectors 0-32066</pre>	
	Destination: N:\da-07-f12\da-07-f12.001	
	Total capacity: 16,418,304 bytes = 15.7 MB	
	Hash of source data: F8B72B65436DE3BD394ACFF71D405D	0389C0E9B7 (SHA-1)
Results:	Annual and Transited Denult	Astron 1 Description
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked

5.2.27 DA-07-F16

Test Case DA-0	07-F16 X-Ways Forensics 16.2 SR-5
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Fri Apr 13 11:01:11 2012
Drives:	STC(UI-IUE) AST (NONE) OTHER (58-IUE)
Source Setup:	<pre>src hash (SHA1): < A48BB565D50EC57C22DB68E2F723DA9AA8DF82B9 > src hash (MD5): < F458F673894753FA6A0EC888EC63848E > 78165360 total sectors (40020664320 bytes) Model (0BB-00JHC0) serial # (WD-WMAMC74171) N Start LBA Length Start C/H/S End C/H/S boo C Fat32X 2 X 020980890 057175335 1023/000/01 1023/254/63 0C Fat32X 2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended 3 S 00000063 002104515 1023/000/01 1023/254/63 05 extended 5 S 00000063 002104452 1023/001/01 1023/254/63 06 Fat16 6 x 0021360 001492902 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 S 00000063 004401995 1023/001/01 1023/254/63 05 extended 11 S 00000063 01049045 1023/001/01 1023/254/63 05 extended 11 S 00000063 01049045 1023/001/01 1023/254/63 05 extended 13 S 00000063 010490382 1023/001/01 1023/254/63 05 extended 13 S 00000063 010490382 1023/001/01 1023/254/63 05 extended 13 S 00000063 010490382 1023/001/01 1023/254/63 05 extended 14 x 025222050 004209030 1023/001/01 1023/254/63 05 extended 15 S 00000063 00774455 1023/001/01 1023/254/63 05 extended 15 S 00000063 027744192 1023/001/01 1023/254/63 07 NTFS 16 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS 16 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS 16 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS 16 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>
Log Highlights:	====== Tool Settings: ====== hash MD-5 re-verify yes image-format e01 compression none Write Block: 4 FastBloc IDE

Test Case DA-	07-F16 X-Ways Forensics 16.2 SR-5		
	OS: Microsoft Windows [Version 6.1.7600]		
	====== Image file segments ======		
	1 1077745421 2012-04-13 09:35 da-07-f16.e01		
	2 905 2012-04-13 09:35 da-07-f16.txt		
	===== Extract from X-Ways logfile.txt file ======		
	Source: Drive F:		
	Sectors $0-2104451$		
	Descination: $N \cdot (da - 0) - 110 \cdot (da - 0) - 110 \cdot e01$		
	Hach of course data: $8P24F3D793188AF2473F60P267AFDA$	4.2 (MD5)	
	hash of source data: 0524F3D795100AF2475F09B207AFDA	12 (105)	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-05 An image is created on file system type FS.	as expected	
	AM-06 All visible sectors acquired.	as expected	
	AM-08 All sectors accurately acquired.	as expected	
	AO-01 Image file is complete and accurate.	as expected	
	AO-05 Multifile image created	ad expected	
	no ob narerifie image createa.	as expected	
	A0-22 Tool calculates hashes by block.	option not available	
	AO-22 Tool calculates hashes by block. AO-23 Logged information is correct.	option not available as expected	
	AO-22 Tool calculates hashes by block. AO-23 Logged information is correct. AO-24 Source is unchanged by acquisition.	option not available as expected not checked	
	AO-22 Tool calculates hashes by block. AO-23 Logged information is correct. AO-24 Source is unchanged by acquisition.	option not available as expected not checked	
	AO-22 Tool calculates hashes by block. AO-23 Logged information is correct. AO-24 Source is unchanged by acquisition.	option not available as expected not checked	

5.2.28 DA-07-F32

Test Case DA-07-F32 X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.		
Assertions:	 AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process. 		
Tester	jrr		
Name. Test Host:	freddy		
Test Date:	Fri Apr 13 11:07:11 2012		
Drives:	src(01-IDE) dst (none) other (58-IDE)		
Source	<pre>src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 ></pre>		
Setup:	<pre>src hash (MD5): < F458F673894753FA6A0ECB8BEC63848E > 78165360 total sectors (40020664320 bytes) Model (0BB-00JHC0) serial # (WD-WNAMC74171) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/01/01 1023/254/63 OF extended 3 S 00000063 00032067 1023/001/01 1023/254/63 OF extended 5 S 00000063 002104452 1023/001/01 1023/254/63 O5 extended 6 S 00010063 002104452 1023/001/01 1023/254/63 O5 extended 7 S 00000063 004192905 1023/001/01 1023/254/63 O5 extended 9 S 00000063 004192902 1023/001/01 1023/254/63 O5 extended 9 S 00000063 0044092902 1023/001/01 1023/254/63 O5 extended 9 S 00000063 00440929 1023/001/01 1023/254/63 O5 extended 1 S 00000063 00440932 1023/001/01 1023/254/63 O5 extended 11 S 00000063 00440932 1023/001/01 1023/254/63 O5 extended 13 S 00000063 00440932 1023/001/01 1023/254/63 O5 extended 13 S 00000063 00420930 1023/001/01 1023/254/63 O5 extended 13 S 00000063 00420930 1023/001/01 1023/254/63 O5 extended 13 S 00000063 00420930 1023/001/01 1023/254/63 O5 extended 13 S 00000063 027744155 1023/001/01 1023/254/63 O5 extended 14 x 029431080 027744255 1023/001/01 1023/254/63 O7 NTFS 16 S 000000063 027744192 1023/001/01 1023/254/63 O7 NTFS 16 S 00000000 0000000 0000/000/00 0000/000/</pre>		
Log Highlights:	===== Tool Settings: ===== hash SHA-256 re-verify yes image-format dd compression none		

Test Case DA-	07-F32 X-Ways Forensics 16.2 SR-5	
	Write Block: 4 FastBloc IDE	
	OS: Microsoft Windows [Version 6.1.7600]	
	====== Image file segments ===== 1 4301789184 2012-04-13 09:42 da-07-f32.001 2 980 2012-04-13 09:44 da-07-f32.txt	
	====== Extract from X-Ways logfile.txt file ====== Source: Drive G: Sectors 0-8401931 Destination: N:\da-07-f32\da-07-f32.001 Total capacity: 4,301,789,184 bytes = 4.0 GB Hash of source data: CAE3A4CC33D59548063255D2AA4016940AC712DD96985AD9B94	FF271CC3E943E (SHA-256)
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Apolygia	Emosted yesults achieved	
Analysis:	Expected results achieved	

5.2.29 DA-07-F32X

Test Case DA-07-F32X X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.	
Tester Name:	jrr	
Test Host:	freddy	
Iest Date:	Fri Apr is il:10:01 2012 src(01-TDF) dst (none) other (58-TDF)	
Source	src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82R9 >	
Setup:	src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E >	
-	78165360 total sectors (40020664320 bytes)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	1 P 000000063 020980827 0000/001/01 1023/254/63 OC Fat32X	
	2 X U2U98U89U U5/1/5335 1U23/UUU/U1 1U23/254/63 UF extended	
	$4 \ge 000032130 \ 002104515 \ 1023/000/01 \ 1023/254/63 \ 05 \ \text{extended}$	
	5 S 000000063 002104452 1023/001/01 1023/254/63 06 Fat16	
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended	
	7 S 00000063 004192902 1023/001/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9 S 00000063 008401932 1023/001/01 1023/254/63 OB Fat32	
	10 x 014731605 010490445 1023/000/01 1023/254/63 05 extended	
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended	
	15 S 00000063 027744192 1023/001/01 1023/254/63 07 NTFS	
	16 S 000000000 00000000 0000/000/00 0000/000/00 00	
	17 P 000000000 00000000 0000/000/00 0000/000 00	
	18 P 000000000 00000000 0000/000/00 0000/000/00 00	
	1 020980827 sectors 10/42183424 bytes	
	5 000032007 sectors 10418304 bytes	
	7 004192902 sectors 2146765824 bytes	
	9 008401932 sectors 4301789184 bytes	
	11 010490382 sectors 5371075584 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 027744192 sectors 14205026304 bytes	
	01F32X-ma5 10/42183423 B5BFD9CE3990C5//EF89C5AFB925F94/ 01F32Y_cha1 10742183423 20PA6CE583A176C5DP533F3A2F57PED5A4A870C1	
	OIL25V_DHUT I0/45103452_20DM0CL202MT/0C2DB222F2MSL2/BLD2M4W0/0CT	
Log		
Highlights:	===== Tool Settings: ======	
	hash SHA-1	
	re-verify yes	
	image-format e01	
	compression none	
	Write Block: 4 FastBloc IDE	
Test Case DA-	07-F32X X-Ways Forensics 16.2 SR-5	
---------------	--	----------------------
	OS: Microsoft Windows [Version 6.1.7600]	
	====== Image file segments ======	
	1 10744812123 2012-04-13 09:57 da-07-32x.e01	
	2 939 2012-04-13 10:03 da-07-32x.txt	
	===== Extract from X-Ways logfile.txt file ======	
	Source: Drive D:	
	Sectors $U-20980826$	
	Descination: N: $(a - 0/-32x)(a - 0/-32x)(a - 0/-32x)$	
	Field Capacity $10,742,103,424$ bytes = 10.0 GB Hagh of gourge data: $200AGCEE923176GEDE522E232EE7DE$	(91)
	hash of source data: SUBROCFS03A1/0C5DB553E5A2F5/BF.	DSA4A8/UCI (SHA-I)
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analveie:	Expected results achieved	

5.2.30 DA-07-NT

Test Case DA-	07-NT X-Ways Forensics 16.2 SR-5
Case Summary:	DA-07 Acquire a digital source of type DS to an image file.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	AM-05 If image file creation is specified, the tool creates an image file
	on file system type FS.
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	AO-01 If the tool creates an image file, the data represented by the image
	file is the same as the data acquired by the tool.
	A0-05 If the tool creates a multi-file image of a requested size then all
	the individual files shall be no larger than the requested size.
	A0-22 if requested, the coor calculates block hashes for a specified block
	size during an acquisition for each proce acquired from the information is Ω_{-23} If the tool logs any log significant information the information is
	accurately recorded in the log file.
	AO-24 If the tool executes in a forensically safe execution environment,
	the digital source is unchanged by the acquisition process.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Fri Apr 13 11:12:14 2012
Drives:	<pre>src(01-IDE) dst (none) other (58-IDE)</pre>
Source	src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 >
Setup:	src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E >
	78165360 total sectors (40020664320 bytes)
	Model (UBB-UUJHCU) serial # (WD-WMAMC/41/1)
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	2 ¥ 02080800 057175325 1023/000/01 1023/254/63 0C Fattandad
	2 x 020900590 05717355 1023/001/01 1023/254/63 01 Eat12
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended
	5 \$ 00000063 002104452 1023/001/01 1023/254/63 06 Fat16
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended
	7 S 000000063 004192902 1023/001/01 1023/254/63 16 other
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended
	9 S 000000063 008401932 1023/001/01 1023/254/63 0B Fat32
	10 x 014731605 010490445 1023/000/01 1023/254/63 05 extended
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux
	12 x 025222050 004209030 1023/000/01 1023/254/63 05 extended
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended
	15 S 000000063 02//4192 1023/001/01 1023/254/63 0/ NTFS
	16 S 000000000 00000000 0000/00 0000/00 000/00 00
	18 B 00000000 00000000 0000/00 0000/00 000 000 000 00
	1 020980827 sectors 10742183424 bytes
	3 000032067 sectors 16418304 bytes
	5 002104452 sectors 1077479424 bytes
	7 004192902 sectors 2146765824 bytes
	9 008401932 sectors 4301789184 bytes
	11 010490382 sectors 5371075584 bytes
	13 004208967 sectors 2154991104 bytes
	15 027744192 sectors 14205026304 bytes
	01NT-md5 14205026303 92B27B30BEE8B0FFBA8C660FA1590D49
-	
LOG Highlighta:	Tool Settings'
mightights.	1001 Bellings,= hash MD-5
	re-verify ves
	image-format dd
	compression none
	Write Block: 4 FastBloc IDE
	US: Microsoft Windows [Version 6.1.7600]

Test Case DA-	07-NT X-Ways Forensics 16.2 SR-5	
	<pre>====== Image file segments ====== 1 14205022208 2012-04-13 10:19 da-07-nt.001 2 805 2012-04-13 10:25 da-07-nt.txt ====== Extract from X-Ways logfile.txt file ====== Source: Drive H: Sectors 0-27744183 Destination: N:\da-07-nt\da-07-nt.001 Total capacity: 14,205,022,208 bytes = 13.2 GB Hash of source data: 28A3A4330007F75B8AFA99D38FFCD257 (MD5)</pre>	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	last 8 sectors not acquired
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	A0-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results not achieved	

5.2.31 DA-07-NT-ALT

Test Case DA-0	07-NT-ALT X-Ways Forensics 16.2 SR-5		
Case	DA-07 Acquire a digital source of type DS to an image file.		
Summary:			
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source. AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE. AM-05 If image file creation is specified, the tool creates an image file on file system type FS. AM-06 All visible sectors are acquired from the digital source. AM-08 All sectors acquired from the digital source are acquired accurately. AO-01 If the tool creates an image file, the data represented by the image file is the same as the data acquired by the tool. AO-05 If the tool creates a multi-file image of a requested size then all the individual files shall be no larger than the requested size. AO-22 If requested, the tool calculates block hashes for a specified block size during an acquisition for each block acquired from the digital source. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. AO-24 If the tool executes in a forensically safe execution environment, the digital source is unchanged by the acquisition process.		
Tester Name:	Jrr		
Test Host:	Frank		
Test Date:	Fri Jul 12 09:37:29 2013		
Drives:	<pre>src(43) dst (none) other (0C-FU)</pre>		
Source Setup:	<pre>src hash (SHA1): < 888E2E7F7AD237DC7A732281DD93F325065E5871 > src hash (MD5): < BC39C3F7EFA50E77B9BA1E65A5AEEF7 > 78125000 total sectors (4000000000 bytes) Model (0BB-75JHC0) serial # (WD-WMAMC46588) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 000000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057143205 1023/000/01 1023/254/63 0F extended 3 S 00000063 000032067 1023/001/01 1023/254/63 01 Fat12 4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended 5 c 000000062 002104515 1022/001/01 1023/254/63 05 extended</pre>		

Test Case DA-	07-NT-ALT X-Ways Forensics 16.2 SR-5	
Test Case DA-	A mays Foreneitics 10.2 SK-5 6 x 002136645 004192965 1023/000/01 1023/254/63 7 S 00000063 004192902 1023/001/01 1023/254/63 8 x 006329610 008401995 1023/000/01 1023/254/63 9 S 00000063 008401932 1023/001/01 1023/254/63 10 x 014731605 010490445 1023/000/01 1023/254/63 11 S 00000063 010490382 1023/001/01 1023/254/63 12 x 025222050 004209030 1023/000/01 1023/254/63 13 S 00000063 004208967 1023/001/01 1023/254/63 14 x 029431080 027712125 1023/001/01 1023/254/63 15 S 00000063 027712062 1023/001/01 1023/254/63 16 S 00000000 00000000 0000/000/00 0000/000 17 P 00000000 00000000 0000/000/00 0000/000/00 17 P 00000000 00000000 0000/000/00 0000/000/00 18 P 00000000 00000000 0000/000/00 0000/000/00 18 P 00000000 00000000 0000/000/00 0000/000/00 18 P 00000000 00000000 0000/000/00 0000/000/00 10 20980827 sectors 16418304 bytes 5 002104452 sectors 1077479424 bytes 7 004192902 sectors 2146765824 bytes 10 01490382 sectors 5371075584 bytes 13 004208967 sectors 2154991104 bytes 13 004208967 sectors 2154991104 bytes 13 004208967 sectors 14188575744 bytes 13 004208967 sectors 14188575744 bytes	05 extended 16 other 05 extended 0B Fat32 05 extended 83 Linux 05 extended 82 Linux swap 05 extended 07 NTFS 00 empty entry 00 empty entry 00 empty entry 1E
Log Highlights:	===== Tool Settings: =====	
	hash MD-5	
	compression none	
	Write Block: 56 Tableau Forensic SATA/IDE Bridge	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	====== Image file segments ===== 1 2097152000 2013-06-26 14:09 Hard disk 6, Partitic 2 2097152000 2013-06-26 14:11 Hard disk 6, Partitic 3 2097152000 2013-06-26 14:13 Hard disk 6, Partitic 4 2097152000 2013-06-26 14:14 Hard disk 6, Partitic 5 2097152000 2013-06-26 14:16 Hard disk 6, Partitic 6 2097152000 2013-06-26 14:18 Hard disk 6, Partitic 7 1605663744 2013-06-26 14:19 Hard disk 6, Partitic	n 8.001 n 8.002 n 8.003 n 8.004 n 8.005 n 8.006 n 8.007
	===== Extract from X-Ways logfile.txt file ======	
	Source, Hard disk 6, Partition 8 Sectors 0-27712061	
	Destination: L:\xways16.2_re-run\da-07-nt\Hard disk Total capacity: 14,188,575,744 bytes = 13.2 GB Hash of source data: 5D42FA317C802ACFEF2D313092D741	6, Partition 8.001 1E (MD5)
Results:		
	Assertion & Expected Result	Actual Result
	AM-UI Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-05 An image is created on file system type FS	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-05 Multifile image created.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.32 DA-07-THUMB

Test Case DA-0	07-THUMB X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-07 Acquire a digital source of type DS to an ima	ge file.	
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.		
	AM-02 The tool acquires digital source DS.		
	AM-03 The tool executes in execution environment XE.		
	AM-05 If image file creation is specified, the tool	creates an image file	
	on file system type FS.		
	AM-06 All visible sectors are acquired from the dig	ital source.	
	AM-08 All sectors acquired from the digital source	are acquired accurately.	
	AU-UI II the tool creates an image life, the data r	epresented by the image	
	AO-05 If the tool creates a multi-file image of a r	equested size then all	
	the individual files shall be no larger than the re	quested size.	
	AO-22 If requested, the tool calculates block hashe	s for a specified block	
	size during an acquisition for each block acquired	from the digital source.	
	AO-23 If the tool logs any log significant informat	ion, the information is	
	accurately recorded in the log file.	vogution onvivonment	
	the digital source is unchanged by the acquisition	process	
	the digital bounce is anonanged by the acquisition	P100055.	
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Fri Apr 20 10:53:33 2012		
Drives:	src(D5-THUMB) dst (none) other (D6-THUMB)		
Source Setup:	src hash (MD5): < C843593624B2B3B878596D8760B19954	DC53E38A >	
Decupt	505856 total sectors (258998272 bytes)	-	
	Model (usb2.0Flash Disk) serial # ()		
Log			
Highlights:	===== Tool Settings: ======		
	re-verify ves		
	image-format dd		
	compression none		
	Write Block: 18 Tableau Forensic USB Bridge		
	Write Brock. 10 Tableau Forensic Obb Bridge		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Image file segments ======		
	1 258998272 2012-04-20 17:24 da-07-thumb.001		
	2 1261 2012-04-20 17:24 da-07-thumb.txt		
	Extract from X-Waya logfile tyt file		
	Source: Removable medium 7		
	Sectors 0-505855		
	Destination: D:\da-07-thumb\da-07-thumb.001		
	Total capacity: 258,998,272 bytes = 247 MB		
	Hash of source data: D68520EF74A336E49DCCF83815B7B0	8FDC53E38A (SHA-1)	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-05 An image is created on file system type FS.	as expected	
	AM-00 All visible sectors acquired.	as expected	
	AM-VO ALL Sectors accurately acquired.	as expected	
	AO-05 Multifile image created.	as expected	
	AO-22 Tool calculates hashes by block.	option not available	
	AO-23 Logged information is correct.	as expected	
	AO-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

November 2013

5.2.33 DA-09

Test Case DA-	09 X-Ways Forensics 16.2 SR-5
Case Summary:	DA-09 Acquire a digital source that has at least one faulty data sector.
Assertions:	AM-01 The tool uses access interface SRC-AI to access the digital source.
	AM-02 The tool acquires digital source DS.
	AM-03 The tool executes in execution environment XE.
	on file system type FS.
	AM-06 All visible sectors are acquired from the digital source.
	AM-08 All sectors acquired from the digital source are acquired accurately.
	AM-09 If unresolved errors occur while reading from the selected digital source, the tool notifies the user of the error type and location within
	the digital source.
	source, the tool uses a benign fill in the destination object in place of
	the inaccessible data.
	AO-01 If the tool creates an image file, the data represented by the image
	file is the same as the data acquired by the tool.
	AO-05 If the tool creates a multi-file image of a requested size then all
	the individual files shall be no larger than the requested size. $10-22$ If requested, the tool calculates block backes for a specified block
	size during an acquisition for each block acquired from the digital source.
	AO-23 If the tool logs any log significant information, the information is
	accurately recorded in the log file.
	AO-24 If the tool executes in a forensically safe execution environment,
	the digital source is unchanged by the acquisition process.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Wed Apr 25 14:29:13 2012
Drives:	Src(ED-BAD-CPR2) dst (50-1DE) other (none)
Setup:	NO DEFORE HASH FOR ED-BAD-CPRZ
beeup	Known Bad Sector List for ED-CPR-BAD-2
	Manufacturer: Maxtor
	Model: DiamondMax Plus 9
	Serial Number: Y22HJL7C
	Interface: SATA
	468 faulty sectors
	1344585, 2594747, 2595500, 2599086, 2599839, 2809909,
	2809910, 3422895, 3422896, 4116750, 4120336, 4120337,
	4121089, 4121090, 4696046, 4698397, 4703710, 4707186,
	4/08105, 4/11580, 4/12499, 4/14850, 4/15//0, 4/19245, 4723630, 4723640, 4724558, 4724559, 4728034, 4728053
	4731304, 4732223, 4735699, 4740093, 4741012. 4743363.
	4745407, 4748677, 4752152, 4756547, 4757466, 4759817,
	4761860, 4761861, 4764211, 4764212, 4765130, 4765131,
	4768606, 4769525, 4773001, 4773920, 4776271, 4777190,
	4780665, 4781584, 5446946, 5448990, 5451341, 5452260,
	5020120, 5023595, 5023590, 5023597, 5024514, 5024515, 5624516, 5626865, 5626866, 5626867, 5628000, 5621260
	5632179, 5635655, 5636574, 5640049, 6021518, 6023869.
	6024788, 6028263, 7662307, 8340091, 8340092, 12178157,
	12179060, 12181370, 12182273, 12185687, 12186590, 12340277,
	13016906, 13049575, 13050477, 13050478, 14000022, 14000762,
	14004285, 14041240, 17135988, 17723611, 17876726, 18161032,
	10700155, 20090050, 20094209, 20095011, 20001414, 21093295, 21694174, 21697502, 22730717, 22838734, 22838735, 24596104
	24596105, 24596106, 26791779, 27686030, 28080041, 28081995.
	29555383, 29655054, 30488210, 30488211, 32215323, 32218669,
	33523139, 33991449, 35267814, 37975363, 38134596, 38136734,
	38137571, 38137572, 38207258, 38207259, 38542983, 38567425,
	38568109, 39421072, 39421909, 39425071, 40273501, 42836488,
	4205/11/2, 42043540, 4204/497, 42051440, 42054557, 43505100, 43508342 43872574 43873411 45217120 45217121 45777316
	46221189, 46296219, 46296220, 46528674, 46955925, 47093653

Test Case DA-	09 X-Ways Forensics 16.2 SR-5
	48537000, 48537662, 49911188, 49911189, 51017721, 51769307,
	51769969, 51994516, 51994517, 53855354, 55793018, 55793019,
	57316559, 57320313, 60571670, 60571671, 60571672, 60952349,
	60952350, 60952993, 61535962, 61535963, 61535964, 62592910,
	62593672, 62596563, 62597325, 62600215, 63140751, 63140752,
	63141513, 63141514, 63144404, 63226363, 63229253, 63670246,
	63972517, 63975497, 65576815, 65925948, 66146215, 67860503,
	67860504, 68711104, 69100751, 69176705, 69189596, 69189597,
	69189598, 69190358, 69190359, 69190360, 69974439, 69975201,
	70656792, 72217315, 72801392, 72992581, 72992582, 73626901,
	73626902, 75004819, 78164515, 78167178, 78167885, 78307369,
	78415033, 78415034, 78693137, 79145838, 79146544, 79146545,
	/9146546, /9/44/14, /9/45420, /9/48084, /9/48/90, /9901007,
	80091204, 80091205, 82083870, 82083871, 82083872, 83739051, 82730062, 9441160, 9462520, 9510104, 95419740, 97107262
	03/39/024, 04411502, 04555520, 05101194, 05410/40, 0/19/252, 00030646, 00030646, 00031016, 00003762, 00034430, 00071012
	00/20343, 00/20340, 00/21210, 00/23/32, 00/24422, 00/1013, 00/7101/ 00/755720, 00/200003, 07/13/0, 02/712/0, 02/74/7//
	02743745 94017998 9592570 9592677 959266921 97455310
	9685572 100687317 100689593 102205339 103403045
	104768238. 105074641. 105638643. 106115226. 106115791.
	106117947, 106118512, 106120668, 106121233, 106122698,
	106123954, 106123955, 106125419, 106125420, 106125984,
	106125985, 106128141, 106128706, 106186051, 106936608,
	107133037, 107276378, 108007258, 109270108, 109270673,
	109272829, 109273394, 109275550, 109319902, 110072175,
	111250371, 111251549, 111485059, 112587333, 112588682,
	112588683, 112588684, 114286586, 114359887, 115110935,
	116807008, 116807009, 116808918, 117175664, 117177512,
	117178002, 117179850, 117180340, 117180341, 117181588,
	117182678, 117182679, 117182680, 117183926, 117184417,
	117186264, 117186265, 117186755, 117188602, 117188603,
	117188604, 117189093, 117190341, 117193170, 117195017,
	117195018, 117195508, 117197355, 117197356, 117197357,
	11/19/846, 11/199094, 11/199584, 11/201432, 11/201922,
	11/201923, 11/203//0, 11/204260, 11/204261, 11/204262,
	11/20/50/8, 11/20/599, 11/20/848, 11/20/847, 11/20/848, 11/20/8227, 11/20/10/6, 11/20/848, 11/20/2627, 11/20/2627, 11/20/2648,
	117210337, 117210103, 117210073, 117212023, 117213013,
	117219428, 117219429, 117221276, 117221766, 117221767,
	117221768, 117223014, 117223505, 117225352, 117225353,
	117225354, 117225843, 117227691, 117228181, 117229429,
	117230519, 117230520, 117231767, 117232258, 117234105,
	117234106, 117234596, 117236444, 117236934, 117238182,
	117239272, 117239273, 117240520, 117241011, 117242858,
	117242859, 117245687, 117245688, 117246935, 117247426,
	117249273, 117249274, 117249764, 117251612, 117252102,
	117253350, 117254440, 117254441, 117255688, 117256179,
	117258026, 117258027, 117258517, 117260855, 117260855,
	117262103, 117263193, 117263194, 117264441, 117264932,
	11/266//9, 11/266/80, 11/26/2/0, 11/269/18, 11/269608,
	11/2/0030, 11/2/1940, 11/2/1347, 11/2/333, 11/2/0023, 11/2/7071 11/2/2021 11/2/0220 11/2/20220
	117280100 117281947 117281948 117282438 117284286
	117284776, 117286024, 117287114, 117287115, 117287116,
	117288362, 117288853, 117290700, 117290701, 117290702,
	117291191, 117293039, 117293529, 117294777, 117295867,
	117295868, 117295869, 117297115, 117297606, 117299453,
	117299454, 117299455, 119655644
Log	===== Destination drive setup =====
HIGNIIGNTS:	120301400 Sectors Wipea With 50
	===== Comparison of original to clone drive ======
	Sectors compared: 120103200
	Sectors match: 120102732
	Sectors differ: 468
	Bytes differ: 239616
	Diffs range 1344585, 2594747, 2595500, 2599086, 2599839,
	2809909-2809910, 3422895-3422896, 4116750, 4120336-4120337,
	4121089-4121090, 4696046, 4698397, 4703710, 4707186,

Test Case DA-0	9 X-Ways Forensics 16.2 SR-5
	4708105, 4711580, 4712499, 4714850, 4715770, 4719245,
	4723639-4723640, 4724558-4724559, 4728034, 4728953,
	4/31304, 4/32223, 4/35699, 4/40093, 4/41012, 4/43363,
	4/454U/, 4/480//, 4/52152, 4/5654/, 4/5/406, 4/5981/, Arciaeco Arciaeco Arc
	4/01000-4/01001, 4/04211-4/04212, 4/05150-4/05151, 4/68666 4/66555 4/72001 4/773020 4/76571 4/77100
	4780665 4781584 546964 5488990 5451341 5452560
	5620120, 5623595-5623597, 5624514-5624516, 5626865-5626867.
	5628909, 5631260, 5632179, 5635655, 5636574, 5640049,
	6021518, 6023869, 6024788, 6028263, 7662307, 8340091-8340092,
	12178157, 12179060, 12181370, 12182273, 12185687, 12186590,
	12340277, 13016906, 13049575, 13050477-13050478, 14000022,
	14000762, 14004285, 14041240, 17135988, 17723611, 17876726,
	18161032, 18760155, 20090856, 20094289, 20095011, 20661414,
	21093235, 210941/4, 2109/502, 22/30/1/, 22030/34-22030/35, 24606104,2466106, 26701770, 27606020, 200000041, 2000100E
	29555383 29655054 30488210-30488211 32215323 32218669
	33523139, 33991449, 35267814, 37975363, 38134596, 38136734,
	38137571-38137572, 38207258-38207259, 38542983, 38567425,
	38568109, 39421072, 39421909, 39425071, 40273501, 42836488,
	42837172, 42843548, 42847497, 42851446, 42854557, 43505180,
	43508342, 43872574, 43873411, 45217120-45217121, 45777316,
	46221189, 46296219-46296220, 46528674, 46955925, 47093653,
	48537000, 48537662, 49911188-49911189, 51017721, 51769307,
	51/03909, 51994510-51994517, 53855354, 55793018-55793019, 57216550 57220212 60571670 60571672 60052240 60052250
	5/310339, 5/320313, 005/10/0-003/10/2, 00532347-0053230,
	62597325, 62600215, 63140751-63140752, 63141513-63141514.
	63144404, 63226363, 63229253, 63670246, 63972517, 63975497,
	65576815, 65925948, 66146215, 67860503-67860504, 68711104,
	69100751, 69176705, 69189596-69189598, 69190358-69190360,
	69974439, 69975201, 70656792, 72217315, 72801392, 72992581-72992582,
	73626901-73626902, 75004819, 78164515, 78167178, 78167885,
	78307369, 78415033-78415034, 78693137, 79145838, 79146544-79146546,
	/9/44/14, /9/45420, /9/48084, /9/48/90, /990100/, 80691204-80691205, 02002070 02002072 027200E1 027200E2 04/11E02 0/E21E0
	85181194 . 85418740 . 87197252 . 88020545-88020546 . 88021216
	88023752, 88024422, 88071013-88071014, 88755730, 89294003,
	92741348-92741349, 92743744-92743745, 94017998, 95929572-95929573,
	97369221, 97485310, 99685572, 100687317, 100689593,
	102205339, 103403045, 104768238, 105074641, 105638643,
	106115226, 106115791, 106117947, 106118512, 106120668,
	106121233, 106122698, 106123954-106123955, 106125419-106125420,
	106125984-106125985, 106128141, 106128/06, 106180051, 106026609, 107122027, 107276279, 108007258, 108270109
	109270673 109272829 109273394 109275550 109319902
	110072175, 111250371, 111251549, 111485059, 112587333.
	112588682-112588684, 114286586, 114359887, 115110935,
	116807008-116807009, 116808918, 117175664, 117177512,
	117178002, 117179850, 117180340-117180341, 117181588,
	117182678-117182680, 117183926, 117184417, 117186264-117186265,
	117186755, 117188602-117188604, 117189093, 117190341,
	117193170, 117195017-117195018, 117195508, 117197355-117197357,
	11/19/846, 11/199094, 11/199564, 11/201432, 11/201922-11/201923, 1172002770, 117200426, 117200426, 1172016608, 117206608
	1172037046-117207848 117208337 117210185 1172106375
	117212523, 117213013-117213014, 117214261, 117215352,
	117217090, 117218938, 117219428-117219429, 117221276,
	117221766-117221768, 117223014, 117223505, 117225352-117225354,
	117225843, 117227691, 117228181, 117229429, 117230519-117230520,
	117231767, 117232258, 117234105-117234106, 117234596,
	117236444, 117236934, 117238182, 117239272-117239273, 117240520, 117241011, 117242050, 117242050, 117245507, 117245507
	II/24U52U, II/24IUII, II/242858-II/242859, II/24568/-II/245688, 117946035, 117947496, 117940973_117940974, 117940764
	117251612, 117252102, 117253350, 117254440-117254441
	117255688, 117256179, 117258026-117258027, 117258517,
	117260365, 117260855, 117262103, 117263193-117263194,
	117264441, 117264932, 117266779-117266780, 117267270,
	117269118, 117269608, 117270856, 117271946-117271947,
	117275533, 117276023, 117277871, 117278361-117278363,

Test Case DA-09 X-Ways Forensics 16.2 SR-5		
	117279609, 117280100, 117281947-117281948, 11728243	8,
	117284286, 117284776, 117286024, 117287114-11728711	б,
	117288362, 117288853, 117290700-117290702, 11729119	1,
	117293039, 117293529, 117294777, 117295867-11729586	9,
	117297115, 117297606, 117299453-117299455, 11965564	4
	Source (120103200) has 36198288 fewer sectors than	destination (156301488)
	Zero fill: 0	
	Src Byte fill (ED): 0	
	Dst Byte fill (50): 36198288	
	Other fill: 0	
	Other no fill: 0	
	Zero fill range:	
	Src IIII range:	
	Other fill range:	
	Other not filled renge:	
	O destination read errors	
	U Source read errors, U descination read errors	
	===== Tool Settings: ======	
	fill none	
	start-sector 0	
	Write Block: 56 Tableau Forensic SATA/IDE Bridge	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file ======	
	Maxtor 6Y060M0> WDC WD800JB-00JJC0	
	Sector 0> Sector 0	
	120,103,200 Sectors	
	Sectors that could not be read:	
	1,344,585	
	2,594,747	
	2,595,500	
	2,599,086	
	2,599,839	
	117,297,606	
	117,299,453	
	117,299,454	
	110 655 644	
	119,055,044	
	04/26/2012 15:23:09 1	
	120.102.732 sector(s) successfully copied.	
	468 bad source sectors encountered	
	Corresponding destination sectors filled with: UNRE	ADABLESECTOR
	===== Summary of Sectors not acquired ======	
	3 different run lengths observed in 366 runs	
	287 runs of length 1	
	56 runs of length 2	
	23 runs of length 3	
	468 sectors differ	
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-U5 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AM-09 Error logged.	as expected
	AM-10 Benign fill replaces inaccessible sectors.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AU-U5 Multifile image created.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AU-23 Logged information is correct.	as expected

Test Case DA-09 X-Ways Forensics 16.2 SR-5			
	A0-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

5.2.34 DA-10-COMPRESSED

Test Case DA-	10-COMPRESSED X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-10 Acquire a digital source to an image file in	an alternate format.	
Assertions:	AM-01 The tool uses access interface SRC-AI to acce	ss the digital source.	
	AM-02 The tool acquires digital source DS.		
	AM-03 The tool executes in execution environment XE.		
	AM-05 If image file creation is specified, the tool creates an image file		
	on file system type FS.	ital acuma	
	AM-06 All visible sectors are acquired from the dig	ital source.	
	AM-00 All sectors acquired from the digital source	epresented by the image	
	file is the same as the data acquired by the tool.	eprebencea by ene image	
	AO-02 If an image file format is specified, the too	l creates an image file	
	in the specified format.		
	AO-05 If the tool creates a multi-file image of a r	equested size then all	
	the individual files shall be no larger than the re	quested size.	
	AU-22 If requested, the tool calculates block hashe	s for a specified block	
	AO-23 If the tool logs any log significant informat	ion the information is	
	accurately recorded in the log file.		
	AO-24 If the tool executes in a forensically safe e	xecution environment,	
	the digital source is unchanged by the acquisition ;	process.	
Tester Name:	jrr frædder		
Test Host:	Ireddy Tue Max 15 14:05:15 2012		
Drives:	src(D5-THIMB) dst (none) other (D6-THIMB)		
Source	src hash (SHA1): < D68520EF74A336E49DCCF83815B7B08F	DC53E38A >	
Setup:	src hash (MD5): < C843593624B2B3B878596D8760B19954	>	
	505856 total sectors (258998272 bytes)		
	Model (usb2.0Flash Disk) serial # ()		
Log			
Highlights:	====== Tool Settings: ======		
5 5	hash SHA-1		
	re-verify yes		
	image-format e01		
	compression normal		
	Write Block: 18 Tableau Forensic USB Bridge		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Image file segments ======		
	1 3819166 2012-05-15 14:26 da-10-compressed.e01		
	2 1296 2012-05-15 14:26 da-10-compressed.txt		
	===== Extract from X-Ways logfile txt file ======		
	Source: Removable medium 8		
	Sectors 0-505855		
	Destination: J:\da-10-compressed\da-10-compressed.e01		
	Total capacity: 258,998,272 bytes = 247 MB		
	Hash of source data: D68520EF74A336E49DCCF83815B7B0	8FDC53E38A (SHA-1)	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-01 Source acquired using interface AI.	as expected	
	AM-02 Source is type DS.	as expected	
	AM-03 Execution environment is XE.	as expected	
	AM-05 An image is created on file system type FS.	as expected	
	AM-Ub All Visible sectors acquired.	as expected	
	AM-US ALL Sectors accurately acquired.	as expected	
	AO-01 Image file in specified format	as expected	
	AO-05 Multifile image created	as expected	
	A0-22 Tool calculates hashes by block.		
	AO-23 Logged information is correct.	as expected	
	A0-24 Source is unchanged by acquisition.	not checked	

Test Case DA-	10-COMPRESSED X-Ways Forensics 16.2 SR-5
Analysis:	Expected results achieved

5.2.35 DA-10-E01

Test Case DA-	10-E01 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-10 Acquire a digital source to an image file in .	an alternate format.
Assertions:	AM-01 The tool uses access interface SRC-AI to acce	ss the digital source.
	AM-02 The tool acquires digital source DS.	
	AM-03 The tool executes in execution environment XE	
	AM-05 If image file creation is specified, the tool	creates an image file
	on file system type FS.	
	AM-06 All visible sectors are acquired from the dig	ital source.
	AM-08 All sectors acquired from the digital source	are acquired accurately.
	AO-01 If the tool creates an image file, the data r	epresented by the image
	file is the same as the data acquired by the tool.	l marten en impere file
	AO-U2 II an image file format is specified, the too	l creates an image file
	In the specified format. λ_{0-05} If the tool greates a multi-file image of a r	equested size then all
	the individual files shall be no larger than the re-	quested size
	A0-22 If requested, the tool calculates block hashe	s for a specified block
	size during an acquisition for each block acquired	from the digital source.
	AO-23 If the tool logs any log significant informat	ion, the information is
	accurately recorded in the log file.	
	AO-24 If the tool executes in a forensically safe e	xecution environment,
	the digital source is unchanged by the acquisition p	process.
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Mon May 14 16:18:44 2012	
Drives:	src(D5-THUMB) dst (none) other (D6-THUMB)	
Source	src hash (SHAI): < D68520EF74A336E49DCCF83815B7B08F.	DC53E38A >
secup.	STC HASH (MD5) < C843593624B2B3B878596D8760B19954	>
	Model (usb2 OFlash Dick) serial # ()	
	Houer (usbz.oriasii bisk) seriar # ()	
Ina		
Highlights:	====== Tool Settings: ======	
5 5	hash MD5	
	re-verify yes	
	image-format e01	
	compression none	
	Write Block: 18 Tableau Forensic USB Bridge	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	====== Image file segments ======	
	1 259064634 2012-05-15 14:20 da-10-e01.e01	
	2 1239 2012-05-15 14:20 da-10-e01.txt	
	===== Extract from X-Ways logfile.txt file ======	
	Source: Removable medium 8	
	Destination: $I: da=10-001 da=10-001 = 001$	
	Total capacity: 258 998 272 bytes $= 247$ MB	
	Hash of source data: $C843593624B2B3B878596D8760B199$	54 (MD5)
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-02 Image file in specified format.	as expected
	AO-05 Multifile image created.	as expected
	A0-22 Tool calculates hashes by block.	option not available
	AU-23 Logged information is correct.	as expected
	I AU-24 Source is unchanged by acquisition.	пот спескеа

Test Case DA-	10-E01 X-Ways Forensics 16.2 SR-5
Analysis:	Expected results achieved

5.2.36 DA-10-ENCRYPTED

Test Case DA-	10-ENCRYPTED X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-10 Acquire a digital source to an image file in a	an alternate format.
Assertions:	AM-01 The tool uses access interface SRC-AI to acces AM-02 The tool acquires digital source DS. AM-03 The tool executes in execution environment XE AM-05 If image file creation is specified, the tool on file system type FS. AM-06 All visible sectors are acquired from the dig. AM-08 All sectors acquired from the digital source a AO-01 If the tool creates an image file, the data re file is the same as the data acquired by the tool. AO-02 If an image file format is specified, the tool in the specified format. AO-05 If the tool creates a multi-file image of a re the individual files shall be no larger than the rea AO-22 If requested, the tool calculates block hashes size during an acquisition for each block acquired is AO-23 If the tool logs any log significant informat. AO-24 If the tool executes in a forensically safe es the digital source is unchanged by the acquisition p	ss the digital source. creates an image file ital source. are acquired accurately. epresented by the image l creates an image file equested size then all quested size. s for a specified block from the digital source. ion, the information is xecution environment, process.
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Tue May 15 10:40:11 2012	
Drives:	<pre>src(D5-THUMB) dst (none) other (D6-THUMB)</pre>	
Source Setup:	<pre>src hash (SHA1): < D68520EF74A336E49DCCF83815B7B08F1 src hash (MD5): < C843593624B2B3B878596D8760B19954 505856 total sectors (258998272 bytes) Model (usb2.0Flash Disk) serial # ()</pre>	DC53E38A > >
Log Highlights: Results:	<pre>====== Tool Settings: ====== hash MD5 re-verify yes image-format e01 compression none encrypted yes Write Block: 18 Tableau Forensic USB Bridge OS: Microsoft Windows XP [Version 5.1.2600] ====== Image file segments ====== 1 259064803 2012-05-16 14:14 da=10-encrypted.e01 2 1082 2012-05-16 14:14 da=10-encrypted.e01 2 1082 2012-05-16 14:14 da=10-encrypted.txt ===== Extract from X-Ways logfile.txt file ====== Source: Removable medium 8 Sectors 0-505855 Destination: J:\da=10-encrypted\da=10-encrypted.e01 Total capacity: 258,998,272 bytes = 247 MB Hash of source data: C843593624B2B3B878596D8760B1991</pre>	54 (MD5)
RESULLS.	Assertion & Expected ResultAM-01 Source acquired using interface AI.AM-02 Source is type DS.AM-03 Execution environment is XE.AM-05 An image is created on file system type FS.AM-06 All visible sectors acquired.AM-08 All sectors accurately acquired.AO-01 Image file is complete and accurate.AO-02 Image file in specified format.AO-05 Multifile image created.AO-22 Tool calculates hashes by block.AO-23 Logged information is correct.	Actual Result as expected as expected

Test Case DA-2	10-ENCRYPTED X-Ways Forensics 16.2 SR-5		
	A0-24 Source is unchanged by acquisition.	not checked	
Analysis:	Expected results achieved		

5.2.37 DA-13

Test Case DA-	-13 X-Ways Forensics 16.2 SR-5	
Case	DA-13 Create an image file where there is insuffici	ent space on a single
Summary:	volume, and use destination device switching to con	tinue on another volume.
Assertions:	AM-01 The tool uses access interface SRC-AI to acce	ss the digital source.
	AM-02 The tool acquires digital source DS.	
	AM-03 The tool executes in execution environment XE	
	AM-05 II Image IIIe creation is specified, the tool	creates an image life on
	AM-06 All visible sectors are acquired from the dig	ital source
	AM-08 All sectors acquired from the digital source	are acquired accurately
	AO-01 If the tool creates an image file, the data r	epresented by the image
	file is the same as the data acquired by the tool.	
	AO-04 If the tool is creating an image file and the	re is insufficient space
	on the image destination device to contain the imag	e file, the tool shall
	notify the user.	
	AO-05 If the tool creates a multi-file image of a r	equested size then all
	the individual files shall be no larger than the re-	quested size.
	AU-10 If there is insufficient space to contain all	files of a multi-file
	and if destination device switching is suppor	led, the image is
	$\Delta 0-22$ If requested the tool calculates block hashe	s for a specified block
	size during an acquisition for each block acquired	from the digital source.
	AO-23 If the tool logs any log significant informat	ion, the information is
	accurately recorded in the log file.	
	AO-24 If the tool executes in a forensically safe e	xecution environment, the
	digital source is unchanged by the acquisition proc	ess.
Tester	jrr	
Name:		
Test Host:	frank	
Test Date:	Fri Jun 14 11:04:14 2013	
Drives:	src(UI-SATA) dst (none) other (U2-IDE)	
Source Setup:		
Secup.	src hash (SHA1): < 4951236428C36B944E62E8D65862DCBE	F05F282C >
	src hash (MD5): < 0A49B13D91FA9DA87CEEE9D006CB6FD6	>
	156301488 total sectors (80026361856 bytes)	
	Model (0JD-32HKA0) serial # (WD-WMAJ91448529)	
Log		
Highlights:	===== Tool Settings: =====	
	image-format eUl	
	compression none	
	Write Block: 56 Forensic SATA/IDE Bridge	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Image file segments (First destination) ====	==
	1 39946879853 2013-06-14 18:14 da-13.e01	
	2 678 2013-06-17 14:26 da-13.txt	
	====== Image file segments (Second destination) ===	===
	3 40099048957 2013-06-17 14:26 da-13.e02	
	Extract from X-Ways logfile tyt file	
	Source: Hard digk &	
	Sectors $0-156301487$	
	Destination: G:\da-13.e01	
	Model: WDC WD800JD-32HKA0	
	Total capacity: 80,026,361,856 bytes = 74.5 GB	
	Sector count: 156,301,488	
	Hash of source data: 0A49B13D91FA9DA87CEEE9D006CB6F	D6 (MD5)
Results:		
	Assertion & Expected Result	Actual Result
	AM-01 Source acquired using interface AI.	as expected

Test Case DA-	13 X-Ways Forensics 16.2 SR-5	
	AM-02 Source is type DS.	as expected
	AM-03 Execution environment is XE.	as expected
	AM-05 An image is created on file system type FS.	as expected
	AM-06 All visible sectors acquired.	as expected
	AM-08 All sectors accurately acquired.	as expected
	AO-01 Image file is complete and accurate.	as expected
	AO-04 User notified if space exhausted.	as expected
	AO-05 Multifile image created.	as expected
	AO-10 Image file continued on new device.	as expected
	AO-22 Tool calculates hashes by block.	option not available
	AO-23 Logged information is correct.	as expected
	AO-24 Source is unchanged by acquisition.	not checked
Analysis:	Expected results achieved	

5.2.38 DA-14-ATA28

Test Case DA-14-ATA28 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-14 Create an unaligned clone from an image file.
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Mon Apr 2 10:23:02 2012
Drives:	src(43) dst (50-SATA) other (58-IDE)
Source	src hash (SHA256): <
Setup:	2658F47603DE6B1D83B64823E9733F578658D08D06A4BB8C053C4F57BDC615E > src hash (SHA1): < 888E2E7F7AD237DC7A732281DD93F325065E5871 > src hash (MD5): < BC39C3F7EFA50E77B9BA1E65A5AEEF7 > 78125000 total sectors (4000000000 bytes) Model (0EB-75JHC0) serial # (WD-WMAMC46588) N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057143205 1023/001/01 1023/254/63 0F extended 3 s 00000063 002104515 1023/001/01 1023/254/63 0F extended 5 s 00000063 002104515 1023/001/01 1023/254/63 06 Fat16 6 x 002136645 004192965 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 s 00000063 008401932 1023/001/01 1023/254/63 05 extended 1 s 00000063 00401932 1023/001/01 1023/254/63 05 extended 11 s 00000063 010490445 1023/001/01 1023/254/63 05 extended 13 s 00000063 004208967 1023/001/01 1023/254/63 05 extended 14 x 029231080 027712125 1023/001/01 1023/254/63 07 NTFS 16 s 00000006 00000000 0000/000/00 0000/000/
Log	===== Destination drive setup ======
Highlights:	156301488 sectors wiped with 50 ====== Comparison of original to clone drive ====== Sectors compared: 78125000 Sectors match: 78125000 Sectors differ: 0 Bytes differ: 0 Diffs range Source (78125000) has 78176488 fewer sectors than destination (156301488) Zero fill: 0 Src Byte fill (43): 0 Dst Byte fill (50): 78176488 Other fill: 0

Test Case DA-	-14-ATA28 X-Ways Forensics 16.2 SR-5		
	Other no fill: Zero fill range: Src fill range: Dst fill range: 78125000-156301487 Other fill range: Other not filled range: O source read errors, 0 destination read errors	5	
	<pre>===== Tool Settings: ====== fill none start-sector 0 OS: Microsoft Windows [Version 6.1.7600] ====== Extract from X-Ways logfile.txt file === [D:\da-06-ata28\da-06-ata28.e01]> ST380815As Sector 0> Sector 0 78,125,000 Sectors 78,125,000 sector(s) successfully copied.</pre>	==== 5	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AO-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected regults achieved		
maryere.	Expected reputes achieved		

5.2.39 DA-14-ATA48

Test Case DA-	14-ATA48 X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-14 Create an unaligned clone from an image	file.
Assertions:	AM-03 The tool executes in execution environment AO-12 If requested, a clone is created from an AO-13 A clone is created using access interface clone device.	nt XE. image file. e DST-AI to write to the
	AO-14 II an unaligned clone is created, each so accurately written to the same disk address on occupied on the digital source.	ector written to the clone is the clone that the sector
	AO-17 If requested, any excess sectors on a clonot modified.	one destination device are
	AO-23 If the tool logs any log significant info accurately recorded in the log file.	ormation, the information is
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Tue Jun 12 10:10:44 2012	
Drives:	<pre>src(4E) dst (2C-SATA) other (5A-SATA)</pre>	
Source	<pre>src hash (SHA1): < 7DDFF1A74B2E2B7E7EE43C41CD9</pre>	066E27986644D >
Setup:	src hash (MD5): < 62C9436930204E0F38921771ACA	1BB88 >
	488397168 total sectors (250059350016 bytes)	
	30400/254/63 (max cyl/hd values)	
	30401/255/63 (number of cyl/hd)	
	IDE disk: Model (WDC WD2500JB-22FUA0) serial #	(WD-WMAEP1925256)
	N Start LBA Length Start C/H/S End C/H/S	boot Partition type
	1 P 000000063 488375937 0000/001/01 1023/254/	63 Boot 07 NTFS
	2 P 00000000 00000000 0000/000/00 0000/000/	00 00 empty entry
	3 P 00000000 0000000 0000/000/00 0000/000/	00 00 empty entry
	4 P 00000000 00000000 0000/000/00 0000/000/	00 00 empty entry
	1 488375937 sectors 250048479744 bytes	
Log Highlights:	===== Destination drive setup ====== 488397168 sectors wiped with 2C	
	<pre>====== Comparison of original to clone drive == Sectors compared: 488397168 Sectors match: 488397168 Sectors differ: 0 Bytes differ: 0 Diffs range 0 source read errors, 0 destination read errors;</pre>	===== s
	====== Tool Settings: ======	
	till none	
	START-SECTOR U	
	Extract from V-Wove loofile tot file	
	Exclact from A-Ways togrife.txt file ==:	 aks-00//sa0
	Beginning of file -5 Sector 0	
	APP 207 169 Sectors	
	488 397 168 sector(s) suggessfully dopied	
	100,000,100 Beccor(b) Buccessiurry Copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE	as expected
	AO-12 A clone is created from an image file	as expected
	A0-13 Clone created using interface AT	as expected
	A0-14 An unaligned glong is greated	as expected
	AU-14 All unallylied clone is created.	as expected
	AU-17 Excess sectors are unchanged.	as expected
	AU-23 Logged information is correct.	as expected
Applygig:	Exported regults ashioved	
ANALYSIS.	Expected results achieved	

5.2.40 DA-14-CF

Test Case DA-	-14-CF X-Ways Forensics 16.2 SR-5	
Case Summary:	DA-14 Create an unaligned clone from an image	file.
Assertions:	AM-03 The tool executes in execution environme	nt XE.
	AO-12 If requested, a clone is created from an	image file.
	A0-13 A clone is created using access interfac	e DST-AI to write to the clone
	device.	
	AO-14 If an unaligned clone is created, each set	ector written to the clone is
	accurately written to the same disk address on	the clone that the sector
	occupied on the digital source	
	AO-17 If requested any excess sectors on a clu	one destination device are not
	modified	the describetion device are not
	Λ_{0-23} If the tool logg any log significant inf	ormation the information is
	accurately recorded in the log file	Simulation, the information is
	accurately recorded in the rog rife.	
Tostor	1.000	
lester Name:		
Name.	free Adre	
Test Host	freddy	
Test Date:	Thu May 10 10:48:37 2012	
Drives:	src(C1-CF) dst (C2-CF) other (D6-THUMB)	
Source	src hash (SHA256): <	
Setup:	C7CF0218222DF80D5316511D6814266C7FA507C13F795A	D3D323BB73C1590D80 >
	<pre>src hash (SHA1): < 5B8235178DF99FA307430C088F8</pre>	1746606638A0B >
	<pre>src hash (MD5): < 776DF8B4D2589E21DEBCF589EDC</pre>	16D78 >
	503808 total sectors (257949696 bytes)	
	Model (CF) serial # ()	
	N Start LBA Length Start C/H/S End C/H/S	boot Partition type
	1 P 778135908 1141509631 0357/116/40 0357/032	/45 Boot 72 other
	2 P 168689522 1936028240 0288/115/43 0367/114	/50 Boot 65 other
	3 P 1869881465 1936028192 0366/032/33 0357/03	2/43 Boot 79 other
	4 P 2885681152 000055499 0372/097/50 0000/010	/00 Boot 0D other
	1 1141509631 sectors 584452931072 bytes	
	2 1936028240 sectors 991246458880 bytes	
	3 1936028192 sectors 991246434304 bytes	
	4 000055499 sectors 28415488 bytes	
Log	====== Destination drive setup ======	
Highlights:	503808 sectors wiped with C2	
	====== Comparison of original to clone drive =	=====
	Sectors compared: 503808	
	Sectors match: 503808	
	Sectors differ: 0	
	Bytes differ: 0	
	Diffs range	
	0 source read errors, 0 destination read error	5
	===== Tool Settings: ======	
	fill none	
	start-sector 0	
	OS: Microsoft Windows [Version 6.1.7600]	
	===== Extract from X-Ways logfile.txt file ==	====
	[I:\da-07-cf\da-07-cf.e01]> LEXAR ATA FLASH	
	Sector 0> Sector 0	
	503,808 Sectors	
	503,808 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AT	as expected
	AO-14 An unaligned clone is created	as expected
	A0-17 Excess sectors are unchanged	as expected
	A0-23 Logged information is correct	as expected
	10 20 HOGACA THEORIMACTON TO COLLECC.	as capeceeu

Test Case DA-	-14-CF X-Ways Forensics 16.2 SR-5
Analysis:	Expected results achieved

5.2.41 DA-14-COMPRESSED

Test Case DA-14-COMPRESSED X-Ways Forensics 16.2 SR-5		
Case	DA-14 Create an unaligned clone from an image :	file.
Summary:		
Assertions:	AM-03 The tool executes in execution environment XE.	
	AO-12 If requested, a clone is created from an image file.	
	A0-13 A Clone is created using access interface DST-A1 to write to the	
	AO-14 If an unaligned clone is created, each so	ector written to the clone is
	accurately written to the same disk address on	the clone that the sector
	occupied on the digital source.	
	AO-17 If requested, any excess sectors on a cl	one destination device are
	not modified.	
	AO-23 If the tool logs any log significant info	ormation, the information is
	accurately recorded in the log file.	
Tostor Nomo:		
Tester Name.	freddy	
Test Date:	The May 15 $16:16:54$ 2012	
Drives:	src(D5-THIMB) dst (D4-THIMB) other (D6-THIMB)	
Source	src hash (SHA1): $< D68520EF74A336E49DCCF83815E$	7B08FDC53E38A >
Setup:	src hash (MD5): < C843593624B2B3B878596D8760B	19954 >
-	505856 total sectors (258998272 bytes)	
	Model (usb2.0Flash Disk) serial # ()	
Log	===== Destination drive setup ======	
Highlights:	505856 sectors wiped with D4	
	Comparison of original to globe drive -	
	====== Comparison of original to clone drive ======	
	Sectors match: 505856	
	Sectors differ: 0	
	Bytes differ: 0	
	Diffs range	
	0 source read errors, 0 destination read errors	
	Tool Sottings:	
	fill none	
	start-sector 0	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file ===	====
	[J:\da-10-compressed\da-10-compressed.e01]>	CRUCIAL usb2.0Flash Disk
	Sector U> Sector U	
	505,856 sector(s) successfully conjed	
	505,050 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	A0-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-23 Logged information is correct.	as expected
Apolaraiat	Emperted requite achieved	
ANALYSIS:	Expected results achieved	

5.2.42 DA-14-E01

Test Case DA-14-E01 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image :	file.
Assertions:	AM-03 The tool executes in execution environment XE.	
	AO-12 If requested, a clone is created from an	image file.
	AO-13 A clone is created using access interface	e DST-AI to write to the
	clone device.	
	A0-14 If an unaligned clone is created, each se	ector written to the clone is
	occupied on the digital source.	the crone that the sector
	AO-17 If requested, any excess sectors on a clo	one destination device are
	not modified.	
	AO-23 If the tool logs any log significant info	ormation, the information is
	accurately recorded in the log file.	
Tester Name:	irr	
Test Host:	freddy	
Test Date:	Tue May 15 11:55:08 2012	
Drives:	src(D5-THUMB) dst (D4-THUMB) other (D6-THUMB)	
Source	src hash (SHA1): < D68520EF74A336E49DCCF83815B	7B08FDC53E38A >
Setup:	<pre>src hash (MD5): < C843593624B2B3B878596D8760B3</pre>	19954 >
	505856 total sectors (258998272 bytes)	
	Model (usb2.0Flash Disk) serial # ()	
Tea	Doctination drive cotum	
Highlights:	505856 sectors wiped with D4	
1129112291100		
	====== Comparison of original to clone drive ======	
	Sectors compared: 505856	
	Sectors match: 505856	
	Sectors differ: 0	
	Bytes differ: U	
	0 source read errors. 0 destination read errors	
	===== Tool Settings: ======	
	fill none	
	start-sector 0	
	OS: Migrosoft Windows VD [Version 5 1 2600]	
	===== Extract from X-Ways logfile.txt file ===	====
	[J:\da-10-e01\da-10-e01.e01]> CRUCIAL usb2.0Flash Disk	
	Sector 0> Sector 0	
	505,856 Sectors	
	505,856 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AO-23 Logged information is correct.	as expected
Analycic:	Expected results achieved	
AUGIASIS.	Expected results achieved	

5.2.43 DA-14-ENCRYPTED

Test Case DA-14-ENCRYPTED X-Ways Forensics 16.2 SR-5		
Case	DA-14 Create an unaligned clone from an image	file.
Summary:		
Assertions:	AM-03 The tool executes in execution environment XE.	
	A0-12 If requested, a clone is created from an image file.	
	alone device	e DSI-AI LO WIILE LO LHE
	AO-14 If an unaligned clone is created, each so	ector written to the clone is
	accurately written to the same disk address on	the clone that the sector
	occupied on the digital source.	
	AO-17 If requested, any excess sectors on a cl	one destination device are
	not modified.	
	AO-23 If the tool logs any log significant info	ormation, the information is
	accurately recorded in the log file.	
Tostor Nomo:		
Tester Name.	freddy	
Test Date:	Wed May 16 10:40:26 2012	
Drives:	src(D5-THIMB) dst (D4-THIMB) other (D6-THIMB)	
Source	src hash (SHA1): < D68520EF74A336E49DCCF83815B	7B08FDC53E38A >
Setup:	src hash (MD5): < C843593624B2B3B878596D8760B	19954 >
-	505856 total sectors (258998272 bytes)	
	Model (usb2.0Flash Disk) serial # ()	
Log	===== Destination drive setup ======	
Highlights:	505856 sectors wiped with D4	
	Companyigon of original to glope drive -	
	====== Comparison of original to clone drive ======	
	Sectors match: 505856	
	Sectors differ: 0	
	Bytes differ: 0	
	Diffs range	
	0 source read errors, 0 destination read errors	
	Teel Settings:	
	<pre>===== TOOL Settings: ===== fill none</pre>	
	start-sector 0	
	Start Sector U	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file ===	====
	[J:\da-10-encrypted\da-10-encrypted.e01]> C	RUCIAL usb2.0Flash Disk
	Sector U> Sector U	
	505,656 sector(s) successfully conjed	
	505,050 Beecor(B) BaceebBrarry copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	A0-17 Excess sectors are unchanged.	as expected
	AU-23 Logged information is correct.	as expected
Analysis:	Expected results achieved	
MIALYSIS.	Expected results achieved	

5.2.44 DA-14-EXFAT

Test Case DA-14-EXFAT X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. 	
Tester	jrr	
Name:	frank	
Test Date:	Wed Aug 1 09:19:57 2012	
Drives:	src(49-SATA) dst (F9) other (7A-SATA)	
Source Setup: Log Highlights:	<pre>Stc(19) dif(19) dif(19) dif(19) dif(19) dif(10) d</pre>	
	Other fill: 0 Other no fill: 0 Zero fill range: Src fill range: 10485760-40183807 Other fill range: 10485760-40183807 Other fill range: Other not filled range: run start Fri Aug 3 14:36:45 2012 run finish Fri Aug 3 14:49:54 2012 elapsed time 0:13:9 Normal exit ===== Tool Settings: ====== fill none OS: Microsoft Windows [Version 6.1.7600]	

Test Case DA-14-EXFAT X-Ways Forensics 16.2 SR-5		
	====== Extract from X-Ways logfile.txt file ====== [E:\da-07-exFAT\da-07-exFAT.e01]> Drive D: Sector 0> Sector 0 10,485,760 Sectors 10,485,760 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	A0-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	3 sectors differ
	A0-17 Excess sectors are unchanged.	as expected
	AO-23 Logged information is correct.	as expected
		·
Analysis:	Expected results not achieved	

5.2.45 DA-14-F12

Test Case DA-	14-F12 X-Ways Forensics 16.2 SR-5
Case Summary:	DA-14 Create an unaligned clone from an image file.
Assertions:	AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file.
Tester Name:	jrr
Test Host:	freddy
Test Date:	Tue May 22 14:49:07 2012
Drives:	src(01-IDE) dst (57-IDE) other (58-IDE)
Source	<pre>src nasn (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 > arg hash (MDE): < E468E6728047E3EA6A0E68D8E662048E ></pre>
secup.	SIC HASH (MDJ) $<$ F430F0/3094/33FA0AUEC0B0EC03040E > 78165360 total sectors (40020664330 bytes)
	Model ($OBB-OO,THCO$) serial $\#$ ($WD-WMAMC74171$)
	N Start LBA Length Start C/H/S End C/H/S boot Partition type
	1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X
	2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended
	3 S 000000063 000032067 1023/001/01 1023/254/63 01 Fat12
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended
	5 S 000000063 002104452 1023/001/01 1023/254/63 06 Fat16
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended
	7 S 00000063 004192902 1023/001/01 1023/254/63 16 other
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended
	9 S 000000063 008401932 1023/001/01 1023/254/63 0B Fat32
	10 S 014/31005 010490445 1023/001/01 1023/254/63 05 Extended
	12 x 02522050 004209030 1023/001/01 1023/254/63 05 extended
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended
	15 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS
	16 S 000000000 00000000 0000/000/00 0000/000/00 00
	17 P 00000000 00000000 0000/00/00 0000/00/00
	18 P 000000000 00000000 0000/000/00 0000/00/
	1 020980827 sectors 10742183424 bytes
	3 000032067 sectors 16418304 bytes
	5 002104452 sectors 10//4/9424 bytes
	0 004192902 Sectors 430/780184 bytes
	11 010490382 sectors 5371075584 bytes
	13 004208967 sectors 2154991104 bytes
	15 027744192 sectors 14205026304 bytes
	01F12-md5 16418303 E20E3CFEA80BF6F2D2AA75E829CC8CD9
	01F12-sha1 16418303 F8B72B65436DE3BD394ACFF71D405D0389C0E9B7
Log Highlights:	===== Destination drive setup ===== 80043264 sectors wiped with 57
	===== comparison of original to clone drive ======
	Sectors compared: 32067
	Sectors differ:
	Bytes differ:
	Diffs range:
	run start Wed May 23 10:16:17 2012
	run finish Wed May 23 10:16:43 2012
	elapsed time 0:0:26
	Normal exit

Test Case DA-	Test Case DA-14-F12 X-Ways Forensics 16.2 SR-5		
	====== Tool Settings: ======		
	fill none		
	start-sector 0		
	<pre>OS: Microsoft Windows XP [Version 5.1.2600] ===== Extract from X-Ways logfile.txt file === D:\da-07-f12\da-07-f12.001> Drive F: Beginning of file> Sector 0 32,067 Sectors 32,067 sector(s) successfully copied.</pre>	====	
Results:			
nobarob	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AO-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results achieved		

5.2.46 DA-14-F16

Test Case DA-14-F16 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. 	
Tester Name:	jrr	
Test Host:	treddy	
Test Date:	Wed May 23 11:29:18 2012	
Drives.	STC(UI-IDE) ASL (S/-IDE) OLIET (S6-IDE)	
Setup:	sic Hash (SHAI)· < R40880000000000000000000000000000000000	
Secup.	78165360 total sectors (40020664320 bytes)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	1 P 000000063 020980827 0000/001/01 1023/254/63 OC Fat32X	
	2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended	
	3 S 00000063 000032067 1023/001/01 1023/254/63 01 Fat12	
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended	
	5 S 000000063 002104452 1023/001/01 1023/254/63 06 Fat16	
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended	
	7 S 000000063 004192902 1023/001/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9 S 000000063 008401932 1023/001/01 1023/254/63 0B Fat32	
	10 x 014/31005 010490445 1023/001/01 1023/254/65 05 Extended	
	12 v 02522050 0020030 1022/001/01 1023/254/63 05 extended	
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Libux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended	
	15 S 00000063 027744192 1023/001/01 1023/254/63 07 NTFS	
	16 S 00000000 00000000 0000/000/00 0000/000/00 00	
	17 P 00000000 00000000 0000/000/00 0000/000/00 00	
	18 P 000000000 00000000 0000/000/00 0000/000/00 00	
	1 020980827 sectors 10742183424 bytes	
	3 000032067 sectors 16418304 bytes	
	5 002104452 sectors 1077479424 bytes	
	7 004192902 sectors 2146765824 bytes	
	9 008401932 sectors 4301789184 bytes	
	11 010490382 sectors 5371075584 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 02//44192 sectors 14205026304 bytes	
	01F16-md5 10//4/9423 8824F3D/93188AF24/3F99826/AFDA42	
	UIFIO-SHAL IU//4/9423 U/4DA0SIBIUISZF4BF9F00AFAB3/CB/FEF402C/D	
Log Highlights:	===== Destination drive setup ===== 80043264 sectors wiped with 57	
	===== Comparison of original to clone drive ======	
	Sectors compared: 2104452	
	Sectors match: 2104452	
	Sectors differ: 0	
	Bytes aller: U	
	DILLS range:	
	run Start wed May 23 11.34.13 2012	
	$\begin{array}{c} \text{Lun rinson web May 25 II.55.25 2012} \\ \text{elarged time 0:1:12} \end{array}$	
	Normal exit	

Test Case DA-14-F16 X-Ways Forensics 16.2 SR-5			
	<pre>===== Tool Settings: ====== fill none start-sector 0 OS: Microsoft Windows XP [Version 5.1.2600] ===== Extract from X-Ways logfile.txt file === [D:\da-07-f16\da-07-f16.e01]> Drive G: Sector 0> Sector 0 2,104,452 Sectors 2 104 452 Sectors</pre>		
	2,104,452 Sector(s) successfully copied.		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AO-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results achieved		

5.2.47 DA-14-F32

Test Case DA-14-F32 X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. 	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Tue May 22 14:49:07 2012	
Drives:	src(01-IDE) dst (57-IDE) other (58-IDE)	
Source Setup:	<pre>src hash (SHA): < A4BB5655b5C722DB68E2F723DA9AABDF82B9 > src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E > 78165360 total sectors (40020664320 bytes) Model (0BB-00JHC0) serial # (WD-WMAMC74171) N Start LEA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057175335 1023/001/01 1023/254/63 0I Fat12 4 x 000032130 002104515 1023/001/01 1023/254/63 05 extended 3 S 00000063 002104515 1023/001/01 1023/254/63 05 extended 6 x 002136645 004192965 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 7 S 00000063 004192902 1023/001/01 1023/254/63 05 extended 9 S 00000063 00441921 0023/001/01 1023/254/63 05 extended 1 S 00000063 00440192 1023/001/01 1023/254/63 05 extended 1 s 00000063 004401932 1023/001/01 1023/254/63 05 extended 1 s 00000063 00440932 1023/001/01 1023/254/63 05 extended 1 s 00000063 004208967 1023/001/01 1023/254/63 05 extended 1 s 00000063 0027744255 1023/001/01 1023/254/63 07 NTFS 1 6 s 00000006 00000000 0000/000/00 0000/000/</pre>	
Log Highlights:	===== Destination drive setup ===== 80043264 sectors wiped with 57	
	<pre>===== Comparison of original to clone drive ===== Sectors compared: 8401932 Sectors match: 8401929 Sectors differ: 3 Bytes differ: 3 Diffs range: 1, 36, 8226 run start Wed May 23 11:42:53 2012 run finish Wed May 23 11:46:45 2012 elapsed time 0:3:52</pre>	

Test Case DA-14-F32 X-Ways Forensics 16.2 SR-5

Normal exit ===== Tool Settings: ====== fill none start-sector 0 OS: Microsoft Windows XP [Version 5.1.2600] ===== Extract from X-Ways logfile.txt file ====== D:\da-07-f32\da-07-f32.001 --> Drive I: Beginning of file --> Sector 0 8,401,932 Sectors 8,401,932 sector(s) successfully copied. Results: Assertion & Expected Result Actual Result AM-03 Execution environment is XE. as expected AO-12 A clone is created from an image file. as expected AO-13 Clone created using interface AI. as expected AO-14 An unaligned clone is created. 3 sectors differ AO-17 Excess sectors are unchanged. as expected AO-23 Logged information is correct. as expected Analysis: Expected results not achieved

5.2.48 DA-14-F32-ALT

Test Case DA-14-F32-ALT X-Ways Forensics 16.2 SR-5			
Case	DA-14 Create an unaligned clone from an image file.		
Summary:			
Assertions:	AM-03 The tool executes in execution environment XE.		
	AO-12 If requested, a clone is created from an image file.		
	AO-13 A clone is created using access interface DST-AI to write to the clone		
	device.		
	AO-14 If an unaligned clone is created, each sector written to the clone is		
	accurately written to the same disk address on the clone that the sector		
	occupied on the digital source.		
	AO-17 If requested, any excess sectors on a clone destination device are not		
	10.22 If the tool logg any log significant information, the information is		
	accurately recorded in the log file		
Tester	jrr		
Name:			
Test Host:	Frank		
Test Date:	Fri Jul 12 2013		
Drives:	src(01-IDE-96) dst (23-IDE) other (0C-FU)		
Source	src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 >		
Setup:	src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E >		
	78165360 total sectors (40020664320 bytes)		
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)		
	N Start LBA Length Start C/H/S End C/H/S boot Partition type		
	1 P 000000063 020980827 0000/001/01 1023/254/63 0C Fat32X		
	2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended		
	3 S 000000063 000032067 1023/001/01 1023/254/63 01 Fat12		
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended		
	5 S 00000063 002104452 1023/001/01 1023/254/63 06 Fat16		
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended		
	7 S 00000063 004192902 1023/001/01 1023/254/63 16 other		
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended		
	9 S 000000063 008401932 1023/001/01 1023/254/63 0B Fat32		
	$10 \times 014/31605 010490445 1023/000/01 1023/254/63 05$ extended		
	11 S 000000063 010490382 1023/001/01 1023/254/63 83 Linux		
	12 x 025222050 004209030 1023/000/01 1023/254/63 05 extended		
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap		

Test Case DA-14-F32-ALT X-Ways Forensics 16.2 SR-5		
Test Case DA	14-F32-ALT X-Ways Forensics 16.2 SR-5 14 x 029431080 027744255 1023/000/01 1023/254/1 15 s 000000063 027744192 1023/001/01 1023/254/1 16 s 00000000 00000000 0000/000 0000/000 17 P 00000000 00000000 0000/000/00 0000/00 18 P 00000000 00000000 0000/000/00 0000/00 10 00032067 sectors 10742183424 bytes 3 000032067 sectors 16418304 bytes 5 002104452 sectors 1077479424 bytes 7 004192902 sectors 2146765824 bytes 9 008401932 sectors 5371075584 bytes 13 004208967 sectors 2154991104 bytes 15 027744192 sectors 14205026304 bytes 16 01749183 B861D9E999F39750B484FFB65	63 05 extended 63 07 NTFS 00 00 empty entry 00 00 empty entry 00 00 empty entry 00 00 empty entry 00 00 empty entry
	01F32-sha256 4301789183 CAE3A4CC33D59548063255D2AA4016940AC712DD96985AJ	D9B94FF271CC3E943E
Log Highlights:	===== Destination drive setup ===== 75813072 sectors wiped with 23	
	<pre>===== Comparison of original to clone drive == Sectors compared: 8401932 Sectors match: 8401932 Sectors match: 0 Bytes differ: 0 Diffs range: Source (8401932) has 2088450 fewer sectors that Zero fill: 0 Src Byte fill (01): 0 Dst Byte fill (23): 2088450 Other fill: 0 Other no fill: 0 Zero fill range: Src fill range: 8401932-10490381 Other fill range: Other not filled range: run start Fri Jul 12 14:26:46 2013 run finish Fri Jul 12 14:30:48 2013 elapsed time 0:4:2 Normal exit </pre>	n destination (10490382)
	fill none	
	start-sector 0	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	<pre>===== Extract from X-Ways logfile.txt file === [0:\xways16.2_re-run\da-07-f32\Hard disk 1, Pa: 0, Partition 2 Sector 0> Sector 0 8,401,932 Sectors 8,401,932 sector(s) successfully copied.</pre>	==== rtition 5.001]> Hard disk
Results:	Agaption (Europhod Desult	Actual Decult
	AM-03 Execution environment is XE	as expected
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AU-23 Logged information is correct.	as expected
Analysis:	Expected results achieved	
5.2.49 DA-14-F32X

Test Case DA-14-F32X X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file.	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	The Jun 28 $10:22:38$ 2012 src(01-TDE) dst (57-TDE) other (58-TDE)	
Source	src(01 102) dst (37 102) other (30 102) src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 >	
Setup:	src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E >	
	78165360 total sectors (40020664320 bytes)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	N Start LBA Length Start C/H/S End C/H/S boot Partition type	
	I P 000000063 020980827 0000/001/01 1023/254/63 UC Fat32X	
	2 x 02090053 00/012057 1023/001/01 1023/254/63 01 Fat12	
	4 x 000032130 002104515 1023/000/01 1023/254/63 05 extended	
	5 S 00000063 002104452 1023/001/01 1023/254/63 06 Fat16	
	6 x 002136645 004192965 1023/000/01 1023/254/63 05 extended	
	7 S 000000063 004192902 1023/001/01 1023/254/63 16 other	
	8 x 006329610 008401995 1023/000/01 1023/254/63 05 extended	
	9.5.0000000003.008401932.1023/001/01.1023/254/63 OB Fals210 x 014731605.010490445.1023/000/01.1023/254/63 O5 extended	
	11 S 00000063 010490382 1023/001/01 1023/254/63 83 Linux	
	12 x 025222050 004209030 1023/000/01 1023/254/63 05 extended	
	13 S 000000063 004208967 1023/001/01 1023/254/63 82 Linux swap	
	14 x 029431080 027744255 1023/000/01 1023/254/63 05 extended	
	15 S 000000063 027744192 1023/001/01 1023/254/63 07 NTFS	
	17 P 00000000 00000000 0000/000/00 0000/000/00 00	
	18 P 000000000 00000000 0000/000/00 0000/000/00 00	
	1 020980827 sectors 10742183424 bytes	
	3 000032067 sectors 16418304 bytes	
	5 002104452 sectors 1077479424 bytes	
	7 004192902 sectors 2146765824 bytes	
	9 008401932 sectors 4301789184 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 027744192 sectors 14205026304 bytes	
	01F32X-md5 10742183423 B5BFD9CE3990C577EF89C5AFB925F947	
	01F32X-sha1 10742183423 30BA6CF583A176C5DB533E3A2F57BFD5A4A870C1	
_		
Log Highlights:	<pre>===== Destination drive setup ====== 80043264 sectors wiped with 57</pre>	
	<pre>===== Comparison of original to clone drive ===== Sectors compared: 20980827 Sectors match: 20980824 Sectors differ: 3 Bytes differ: 3 Diffs range: 1, 32, 10268 run start Wed May 23 14:52:32 2012 run finish Wed May 23 15:01:35 2012 elapsed time 0:9:3 Normal exit</pre>	

Test Case DA-14-F32X X-Ways Forensics 16.2 SR-5			
	===== Tool Settings: ===== fill none start-sector 0		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	<pre>===== Extract from X-Ways logfile.txt file ====== [D:\da-07-32x\da-07-32x.e01]> Drive E: Sector 0> Sector 0 20,980,827 Sectors 20,980,827 Sectors 20,980,827 sector(s) successfully copied.</pre>		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	3 sectors differ	
	A0-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results not achieved		

5.2.50 DA-14-FW

Test Case DA-	Test Case DA-14-FW X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.		
Assertions:	AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file.		
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Wed Apr 11 15:35:07 2012		
Drives:	src(63-FU2) dst (30-IDE) other (29-SATA)		
Source Setup:	<pre>src hash (SHA256): < EC8EF011494BA6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069EDCBEAC863C88DECED82159F22DA96BE99B > src hash (MD5): < EE217BC4FA4F3D1B4021D29B065AA9EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 004192902 0000/001/01 0260/254/63 Boot 06 Fat16 2 X 004192965 113097600 0261/000/01 1023/254/63 OF extended 3 S 00000063 113097537 0261/001/01 1023/254/63 OF extended 3 S 00000063 113097537 0261/001/01 1023/254/63 OF extended 3 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>		
Log Highlights:	===== Destination drive setup ===== 156301488 sectors wiped with 30		
	<pre>====== Comparison of original to clone drive ====== Sectors compared: 117304992 Sectors match: 117304992 Sectors differ: 0 Bytes differ: 0 Diffs range Source (117304992) has 38996496 fewer sectors than destination (156301488) Zero fill: 0 Src Byte fill (63): 0 Dst Byte fill (63): 0 Dst Byte fill (30): 38996496 Other fill: 0 Zero fill range: 0 Src fill range: 117304992-156301487 Other fill range: 117304992-156301487 Other not filled range: 0 source read errors, 0 destination read errors</pre>		
	===== Tool Settings: ===== fill none start-sector 0		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Extract from X-Ways logfile.txt file ====== [D:\da-06-fw\da-06-fw.e01]> ST380215A Sector 0> Sector 0		

	117,304,992 Sectors 117,304,992 sector(s) successfully copied.	
Results:	Agartian & Exposted Pegult	Actual Pogult
	ASSELLION & Expected Result	Accual Result
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-23 Logged information is correct.	as expected

5.2.51 DA-14-HOT

Test Case DA-14-HOT X-Ways Forensics 16.2 SR-5			
Case	DA-14 Create an unaligned clone from an image :	file.	
Summary:			
Assertions: Tester	AM-03 The tool executes in execution environmen AO-12 If requested, a clone is created from an AO-13 A clone is created using access interface device. AO-14 If an unaligned clone is created, each se accurately written to the same disk address on occupied on the digital source. AO-17 If requested, any excess sectors on a clo modified. AO-23 If the tool logs any log significant info accurately recorded in the log file.	nt XE. image file. e DST-AI to write to the clone ector written to the clone is the clone that the sector one destination device are not prmation, the information is	
Name:			
Test Host:	frank		
Test Date:	Tue Jun 18 09:10:09 2013		
Drives:	<pre>src(01-SATA) dst (05-SATA) other (02-IDE)</pre>		
Source	src hash (SHA256): <		
Setup:	<pre>1AA01FEAE55F5CD55185D2B1A1359B3F913E7093FEF1D1; src hash (SHA1): < 4951236428C36B944E62E8D6586; src hash (MD5): < 0A49B13D91FA9DA87CEEE9D006CC 156301488 total sectors (80026361856 bytes) Model (0JD-32HKA0) serial # (WD-WMAJ9144;</pre>	ADA220CAC456BA40D8 > 2DCBEF05F282C > 36FD6 > 3529)	
Log	====== Destination drive setup ======		
Highlights:	156301488 sectors wiped with 5		
Results:	<pre>====== Comparison of original to clone drive == Sectors compared: 156301488 Sectors match: 156301488 Sectors differ: 0 Bytes differ: 0 Diffs range 0 source read errors, 0 destination read errors ===== Tool Settings: ===== start-sector 0 OS: Microsoft Windows XP [Version 5.1.2600] ====== Extract from X-Ways logfile.txt file === [G:\da-13.e01]> WDC WD800JD-32HKA0 Sector 0> Sector 0 156,301,488 Sectors 156,301,488 sector(s) successfully copied.</pre>	3	
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	A0-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results achieved		

5.2.52 DA-14-NT

Test Case DA-14-NT X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-14 If an unaligned clone is created, each sector written to the clone is accurately written to the same disk address on the clone that the sector occupied on the digital source. AO-17 If requested, any excess sectors on a clone destination device are not modified. AO-23 If the tool logs any log significant information, the information is accurately recorded in the log file. 	
Tester Name:	irr	
Test Host:	Nihilus	
Test Date:	Wed Dec 5 16:35:59 2012	
Drives:	<pre>src(01-IDE-58) dst (7A-SATA) other (0F-FU)</pre>	
Source Setup:	<pre>src hash (SHA1): < A48BB5665D6DC57C22DB68E2F723DA9AA8DF82B9 > src hash (MD5): < F458F673894753FA6A0EC8B8EC63848E > 78165360 total sectors (40020664320 bytes)</pre>	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171)	
	Model (0BB-00JHC0) serial # (WD-WMAMC74171) N Start LBA Length Start C/H/S End C/H/S bot Partition type 1 P 00000063 020980827 0000/001/01 1023/254/63 0C Fat32X 2 X 020980890 057175335 1023/000/01 1023/254/63 0F extended 3 S 00000063 00032067 1023/001/01 1023/254/63 0F extended 5 S 00000063 002104515 1023/000/01 1023/254/63 0F extended 5 S 00000063 004192965 1023/001/01 1023/254/63 0F extended 7 S 00000063 004192902 1023/001/01 1023/254/63 0F extended 9 S 00000063 00401925 1023/000/01 1023/254/63 0F extended 9 S 00000063 00401925 1023/001/01 1023/254/63 0F extended 11 S 00000063 00401925 1023/001/01 1023/254/63 0F extended 11 S 00000063 010490445 1023/001/01 1023/254/63 0F extended 13 S 00000063 004209030 1023/001/01 1023/254/63 0F extended 13 S 00000063 004208967 1023/001/01 1023/254/63 0F extended 14 x 025431080 027744255 1023/001/01 1023/254/63 0F extended 15 S 00000063 027744192 1023/001/01 1023/254/63 07 NTFS 16 S 00000000 00000000 0000/000 0000/000/0	
Log	===== Destination drive setup =====	
Highlights:	156250000 sectors wiped with 7A ===== Comparison of original to clone drive ===== Sectors compared: 27744192 Sectors match: 27700231 Sectors differ: 43961 Bytes differ: 22384084 Diffs range: 6160368-6160399, 6160424-6160631, 6291448-6291479, 6291504-6291967, 6701312-6744447, 9759488-9759489, 9760000-9760001, 13872088-13872096, 13872104-13872159, 13872168-13872175, 13872384, 13872396-13872397, 13872615, 27744184-27744191 Source (27744192) has 5815530 fewer sectors than destination (33559722)	
	Source (27744192) has 5815530 fewer sectors than destination (33559722) Zero fill: 0	

Test Case DA-	14-NT X-Ways Forensics 16.2 SR-5		
	Src Byte fill (01): 0		
	Dst Byte fill (7A): 5815529		
	Other fill: 0		
	Other no fill: 1		
	Zero fill range:		
	Src fill range:		
	Dst fill range: 27744192-33559720		
	Other fill range:		
	Other not filled range: 33559721		
	run start Wed Dec 5 17:09:42 2012		
	run finish Wed Dec 5 17:23:58 2012		
	elapsed time 0:14:16		
	Normal exit		
	====== Tool Settings: ======		
	start-sector U		
	OS: Microsoft Windows [Version 6.1.7600]		
	===== Extract from X-Ways logfile.txt file ===	====	
	[L:\XWays-reRun-II\da-07-nt-alt\da-07-nt-alt.0	01]> Drive K:	
	Sector 0> Sector 0		
	27,744,184 Sectors		
	27,744,184 sector(s) successfully copied.		
	Turner destinction nontition contour book.		
	EXCess destination partition sectors hash.	مەرمەرمەرمەرمەرمەرمەرمە	7707
Peculte	SHAT 14205020304 - 1/10257/005 = 72CD11F3FC2E40	6D329965DABD0877E30AA7F	4//0/
Results.	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI	as expected	
	AO-14 An unaligned clone is created	43961 sectors differ	
	AO-17 Excess sectors are unchanged	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results not achieved		

5.2.53 DA-14-NT-ALT

Test Case DA-	14-NT-ALT X-Ways Forensics 16.2 SR-5		
Case	DA-14 Create an unaligned clone from an image file.		
Summary:			
Assertions:	AM-03 The tool executes in execution environment XE.		
	AO-12 If requested, a clone is created from an image file.		
	AO-13 A clone is created using access interface DST-AI to write to the		
	10-14 If an unaligned clone is greated each sector written to the clone is		
	accurately written to the same disk address on the clone that the sector		
	occupied on the digital source.		
	AO-17 If requested, any excess sectors on a clone destination device are		
	not modified.		
	AO-23 If the tool logs any log significant information, the information is		
	accurately recorded in the log file.		
Tester Name:	jrr		
Test Host:	Frank		
Test Date:	Wed Jul 31 11:32:25 2013		
Drives:	<pre>src(43) dst (08-IDE) other (0C-FU)</pre>		
Source	src hash (SHA1): < 888E2E7F7AD237DC7A732281DD93F325065E5871 >		
Setup:	src hash (MD5): < BC39C3F7EE7A50E77B9BA1E65A5AEEF7 >		
	78125000 total sectors (4000000000 bytes)		
	Model (0BB-75JHC0) serial # (WD-WMAMC46588)		
	N Start LBA Length Start C/H/S End C/H/S boot Partition type		
	1 P 000000063 020980827 0000/001/01 1023/254/63 OC Fat32X		
	2 X 020980890 057143205 1023/000/01 1023/254/63 OF extended		

Test Case DA-	14-NT-ALT X-Ways Forensics 16.2 SR-5	
	3 S 00000063 000032067 1023/001/01 1023/254/	63 01 Fat12
	4 x 000032130 002104515 1023/000/01 1023/254/	63 05 extended
	5 S 00000063 002104452 1023/001/01 1023/254/	63 06 Fat16
	6 x 002136645 004192965 1023/000/01 1023/254/	63 05 extended
	7 S 000000063 004192902 1023/001/01 1023/254/	63 16 other
	8 X 006329610 008401995 1023/000/01 1023/254/	63 US extended
	9.5.0000000005.000401952.1025/001/01.1025/254/	63 05 extended
	11 S 00000063 010490382 1023/001/01 1023/254/	63 83 Linux
	$12 \times 0.025222050 \ 0.04209030 \ 1023/000/01 \ 1023/254/$	63 05 extended
	13 S 00000063 004208967 1023/001/01 1023/254/	63 82 Linux swap
	14 x 029431080 027712125 1023/000/01 1023/254/	63 05 extended
	15 S 00000063 027712062 1023/001/01 1023/254/	63 07 NTFS
	16 S 00000000 00000000 0000/000/00 0000/000/	00 00 empty entry
	17 P 00000000 00000000 0000/000/00 0000/000/	00 00 empty entry
	18 P 00000000 00000000 0000/000/00 0000/000/	00 00 empty entry
	1 020980827 sectors 10742183424 bytes	
	3 000032067 sectors 16418304 bytes	
	5 UU21U4452 sectors 10//4/9424 bytes 7 004102002 gogterg 2146765824 byteg	
	9 008401932 sectors 4301789184 bytes	
	11 010490382 sectors 5371075584 bytes	
	13 004208967 sectors 2154991104 bytes	
	15 027712062 sectors 14188575744 bytes	
	01NT-md5 14205026303 5D42FA317C802ACFEF2D31309	2D7411E
	Excess destination partition sectors hash:	
	SHA1 14188575744 - 15035779583 = 027E7E6DEF7CB	64E9861C847B960B0409C706CDD
Log	===== Destination drive setup ======	
Highlights:	78165360 sectors wiped with 8	
	====== Comparison of original to clone drive =	=====
	Sectors compared: 27/12062	
	Sectors match: 27/11923	
	Bytes differ: 15295	
	Diffs range: 16, 32-39, 48-55, 80-95, 208-223	, 13856024-13856095,
	13987104-13987119, 13988291, 13988803	,,
	Source (27712062) has 1654695 fewer sectors th	an destination (29366757)
	Zero fill: 0	
	Src Byte fill (43): 0	
	Dst Byte fill (08): 1654695	
	Other fill: 0	
	Other no IIII: U	
	Sra fill range:	
	Dst fill range: 27712062-29366756	
	Other fill range:	
	Other not filled range:	
	run start Wed Jul 31 10:23:46 2013	
	run finish Wed Jul 31 10:37:44 2013	
	elapsed time 0:13:58	
	Normal exit	
	===== Tool Settings:	
	start-sector 0	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	===== Extract from X-Ways logfile.txt file ==	====
	[I:\xways16.2_re-run\da-07-nt\Hard disk 6, Par	tition 8.001]> Hard disk
	0, Partition 2	
	Sector 0> Sector 0	
	27,712,062 Sectors	
	2/,/12,062 sector(s) successfully copied.	
	Excess destination partition sectors hash:	
	SHA1 14188575744 - 15035779583 = 027E7E6DEF7CB	64E9861C847B960B0409C706CDD
Results:		
	Assertion & Expected Result	Actual Result

November 2013

Test Case DA-14-NT-ALT X-Ways Forensics 16.2 SR-5			
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	139 sectors differ	
	AO-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results not achieved		

5.2.54 DA-14-SATA28

Test Case DA-14-SATA28 X-Ways Forensics 16.2 SR-5		
Case	DA-14 Create an unaligned clone from an image	file.
Summary:		
Assertions:	AM-03 The tool executes in execution environmen AO-12 If requested, a clone is created from an AO-13 A clone is created using access interfac device. AO-14 If an unaligned clone is created, each s	nt XE. image file. e DST-AI to write to the clone ector written to the clone is
	accurately written to the same disk address on occupied on the digital source. AO-17 If requested, any excess sectors on a cl modified.	the clone that the sector one destination device are not
	ACCURATELY recorded in the log file.	ormation, the information is
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Wed Apr 4 14:37:43 2012	
Drives:	<pre>src(01-SATA) dst (4D-SATA) other (23-IDE)</pre>	
Source	src hash (SHA256): <	
Setup:	1AA01FEAE55F5CD55185D2B1A1359B3F913E7093FEF1D1	ADA220CAC456BA40D8 >
	src hash (SHA1): < 4951236428C36B944E62E8D6586	2DCBEF05F282C >
	src hash (MD5): < 0A49B13D91FA9DA87CEEE9D006C	B6FD6 >
	156301488 total sectors (80026361856 bytes)	95.20.)
	Model (UJD-32HKAU) serial # (WD-WMAJ9144	8529)
Log Highlights:	===== Destination drive setup ===== 156301488 sectors wiped with 4D	
	<pre>===== Comparison of original to clone drive = Sectors compared: 156301488 Sectors match: 156301488 Sectors differ: 0 Bytes differ: 0 Diffs range 0 source read errors, 0 destination read error</pre>	===== S
	Tool Settings:	
	fill none	
	start-sector 0	
	OS: Microsoft Windows XP [Version 5.1.2600]	
	<pre>===== Extract from X-Ways logfile.txt file == [D:\da-06-sata28\da-06-sata28.e01]> WDC WD8 Sector 0> Sector 0 156,301,488 Sectors 156,301,488 sector(s) successfully copied.</pre>	==== 00JD-32HKA0
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AU-12 A clone is created from an image file.	as expected
	AU-13 Clone created using interface AI.	as expected
	AU-14 An unaligned clone is created.	as expected
	AU-1/ Excess sectors are unchanged.	as expected
	AU-23 Logged information is correct.	as expected
Analysis:	Expected results achieved	

5.2.55 DA-14-SATA48

Test Case DA-14-SATA48 X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-14 Create an unaligned clone from an image	file.	
Assertions:	 AM-03 The tool executes in execution environment AO-12 If requested, a clone is created from an AO-13 A clone is created using access interface device. AO-14 If an unaligned clone is created, each se accurately written to the same disk address on occupied on the digital source. AO-17 If requested, any excess sectors on a clo modified. AO-23 If the tool logs any log significant infor accurately recorded in the log file. 	nt XE. image file. e DST-AI to write to the clone ector written to the clone is the clone that the sector one destination device are not ormation, the information is	
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Thu Apr 5 16:51:54 2012		
Drives:	src(OB-SATA) dst (2C-IDE) other (66-SATA)		
Source Setup:	<pre>src hash (SHA256): < 0026805624818CAEDAD12019DCDB16E79DE3C47CFE1C71 src hash (SHA1): < DA892EE968DD828F2F1B6825C1D src hash (MD5): < 1873847F597A69D0F5DB991B67E 488397168 total sectors (250059350016 bytes) 30400/254/63 (max cyl/hd values) 30401/255/63 (number of cyl/hd) Model (00JD-22FYB0) serial # (WD-WMAEH267</pre>	7193F9880B3DB32A9F > 3EF35062A0737 > 84F92 > 7545)	
Log Highlights:	===== Destination drive setup ===== 490234752 sectors wiped with 2C		
	<pre>===== Comparison of original to clone drive = Sectors compared: 488397168 Sectors match: 488397168 Sectors differ: 0 Bytes differ: 0 Diffs range Source (488397168) has 1837584 fewer sectors th Zero fill: 0 Src Byte fill (0B): 0 Dst Byte fill (2C): 1837584 Other fill: 0 Other fill: 0 Zero fill range: Src fill range: Src fill range: 488397168-490234751 Other fill range: 0 ther not filled range: 0 source read errors, 0 destination read error. ====== Tool Settings: ====== fill none</pre>	===== han destination (490234752)	
	<pre>fill none start-sector 0 ===== Extract from X-Ways logfile.txt file == D:\da-06-sata48\da-06-sata48.001> Maxtor 7Y Beginning of file> Sector 0 488,397,168 Sectors 488,397,168 sector(s) successfully copied.</pre>	==== 250P0	
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AU-12 A clone is created from an image file.	as expected	
	AU-13 Clone created using interface AI.	as expected	
	AU-14 An unaligned clone is created.	as expected	

Test Case DA-14-SATA48 X-Ways Forensics 16.2 SR-5			
	A0-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results achieved		

5.2.56 DA-14-SCSI

Test Case DA-14-SCSI X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-14 Create an unaligned clone from an image :	file.	
Assertions:	AM-03 The tool executes in execution environment	nt XE.	
	AO-12 If requested, a clone is created from an	image file.	
	AO-13 A clone is created using access interface	e DST-AI to write to the	
	clone device.		
	AO-14 If an unaligned clone is created, each se	ector written to the clone is	
	accurately written to the same disk address on	the clone that the sector	
	occupied on the digital source.	and doctination dovide and	
	AO-17 II requested, any excess sectors on a cit	one destination device are	
	AO-23 If the tool logs any log significant info	ormation, the information is	
	accurately recorded in the log file.		
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Thu Apr 12 11:28:26 2012		
Drives:	<pre>src(E0) dst (08-IDE) other (05-SATA)</pre>		
Source	src hash (SHA1): < 4A6941F1337A8A22B10FC844B4D	7FA6158BECB82 >	
Setup:	src hash (MD5): < A97C8F36B7AC9D5233B90AC0928	4F938 >	
	1/938985 total sectors (9184/60320 bytes)		
	MODEL (AILASIOKZ-110920) SELIAI # (10902814243)	5)	
Loa	====== Destination drive setup ======		
Highlights:	78165360 sectors wiped with 8		
	-		
	====== Comparison of original to clone drive ==	=====	
	Sectors compared: 17938985		
	Sectors match: 17938985		
	Sectors differ: 0		
	Bytes differ: U		
	DIIIS range Source (17938985) has 60226375 fewer sectors th	an destination (78165360)	
	Zero fill: 0		
	Src Byte fill (EQ): 0		
	Dst Byte fill (08): 60226375		
	Other fill: 0		
	Other no fill: 0		
	Zero fill range:		
	Src fill range:		
	Dst fill range: 17938985-78165359		
	Other IIII range:		
	0 source read errors 0 destination read errors	3	
	bource read errorb, b depermetron read error,	5	
	====== Tool Settings: ======		
	fill none		
	start-sector 0		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	===== Extract from X-Ways logfile.txt file ===	====	
	[D:\da-06-scsi\da-06-scsi.e01]> ST340016A		
	Sector U> Sector U 17 938 985 Sectors		
	17,938,985 sector(s) successfully copied		
	,,		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-14 An unaligned clone is created.	as expected	
	AU-1/ Excess sectors are unchanged.	as expected	
	AU-23 Logged information is correct.	as expected	
1			

Test Case DA-	14-SCSI X-Ways Forensics 16.2 SR-5
Analysis:	Expected results achieved

5.2.57 DA-14-THUMB

Test Case DA-14-THUMB X-Ways Forensics 16.2 SR-5			
Case Summary:	DA-14 Create an unaligned clone from an image	file.	
Assertions:	AM-03 The tool executes in execution environment XE.		
	AO-12 If requested, a clone is created from an	image file.	
	AO-13 A clone is created using access interfac	e DST-AI to write to the	
	clone device.		
	AU-14 If an unaligned clone is created, each s	ector written to the clone is	
	accurately written to the same disk address on	the crone that the sector	
	A0-17 If requested, any excess sectors on a cl	one destination device are	
	not modified.		
	AO-23 If the tool logs any log significant inf	ormation, the information is	
	accurately recorded in the log file.		
Tester Name:	jrr faa dha		
Test Host:	Iready		
Drives:	MOII API 23 10.44.37 2012 gra(D5-THIMR) det (D4-THIMR) other (D6-THIMR)		
Source	src hash (SHA1): < D68520FF74A336F49DCCF83815B		
Setup:	src hash (MD5): < C843593624B2B3B878596D8760B	19954 >	
<u>-</u>	505856 total sectors (258998272 bytes)		
	Model (usb2.0Flash Disk) serial # ()		
Log	====== Destination drive setup ======		
Highlights:	505856 sectors wiped with D4		
	====== Comparison of original to clone drive =		
	Sectors compared: 505856		
	Sectors match: 505856		
	Sectors differ: 0		
	Bytes differ: 0		
	Diffs range		
	0 source read errors, 0 destination read errors		
	===== Tool Settings: ======		
	fill none		
	start-sector 0		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	Evtragt from V Wave logfile tut file		
	===== Extract from X-Ways logille.txt file ======		
	Beginning of file> Sector 0		
	505.856 Sectors		
	505,856 sector(s) successfully copied.		
Results:	Annution & Europhed Descript		
	Assertion & Expected Result	Accual Result	
	AM-03 EXECUTION ENVIRONMENT IS AE.	as expected	
	A0-13 Clone created using interface AT	as expected	
	A0-14 An unaligned clone is created	as expected	
	A0-17 Excess sectors are unchanged.	as expected	
	AO-23 Logged information is correct.	as expected	
		·	
Analysis:	Expected results achieved		

5.2.58 DA-14-USB

Test Case DA-14-USB X-Ways Forensics 16.2 SR-5		
Case Summary:	DA-14 Create an unaligned clone from an image file.	
Assertions:	 M-03 The tool executes in execution environment XE. O-12 If requested, a clone is created from an image file. O-13 A clone is created using access interface DST-AI to write to the clone evice. O-14 If an unaligned clone is created, each sector written to the clone is ccurately written to the same disk address on the clone that the sector ccupied on the digital source. O-17 If requested, any excess sectors on a clone destination device are not odified. O-23 If the tool logs any log significant information, the information is ccurately recorded in the log file. 	
Tester Name:	jrr	
Test Host:	freddy	
Test Date:	Mon Apr 9 13:52:55 2012	
Drives:	src(63-fu2) dst (2F-IDE) other (80-FU2)	
Source Setup:	<pre>src hash (SHA256): < EC8EF011494BA6DA18F74C47547C3E74E7180585096A830F9247A98EF613BB1D > src hash (SHA1): < F7069EDCBEAC863C88DECED82159F22DA96BE99B > src hash (MD5): < EE217BC4FA4F3D1B4021D29B065AA9EC > 117304992 total sectors (60060155904 bytes) Model (SP0612N) serial # () N Start LBA Length Start C/H/S End C/H/S boot Partition type 1 P 00000063 004192902 0000/001/01 0260/254/63 Boot 06 Fat16 2 x 004192965 113097600 0261/000/01 1023/254/63 OF extended 3 S 00000063 113097537 0261/001/01 1023/254/63 OB Fat32 4 S 00000000 00000000 0000/000/00 0000/000/00 00</pre>	
Log Highlights:	===== Destination drive setup ===== 156301488 sectors wiped with 2F	
	<pre>====== Comparison of original to clone drive ====== Sectors compared: 117304992 Sectors match: 117304992 Sectors differ: 0 Bytes differ: 0 Diffs range Source (117304992) has 38996496 fewer sectors than destination (156301488) Zero fill: 0 Src Byte fill (63): 0 Dst Byte fill (63): 0 Dst Byte fill (2F): 38996496 Other fill: 0 Zero fill range: 0 Src fill range: 117304992-156301487 Other no fill: 17304992-156301487 Other fill range: 0 Source read errors, 0 destination read errors ====== Tool Settings: ======</pre>	
	fill none start-sector 0	
	Fytract from X-Ways logfile tyt file	
	[D:\da-06-usb\da-06-usb.e01]> ST380215A Sector 0> Sector 0	

Test Case DA-14-USB X-Ways Forensics 16.2 SR-5

	117,304,992 Sectors 117,304,992 sector(s) successfully copied.	
Results:		
	Assertion & Expected Result	Actual Result
	AM-03 Execution environment is XE.	as expected
	AO-12 A clone is created from an image file.	as expected
	AO-13 Clone created using interface AI.	as expected
	AO-14 An unaligned clone is created.	as expected
	AO-17 Excess sectors are unchanged.	as expected
	AO-23 Logged information is correct.	as expected
Analysis:	Expected results achieved	

5.2.59 DA-17

Test Case DA-17 X-Ways Forensics 16.2 SR-5			
Case	DA-17 Create a truncated clone from an image file.		
Summary:			
Assertions:	 AM-03 The tool executes in execution environment XE. AO-12 If requested, a clone is created from an image file. AO-13 A clone is created using access interface DST-AI to write to the clone device. AO-19 If there is insufficient space to create a complete clone, a truncated clone is created using all available sectors of the clone device. AO-20 If a truncated clone is created, the tool notifies the user. AO-23 If the tool logs any log significant information, the information is property log with the log field. 		
	accuracely recorded in the roy rife.		
Tester Name:	jrr		
Test Host:	freddy		
Test Date:	Thu May 10 12:16:03 2012		
Drives:	<pre>src(E0) dst (57-IDE) other (D6-THUMB)</pre>		
Source Setup:	<pre>src hash (SHA1): < 4A6941F1337A8A22B10FC844B4D7FA6158BECB82 > src hash (MD5): < A97C8F36B7AC9D5233B90AC09284F938 > 17938985 total sectors (9184760320 bytes) Model (ATLAS10K2-TY092J) serial # (169028142436)</pre>		
Log Highlights:	===== Destination drive setup ====== 4001760 sectors wiped with D6		
	===== Tool Settings: ===== fill none start-sector 0		
	OS: Microsoft Windows XP [Version 5.1.2600]		
	====== No X-Ways logfile.txt file created ======		
	===== Tool Message: ======		
	X-Ways Forensics		
Results:			
	Assertion & Expected Result	Actual Result	
	AM-03 Execution environment is XE.	as expected	
	AO-12 A clone is created from an image file.	as expected	
	AO-13 Clone created using interface AI.	as expected	
	AO-19 Truncated clone is created.	as expected	
	AO-20 User notified that clone is truncated.	as expected	
	AO-23 Logged information is correct.	as expected	
Analysis:	Expected results achieved		