

**December 2022**

**Test Results for Mobile Device Acquisition Tool:**  
Manget Forensics Axiom v6.8.0.33717

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## Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the Department of Homeland Security's (DHS) Science and Technology Directorate, the National Institute of Justice, and the National Institute of Standards and Technology's (NIST) Special Programs Office and Information Technology Laboratory. 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's Criminal Investigation Division Electronic Crimes Program, and the DHS' 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. Interested parties in the computer forensics community can review and comment on the specifications and test methods posted on the CFTT Web site (<https://www.cftt.nist.gov/>).

This document reports the results from testing Magnet Axium v6.8.0.33717 across supported mobile devices.

Test results from other tools can be found on the DHS Science & Technology sponsored digital forensics web page, <http://www.dhs.gov/science-and-technology/nist-cftt-reports>.

## How to Read This Report

This report is divided into four sections. Section 1 identifies and provides a summary of any significant anomalies observed in the test runs. This section is sufficient for most readers to assess the suitability of the tool for the intended use. Section 2 identifies the mobile devices used for testing. Section 3 lists testing environment, the internal memory data objects used to populate the mobile devices. Section 4 provides an overview of the test case results reported by the tool.

# Test Results for Mobile Device Acquisition Tool

**Tool Tested:** Axiom

**Software Version:** v6.8.0.33717

**Supplier:** Magnet Forensics

**WWW:** [magnetforensics.com](http://magnetforensics.com)

## 1 Results Summary

Magnet Axiom v6.8.0.33717 was tested for its ability to acquire active data from the internal memory of supported mobile devices.

The data reported for the devices below varies based upon the data extraction technique supported. For instance, a physical and/or file system extraction will provide the user with more data than a logical extraction. Each supported data extraction technique was performed. Except for the following anomalies, the tool acquired all supported data objects completely and accurately for all mobile devices tested.

### ***Contacts and Calendar entries:***

Contacts and Calendar entries were not reported. (Devices: ***Galaxy S22, Galaxy Z Fold3, One Plus 10 Pro, One Plus 9, Google Pixel 6 Pro, Google Pixel 6***)

### ***Notes/Memo entries:***

Notes/Memo entries are not reported. (Devices: ***All Android***)

### ***Call logs:***

Call logs are not reported. (Devices: ***Galaxy S22, Galaxy Z Fold 3, Google Pixel 6 Pro, Google Pixel 6, Galaxy Note 8***)

### ***MMS messages:***

- MMS attachments (audio, graphic, video) are not reported. (Devices: ***Galaxy S22, Galaxy Z Fold3, One Plus 10 Pro, One Plus 9, Google Pixel 6 Pro, Google Pixel 6, Galaxy S9***)
- MMS attachments (audio) are not reported. (Devices: ***Galaxy Note 10, Galaxy S10, Galaxy Note 8***)

### ***Social media data:***

- Social media data (Facebook, Facebook Messenger, Twitter, SnapChat) is not reported. (Devices: ***iPhone 13 Pro Max, iPhone 13 Pro, iPhone 13, iPhone 13 mini, iPhone 11, iPhone XR, iPhone SE, iPad Pro, iPhone 8***)
- Social media data (LinkedIn, Pinterest) is partially reported i.e., account, profile related information. (Devices: ***iPhone 13 Pro Max, iPhone 13 Pro, iPhone 13, iPhone 11, iPhone XR, iPhone SE, iPad Pro***)
- Social media data for Instagram is partially reported i.e., account, profile related information. (Device: ***iPhone 8***)

- Social media data for LinkedIn is partially reported i.e., account, profile related information. (Device: *iPhone X*)
- Social media data (Pinterest, SnapChat) is not reported. (Devices: *iPhone X*, *iPhone 8*)

For more test result details see section 4.

## 2 Mobile Devices

The following table lists the mobile devices used for testing Magnet Forensics Axiom v6.8.0.33717.

Make	Model Name	OS	Model #	Network
Apple iPhone	13 Pro Max	iOS 15.6	MNCP34LL/A	CDMA
Apple iPhone	13 Pro	iOS 15.6	MNNDT3LL/A	CDMA
Apple iPhone	13	iOS 15.6	MNGD3LL/A	CDMA
Apple iPhone	13 mini	iOS 15.6	MNF83LL/A	CDMA
Apple iPhone	11	iOS 15.1	MWL72LL/A	CDMA
Apple iPhone	XR	iOS 15.1	NQCK2LL/A	CDMA
Apple iPhone	SE	iOS 15.1	MX9N2LL/A	CDMA
Apple iPhone	X	iOS 11.3.1	MQCK2LL/A	CDMA
Apple iPad	Pro	iOS 15.6	MHQR3LL/A	CDMA
Apple iPhone	8	iOS 11.3.1	15E203	CDMA
Samsung	Galaxy S22	Android 12	SM-S901U1	CDMA
Samsung	Galaxy Z Fold3 5G	Android 12	SM-F926U1	CDMA
One Plus	10 Pro	Android 12	NE2215	CDMA
One Plus	9	Android 11	LE2115	CDMA
Google Pixel	6 Pro	Android 12	GF5KQ	CDMA
Google Pixel	6	Android 12	GR1YH	CDMA
Google	Pixel 4	Android 10	G0201	CDMA
Samsung	Galaxy Note 10	Android 9	SM-N97OU1	CDMA
Samsung	Galaxy S10	Android 9	SM-G973U1	CDMA
Samsung	Galaxy Note 8	Android 7.1.1	NMF26XN950 U1UEU1AQ1f	CDMA
Samsung	Galaxy S9	Android 8.0.0	G960U1UEU1 ARB7	CDMA
Huawei	P20 Pro	Android 8.1.0	CLTL2981010 6 (C636)	CDMA

**Table 1: Mobile Devices**

### 3 Testing Environment

The tests were run in the NIST CFTT lab. This section describes the selected test execution environment, and the data objects populated onto the internal memory of mobile devices.

#### 3.1 Execution Environment

Magnet Forensics Axiom v6.8.0.33717 was installed on Windows 10 Pro version 10.0.19042.1586.

#### 3.2 Internal Memory Data Objects

Magnet Forensics Axiom v6.8.0.33717 was measured by analyzing acquired data from the internal memory of pre-populated mobile devices. Table 2 defines the data objects and elements used for populating mobile devices provided the mobile device supports the data element.

Data Objects	Data Elements
Address Book Entries	<i>Regular Length</i> <i>Maximum Length</i> <i>Special Character</i> <i>Blank Name</i> <i>Regular Length, email</i> <i>Regular Length, graphic</i> <i>Regular Length, Address</i> <i>Deleted Entry</i> <i>Non-Latin Entry</i> <i>Contact Groups</i>
PIM Data: Datebook/Calendar; Memos	<i>Regular Length</i> <i>Maximum Length</i> <i>Deleted Entry</i> <i>Special Character</i> <i>Blank Entry</i>
Call Logs	<i>Incoming</i> <i>Outgoing</i> <i>Missed</i> <i>Incoming – Deleted</i> <i>Outgoing – Deleted</i> <i>Missed - Deleted</i>

<b>Data Objects</b>	<b>Data Elements</b>
Text Messages	<i>Incoming SMS – Read Incoming SMS – Unread Outgoing SMS Incoming EMS – Read Incoming EMS – Unread Outgoing EMS Incoming SMS – Deleted Outgoing SMS – Deleted Incoming EMS – Deleted Outgoing EMS – Deleted Non-Latin SMS/EMS</i>
MMS Messages	<i>Incoming Audio Incoming Graphic Incoming Video Outgoing Audio Outgoing Graphic Outgoing Video</i>
Application Data	<i>Device Specific App Data</i>
Stand-alone data files	<i>Audio Graphic Video Audio – Deleted Graphic - Deleted Video - Deleted</i>
Internet Data	<i>Visited Sites Bookmarks E-mail</i>
Location Data	<i>GPS Coordinates Geo-tagged Data</i>
Social Media Data	<i>Facebook Twitter LinkedIn Instagram Pinterest SnapChat WhatsApp TikTok</i>

**Table 2: Internal Memory Data Objects**

## 4 Test Results

This section provides the test cases results reported by the tool. Sections 4.1 – 4.2 identify the mobile device operating system type, media (e.g., Android, iOS) and the make and model of mobile devices used for testing Magnet Forensics Axiom v6.8.0.33717.

The *Test Cases* column (internal memory acquisition) in sections 4.1 - 4.2 are comprised of two sub-columns that define a particular test category and individual sub-categories that are verified when acquiring the internal memory for supported mobile devices and UICCs within each test case. Each individual sub-category row results for each mobile device/UICC tested. The results are as follows:

*As Expected:* the mobile forensic application returned expected test results – the tool acquired and reported data from the mobile device/UICC successfully.

*Partial:* the mobile forensic application returned some of data from the mobile device/UICC.

*Not As Expected:* the mobile forensic application failed to return expected test results – the tool did not acquire or report supported data from the mobile device/UICC successfully.

*NA:* Not Applicable – the tool does not provide support for the acquisition for a particular data element.

## **4.1 Android Mobile Devices**

The internal memory contents for Android devices were acquired and analyzed with Magnet Forensics Axiom v6.8.0.33717. All test cases pertaining to the acquisition of supported Android devices were successful with the exception of the following across all Android devices.

- Contacts and Calendar entries were not reported for the Galaxy S22, Galaxy Z Fold3, One Plus 10 Pro, One Plus 9, Google Pixel 6 Pro and Google Pixel 6.
- Notes/Memo entries were not reported for all Android devices.
- Call logs (incoming, outgoing, missed) were not reported for the Galaxy S22, Galaxy Z Fold 3, Google Pixel 6 Pro, Google Pixel 6 and Galaxy Note 8.
- MMS attachments (audio, graphic, video) are not reported for the Galaxy S22, Galaxy Z Fold3, One Plus 10 Pro, One Plus 9, Google Pixel 6 Pro, Google Pixel 6 and Galaxy S9.
- MMS attachments (audio) are not reported for the Galaxy Note 10, Galaxy S10 and Galaxy Note 8.

See Table 3a, 3b below for more details.

**Internal Memory Acquisition**  
**Magnet Forensics Axiom v6.8.0.33717**  
*Mobile Device Platform: Android*

<b>Test Cases:</b>	Samsung Galaxy S22	Samsung Galaxy Z Fold 3 5G	One Plus 10 Pro	One Plus 9	Google Pixel 6 Pro	Google Pixel 6
Acquisition: Acquire All	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Acquisition: Disrupted	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Preview-Pane	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Generated Reports	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: IMEI/MEID/ESN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: MSISDN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Contacts	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
PIM Data: Calendar	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
PIM Data: Memos/Notes	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
Call Logs: Incoming	Not As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
Call Logs: Outgoing	Not As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
Call Logs: Missed	Not As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
SMS Messages: Incoming	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	NA
SMS Messages: Outgoing	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	NA
MMS Messages: Graphic	Partial	Partial	Partial	Partial	Partial	Partial
MMS Messages: Audio	Partial	Partial	Partial	Partial	Partial	Partial
MMS Messages: Video	Partial	Partial	Partial	Partial	Partial	Partial
Stand-alone Files: Graphic	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Audio	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Video	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Application Data: Documents (txt, pdf files)	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>

<b>Test Cases:</b>	Samsung Galaxy S22	Samsung Galaxy Z Fold 3 5G	One Plus 10 Pro	One Plus 9	Google Pixel 6 Pro	Google Pixel 6
Social Media Data: Facebook	NA	NA	NA	NA	NA	NA
Social Media Data: Facebook Messenger	NA	NA	NA	NA	NA	NA
Social Media Data: Twitter	NA	NA	NA	NA	NA	NA
Social Media Data: LinkedIn	NA	NA	NA	NA	NA	NA
Social Media Data: Instagram	NA	NA	NA	NA	NA	NA
Social Media Data: Pinterest	NA	NA	NA	NA	NA	NA
Social Media Data: SnapChat	NA	NA	NA	NA	NA	NA
Social Media Data: WhatsApp	NA	NA	NA	NA	NA	NA
Social Media Data: TikTok	NA	NA	NA	NA	NA	NA
Internet Data: Bookmarks	NA	NA	NA	NA	NA	NA
Internet Data: History	NA	NA	NA	NA	NA	NA
Internet Data: Email	NA	NA	NA	NA	NA	NA
GPS Data: Coordinates/Geo-tagged	NA	NA	NA	NA	NA	NA
Non-Latin Character: Reported in native format	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Hashing: Case File/ Individual Files	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Case File Data Protection: Modify Case Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SQLite Data: Report Active Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SQLite Data: Run SQLite Commands	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>

**Table 3a: Android Devices**

<b>Test Cases:</b>	Google Pixel 4	Samsung Galaxy Note 10	Samsung Galaxy S10	Samsung Galaxy Note 8	Samsung Galaxy S9	Huawei P20 Pro
Acquisition: Acquire All	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Acquisition: Disrupted	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Preview-Pane	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Generated Reports	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: IMEI/MEID/ESN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: MSISDN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Contacts	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Calendar	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Memos/Notes	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
Call Logs: Incoming	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Call Logs: Outgoing	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Call Logs: Missed	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
SMS Messages: Incoming	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
SMS Messages: Outgoing	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
MMS Messages: Graphic	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Partial	As <i>Expected</i>
MMS Messages: Audio	As <i>Expected</i>	Partial	Partial	Partial	Partial	As <i>Expected</i>
MMS Messages: Video	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Partial	As <i>Expected</i>
Stand-alone Files: Graphic	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Audio	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Video	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Application Data: Documents (txt, pdf files)	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Social Media Data: Facebook	NA	NA	NA	NA	NA	NA

<b>Test Cases:</b>	Google Pixel 4	Samsung Galaxy Note 10	Samsung Galaxy S10	Samsung Galaxy Note 8	Samsung Galaxy S9	Huawei P20 Pro
Social Media Data: Facebook Messenger	NA	NA	NA	NA	NA	NA
Social Media Data: Twitter	NA	NA	NA	NA	NA	NA
Social Media Data: LinkedIn	NA	NA	NA	NA	NA	NA
Social Media Data: Instagram	NA	NA	NA	NA	NA	NA
Social Media Data: Pinterest	NA	NA	NA	NA	NA	NA
Social Media Data: SnapChat	NA	NA	NA	NA	NA	NA
Social Media Data: WhatsApp	NA	NA	NA	NA	NA	NA
Social Media Data: TikTok	NA	NA	NA	NA	NA	NA
Internet Data: Bookmarks	NA	NA	NA	NA	NA	NA
Internet Data: History	NA	NA	NA	NA	NA	NA
Internet Data: Email	NA	NA	NA	NA	NA	NA
GPS Data: Coordinates/Geo-tagged	NA	NA	NA	NA	NA	NA
Non-Latin Character: Reported in native format	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Hashing: Case File/ Individual Files	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Case File Data Protection: Modify Case Data	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
SQLite Data: Report Active Data	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
SQLite Data: Run SQLite Commands	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected

**Table 3b: Android Devices**

## **4.2 iOS Mobile Devices**

The internal memory contents for iOS devices were acquired and analyzed with Magnet Forensics Axiom v6.8.0.33717.

All test cases pertaining to the acquisition of supported iOS devices were successful with the exception of the following across all iOS devices.

- Social media data for Facebook, Facebook Messenger, Twitter and SnapChat is not reported for the iPhone 13 Pro Max, iPhone 13 Pro, iPhone 13, iPhone 13 mini, iPhone 11, iPhone XR, iPhone SE, iPad Pro and iPhone 8.
- Social media data for LinkedIn and Pinterest is partially reported (i.e., account, profile related information) for the iPhone 13 Pro Max, iPhone 13 Pro, iPhone 13, iPhone 11, iPhone XR, iPhone SE and iPad Pro.
- Social media data for Instagram is partially reported (i.e., account, profile related information) for the iPhone 8.
- Social media data for LinkedIn is partially reported (i.e., account, profile related information) for the iPhone X.
- Social media data for Pinterest and SnapChat is not reported for the iPhone X and iPhone 8.

See Table 4a and Table 4b below for more details.

**Internal Memory Acquisition**  
**Magnet Forensics Axiom v6.8.0.33717**  
*Mobile Device Platform: iOS*

<b>Test Cases:</b>	iPhone 13 Pro Max	iPhone 13 Pro	iPhone 13	iPhone 13 mini	iPhone 11	iPhone XR
Acquisition: Acquire All	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Acquisition: Disrupted	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Preview-Pane	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Reporting: Generated Reports	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: IMEI/MEID/ESN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Equipment/User Data: MSISDN	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Contacts	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Calendar	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
PIM Data: Memos/Notes	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Call Logs: Incoming	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Call Logs: Outgoing	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Call Logs: Missed	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
SMS Messages: Incoming	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
SMS Messages: Outgoing	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
MMS Messages: Graphic	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
MMS Messages: Audio	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
MMS Messages: Video	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Graphic	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Audio	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Stand-alone Files: Video	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>
Application Data: Documents (txt, pdf files)	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>

<b>Test Cases:</b>	iPhone 13 Pro Max	iPhone 13 Pro	iPhone 13	iPhone 13 mini	iPhone 11	iPhone XR
Social Media Data: Facebook	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: Facebook Messenger	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: Twitter	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: LinkedIn	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>
Social Media Data: Instagram	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Social Media Data: Pinterest	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>
Social Media Data: SnapChat	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: WhatsApp	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Social Media Data: TikTok	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>As Expected</i>	<i>NA</i>
Internet Data: Bookmarks	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Internet Data: History	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Internet Data: Email	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
GPS Data: Coordinates/Geo-tagged	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Non-Latin Character: Reported in native format	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Hashing: Case File/ Individual Files	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Case File Data Protection: Modify Case Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SQLite Data: Report Active Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Run SQLite Data: Run SQLite Commands	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>

**Table 4a: iOS Devices**

<b>Test Cases:</b>	<b>iPhone SE</b>	<b>iPhone X</b>	<b>iPad Pro</b>	<b>iPhone 8</b>
Acquisition: Acquire All	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Acquisition: Disrupted	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Reporting: Preview-Pane	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Reporting: Generated Reports	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Equipment/User Data: IMEI/MEID/ESN	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Equipment/User Data: MSISDN	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
PIM Data: Contacts	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
PIM Data: Calendar	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
PIM Data: Memos/Notes	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Call Logs: Incoming	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Call Logs: Outgoing	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Call Logs: Missed	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SMS Messages: Incoming	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SMS Messages: Outgoing	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
MMS Messages: Graphic	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
MMS Messages: Audio	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
MMS Messages: Video	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Stand-alone Files: Graphic	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Stand-alone Files: Audio	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Stand-alone Files: Video	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Application Data: Documents (txt, pdf files)	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Social Media Data: Facebook	<i>Not As Expected</i>	<i>As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>

<b>Test Cases:</b>	iPhone SE	iPhone X	iPad Pro	iPhone 8
Social Media Data: Facebook Messenger	<i>Not As Expected</i>	<i>As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: Twitter	<i>Not As Expected</i>	<i>As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: LinkedIn	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Not As Expected</i>
Social Media Data: Instagram	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>Partial</i>
Social Media Data: Pinterest	<i>Partial</i>	<i>Not As Expected</i>	<i>Partial</i>	<i>Not As Expected</i>
Social Media Data: SnapChat	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
Social Media Data: WhatsApp	<i>As Expected</i>	<i>As Expected</i>	<i>NA</i>	<i>As Expected</i>
Social Media Data: TikTok	<i>NA</i>	<i>NA</i>	<i>As Expected</i>	<i>NA</i>
Internet Data: Bookmarks	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Internet Data: History	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Internet Data: Email	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
GPS Data: Coordinates/Geo-tagged	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Non-Latin Character: Reported in native format	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Hashing: Case File/ Individual Files	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Case File Data Protection: Modify Case Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SQLite Data: Report Active Data	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
SQLite Data: Run SQLite Commands	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>

**Table 4b: iOS Devices**