Test Results for Mobile Device Acquisition Tool:
Data Pilot Desktop v2.0.31

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Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the Department of Homeland Security (DHS) Science and Technology Directorate (S&T), the National Institute of Justice, and the National Institute of Standards and Technology (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's Cyber Crime Center, U.S. Internal Revenue Service's Criminal Investigation Division Electronic Crimes Program, as well as 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 website (http://www.cftt.nist.gov/).

This document reports the results from testing Data Pilot Desktop v2.0.31 across supported mobile devices and associated media e.g., smart phones and tablets.

Test results from other tools can be found on the S&T-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: Data Pilot Desktop

Software Version: v2.0.31

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1   Results Summary

Data Pilot Desktop v2.0.31 was tested for its ability to acquire active data from the internal memory of supported mobile devices (i.e., smart phones, tablets). Except for the following anomalies, the tool acquired all supported data objects completely and accurately for all mobile devices tested.

The anomalies listed below are specific to the phone type and OS.

Acquisition:
- Disruption of device's connectivity doesn't result in error. (Devices: ***Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola G5 Plus, Google Pixel 2***)

***Personal Information Management (PIM) data*:**
- Notes/Memos are not reported. (Devices: ***Galaxy S5, LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, Samsung Galaxy Note 8, Ellipsis, Google Pixel 2, iPhone 5S, iPhone 6S Plus, iPad Air v7.1***)
- Notes/Memos are partially reported. (Devices: ***iPhone 7, iPhone 8 Plus, iPhone X, iPad Mini 2 v11.3.1, iPad Air v11.2.1***)

Short Message Service (SMS) Messages:
- SMS via FireChat application are not reported. (Device: ***Ellipsis***)
- SMS not reported. (Devices: ***iPhone 5S, iPad Air v7.1***)

***Multimedia Messaging Service (MMS)Messages*:**
- MMS audio partially reported. Attachments are not associated with the text portion of the message. (Devices: ***LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, Samsung Galaxy Note 8, Google Pixel 2***)
- MMS via FireChat application are not reported. (Device: ***Ellipsis***)

- MMS containing graphic and video attachments are partially reported. (Devices: *HTC U11, iPhone 5S*)
- MMS with audio attachment is not reported. (Device: *iPhone 5S*)
- Outgoing audio MMS is not reported. (Devices: *iPad Mini 2 v11.3.1, iPad v11.2.1*)
- MMS not reported. (Device: *iPad Air v7.1*)

Stand-alone files:
- Document files are not reported. (Devices: *Galaxy S5, LG G4, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, Samsung Galaxy Note 8, Ellipsis, Google Pixel 2, iPhone 7, iPad Air v7.1*)
- Document files are partially reported (i.e., files can't be accessed/opened). (Device: *iPhone 6S Plus*)
- Stand-alone files (i.e., audio) are not reported. (Devices: *iPhone 5S, iPad Air v7.1*)

Social media Data:
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Instagram) is not reported. (Devices: *Motorola Droid Turbo 2, Motorola Z Force)*
- Social media related data (i.e., Facebook, LinkedIn, Pinterest, SnapChat) are not reported. (Devices: *Motorola G5 Plus, Sony Experia, Google Pixel 2*)
- Social media related data (i.e., WhatsApp) is not reported. (Device: *Motorola G5 Plus*)
- Social media related data (i.e., Twitter, Instagram) is partially reported i.e. only a picture was reported. (Devices: *Motorola G5 Plus, Sony Experia*)
- Social media related data (i.e., WhatsApp) is partially reported i.e., pictures reported but can't be opened. (Device: *Sony Experia*)
- Social media related data (i.e., Facebook, LinkedIn, Instagram, Pinterest, SnapChat) is not reported. (Device: *Samsung Galaxy Note 8*)
- Social media related data (i.e., Facebook, LinkedIn) is not reported. (Devices: *HTC 10, Samsung Galaxy J3*)
- Social media related data (i.e., Twitter) is partially reported i.e., only pictures. (Devices: *Galaxy S5, LG G4, Samsung Galaxy S7 Edge, HTC 10, Samsung J3, HTC U11, Samsung Galaxy Note 8, Ellipsis*)
- Social media related data (i.e., WhatsApp) is partially reported (i.e., videos reported but can't be played). (Device: *Samsung Galaxy Note 8*)
- Social media related data (i.e., Facebook, LinkedIn, Instagram) is not reported. (Devices: *HTC 10, Samsung Galaxy S7 Edge, Ellipsis*)
- Social media related data (i.e., Facebook) is not reported. (Device: *Galaxy S5*)
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Instagram, Pinterest, SnapChat) is partially reported (account, profile related information). (Device: *iPhone X*)
- Social media related data (i.e., Facebook, Twitter, LinkedIn) is not reported. (Devices: *iPhone 5S, iPad Air v7.1*)
- Social media related data (i.e., Facebook, Twitter, Instagram, Pinterest, SnapChat) is partially reported (account, profile related information). (Device: *iPhone 8 Plus*)

- Social media related data (i.e., Facebook, Twitter, Instagram) is not reported. (Devices: *LG G4, iPhone 6S Plus, iPhone 7*)
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Pinterest) is partially reported. (Device: *iPad Mini 2 v11.3.1*)
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Pinterest) is not reported. (Device: *iPad Air v11.2.1*)
- Social media related data (i.e., Facebook, LinkedIn, Instagram, Pinterest) is not reported. (Device: *HTC U11*)
- Social media related data (i.e., Twitter, Instagram, WhatsApp) is partially reported. (Device: *Google Pixel 2*)

Internet Related Data:
- Bookmarks, Browser and email related data are not reported. (Devices: *HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Sony Experia, HTC U11, Samsung Galaxy G5 Plus, Samsung Galaxy Note 8, Google Pixel 2*)
- Email data is not reported. (Devices: *Galaxy S5, LG G4, Motorola Droid Turbo 2, Ellipsis*)
- Browser/History data is not reported. (Devices: *LG G4, iPad Mini 2 v11.3.1*)

GPS Related Data:
- GPS related data (i.e., longitude, latitude coordinates) is not reported. (Devices: *LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, Google Pixel 2, iPhone 5S, iPhone 6S Plus, iPhone 7, iPhone 8 Plus, iPhone X, iPad Mini 2 v11.3.1, iPad v11.2.1, iPad Air v7.1*)
- GPS related data (i.e., longitude, latitude coordinates) are partially reported. (Device: *Samsung Galaxy Note 8*)

For more test result details see section 4.

2 Mobile Devices

The following table lists the mobile devices used for testing Data Pilot Desktop v2.0.31.

Make	Model	OS	Firmware	Network
Apple iPhone	5S	iOS 7.1 (11D167)	2.18.02	CDMA
Apple iPhone	6S Plus	iOS 9.2.1 (13C75)	1.23.00	CDMA
Apple iPhone	7	iOS 10.2 (14C92)	1.33.00	CDMA
Apple iPhone	8 Plus	iOS 11.4.1 (15G77)	1.89.00	CDMA
Apple iPhone	X	iOS 11.3.1 (15E302)	1.89.00	CDMA
Apple iPad	Air	iOS 11.2.1 (11D167)	2.18.02	CDMA
Apple iPad	Mini	iOS 11.3.1 (15E302)	4.52.00	CDMA
Apple iPad	Air	iOS 7.1		CDMA
Samsung Galaxy	S5 SM-G900V	Android 4.2.2	G900V.05	CDMA
LG G4	VS986	Android 5.1	LMY47D	CDMA
Motorola Droid	Turbo2	Android 5.1.1	LCK23.130-23	CDMA
HTC 10	HTC6545LVW	Android 6.0.1	1.85.605.8.8.0_g CL774095	CDMA
Samsung GS7 Edge	GS7 Edge SM-G935V	Android 6.0.1	MMB29M.G935VVRS4APH1	CDMA
Samsung J3	J3 – SM-J320V	Android 6.0.1	MMB29M.J320VVRU2AP12	CDMA
Motorola	Z Force XT1650	Android 7.0	NCLS25.86-11-4	CDMA
Moto	G5Plus	Android 7.0	NPNS25137924	CDMA
Sony	Xperia (G8342)	Android 8.0.0	471A2324	CDMA
HTC U11	U11	Android 7.1.1	12861730	CDMA
Samsung Galaxy	Note 8	Android 7.1.1	G960U1UEU1ARB7	CDMA
Ellipsis 8	QTAQZ3	Android 4.4.2	KOT49H	CDMA
Google	Pixel 2	Android 8.1.0	OPM 171019.029	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

Data Pilot Desktop v2.0.31 was installed on Windows 10 Pro version 20H2.

3.2 Internal Memory Data Objects

Data Pilot Desktop v2.0.31 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	*Regular Length*
	Maximum Length
	Special Character
	Blank Name
	Regular Length, Email
	Regular Length, Graphic
	Regular Length, Address
	Deleted Entry
	Non-Latin Entry
	Contact Groups
PIM Data: Datebook/Calendar; Memos	*Regular Length*
	Maximum Length
	Deleted Entry
	Special Character
	Blank Entry
Call Logs	*Incoming*
	Outgoing
	Missed
	Incoming – Deleted
	Outgoing – Deleted
	Missed – Deleted
Text Messages	*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

Data Objects	Data Elements
MMS Messages	*Incoming Audio*
	Incoming Graphic
	Incoming Video
	Outgoing Audio
	Outgoing Graphic
	Outgoing Video
Application Data	*Device Specific App Data*
Stand-alone Data Files	*Audio*
	Graphic
	Video
	Audio – Deleted
	Graphic – Deleted
	Video – Deleted
Internet Data	*Visited Sites*
	Bookmarks
	E-mail
Location Data	*GPS Coordinates*
	Geo-tagged Data
Social Media Data	*Facebook*
	Twitter
	LinkedIn
	Instagram
	Pinterest
	SnapChat
	WhatsApp

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, iPhone Operating System) and the make and model of mobile devices used for testing Data Pilot Desktop v2.0.31.

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 Universal Integrated Circuit Cards (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 Data Pilot Desktop v2.0.31. All test cases pertaining to the acquisition of supported Android devices were successful with the exception of the following:

- Disruption of device's connectivity doesn't result in errors. The tool keeps attempting acquisition resulting in an empty report for the Motorola Droid 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola G5 Plus, and Google Pixel 2.
- Notes/Memos are not reported for the Galaxy S5, LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, Samsung Galaxy Note 8, Ellipsis, and Google Pixel 2.
- Incoming and Outgoing SMS via FireChat are not reported for the Ellipsis.
- Incoming and Outgoing audio MMS attachments are found under the "Audio Files" category and not associated with the text portion of the message for the LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, Samsung Galaxy Note 8, and Google Pixel 2.
- Incoming and Outgoing MMS via FireChat application are not reported for the Ellipsis.
- The textual portion of MMS messages are not reported for the HTC U11. Note: Audio file attachments are not reported, graphic and video attachments are reported.
- Document files (i.e. pdf) are not reported within the GUI. They are found in a File System folder saved to Desktop (DPD/File System/…) for the Galaxy S5, LG G4, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, Samsung Galaxy Note 8, Ellipsis, and Google Pixel 2.
- Social media related data (i.e., Facebook) is not reported for the Galaxy S5.
- Social media related data (i.e., Facebook, LinkedIn, Instagram) is not reported for the LG G4.
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Instagram) is not reported for the Motorola Droid Turbo 2 and Motorola Z Force.
- Social media related data (i.e., Facebook, LinkedIn, Pinterest, SnapChat) is not reported for the Motorola G5 Plus, Sony Experia, and Google Pixel 2.
- Social media related data (i.e., WhatsApp) is not reported for the Motorola G5 Plus.
- Social media related data (i.e., Twitter, Instagram) is partially reported, only a picture was reported for the Motorola G5 Plus, Sony Experia, and Google Pixel 2.
- Social media related data (i.e., WhatsApp) is partially reported, pictures reported but can't be opened for the Sony Experia.
- Social media related data (i.e., WhatsApp) is partially reported. Text portion of the messages are not reported, only graphic files are for the Google Pixel 2.
- Social media related data (i.e., Facebook, LinkedIn, Instagram, Pinterest, SnapChat) is not reported for the Samsung Galaxy Note 8.
- Social media related data (i.e., Facebook, LinkedIn, Instagram) is not reported for the HTC 10, Samsung Galaxy S7 Edge, and Ellipsis.

- Social media related data (i.e., Facebook, LinkedIn) is not reported for the HTC 10 and Samsung J3.
- Social media related data (i.e., Twitter) is partially reported i.e., only pictures for the Galaxy S5, LG G4, Samsung Galaxy S7 Edge, HTC 10, Samsung J3, HTC U11, Samsung Galaxy Note 8, and Ellipsis.
- Social media related data (i.e., Facebook, LinkedIn, Instagram, Pinterest) are not reported for the HTC U11.
- Social media related data (i.e., WhatsApp) is partially reported (i.e., videos reported can't be played) for the Samsung Galaxy Note 8.
- Social media related data (i.e., Twitter, Instagram, WhatsApp) is partially reported for the Google Pixel 2.
- Internet Related Data (i.e., Bookmarks, Browser, and Email) is not reported for the HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Sony Experia, HTC U11, Motorola G5 Plus, Samsung Galaxy Note 8, and Google Pixel 2.
- Internet Related Data (i.e., Email) is not reported for the Galaxy S5, LG G4, Motorola Droid Turbo 2, and Ellipsis.
- Browser/History data is not reported for the LG G4.
- GPS related data is not reported for the LG G4, Motorola Droid Turbo 2, HTC 10, Samsung Galaxy S7 Edge, Samsung J3, Motorola Z Force, Motorola G5 Plus, Sony Experia, HTC U11, and Google Pixel 2.
- GPS related data is reported as a graphic file for the Samsung Galaxy Note 8.

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

> ➢ **Notes:**
> - *Deleted data (i.e., SMS Stand-alone graphic file) was reported for the Motorola Z Force.*
> - *Only the 1st contact listed in a group MMS was reported for the Sony Experia.*
> - *Memos database has to be opened with a 3rd party tool to be able to read the memos for the Motorola G5 Plus.*

Data Pilot Desktop v2.0.31								
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: Android*						
		Galaxy S5	LG G4	Motorola Droid Turbo 2	HTC 10	Samsung GS7 Edge	Samsung J3	Motorola Z Force
Acquisition	Acquire All	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Disrupted	*As Expected*	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*As Expected*
Reporting	Preview-Pane	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Generated Reports	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*

Data Pilot Desktop v2.0.31								
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: Android*						
		Galaxy S5	LG G4	Motorola Droid Turbo 2	HTC 10	Samsung GS7 Edge	Samsung J3	Motorola Z Force
Equipment/ User Data	IMEI/ MEID/ESN	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	MSISDN	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
PIM Data	Contacts	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Calendar	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Memos/ Notes	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
Call Logs	Incoming	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Outgoing	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Missed	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
SMS Messages	Incoming	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Outgoing	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
MMS Messages	Graphic	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Audio	*As Expected*	*Partial*	*Partial*	*Partial*	*Partial*	*Partial*	*Partial*
	Video	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
Stand-alone Files	Graphic	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Audio	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Video	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
Application Data	Documents (txt, pdf files)	*Not As Expected*	*Not As Expected*	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*

Data Pilot Desktop v2.0.31							
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: Android*					
		Galaxy S5	LG G4	Motorola Droid Turbo 2	HTC 10	Samsung GS7 Edge	Samsung J3	Motorola Z Force
Social Media Data	Facebook	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	Twitter	*Partial*	*Partial*	*Not As Expected*	*Partial*	*Partial*	*Partial*	*Not As Expected*
	LinkedIn	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	Instagram	*NA*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*NA*	*Not As Expected*
	Pinterest	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	SnapChat	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	WhatsApp	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Internet Data	Bookmarks	*As Expected*	*As Expected*	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	History	*As Expected*	*Not As Expected*	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	Email	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
GPS Data	Coordinates /Geo-tagged	*As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
Non-Latin Character	Reported in native format	*As Expected*	*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*	*As Expected*
Case File Data Protection	Modify Case Data	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
SQLite Data	Report Active Data	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	Run SQLite Commands	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

Table 3a: Android Devices

Data Pilot Desktop v2.0.31							
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: Android*					
		Motorola G5 Plus	Sony Experia	HTC U11	Samsung Galaxy Note 8	Ellipsis	Google Pixel 2
Acquisition	Acquire All	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Disrupted	*Not As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*Not As Expected*
Reporting	Preview-Pane	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Generated Reports	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
Equipment/ User Data	IMEI/ MEID/ESN	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	MSISDN	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
PIM Data	Contacts	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Calendar	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Memos/ Notes	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
Call Logs	Incoming	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*NA*	*As Expected*
	Outgoing	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*NA*	*As Expected*
	Missed	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*NA*	*As Expected*
SMS Messages	Incoming	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*Not As Expected*	*As Expected*
	Outgoing	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*Not As Expected*	*As Expected*
MMS Messages	Graphic	*As Expected*	*As Expected*	*Partial*	*As Expected*	*Not As Expected*	*As Expected*
	Audio	*Partial*	*Partial*	*Not As Expected*	*Partial*	*Not As Expected*	*Partial*
	Video	*As Expected*	*As Expected*	*Partial*	*As Expected*	*Not As Expected*	*As Expected*
Stand-alone Files	Graphic	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Audio	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	Video	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
Application Data	Documents (txt, pdf files)	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*

Data Pilot Desktop v2.0.31						
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: Android*					
		Motorola G5 Plus	Sony Experia	HTC U11	Samsung Galaxy Note 8	Ellipsis	Google Pixel 2
Social Media Data	Facebook	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	Twitter	*Partial*	*Partial*	*Partial*	*Partial*	*Partial*	*Partial*
	LinkedIn	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
	Instagram	*Partial*	*Partial*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Partial*
	Pinterest	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*NA*	*Not As Expected*
	SnapChat	*Not As Expected*	*Not As Expected*	*NA*	*Not As Expected*	*NA*	*Not As Expected*
	WhatsApp	*Not As Expected*	*Partial*	*NA*	*Partial*	*NA*	*Partial*
Internet Data	Bookmarks	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*As Expected*	*Not As Expected*
	History	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*As Expected*	*Not As Expected*
	Email	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
GPS Data	Coordinates /Geo-tagged	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Partial*	*As Expected*	*Not As Expected*
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	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	Run SQLite Commands	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

Table 3b: Android Devices

4.2 iPhone Operating System (iOS) Mobile Devices

The internal memory contents for iOS devices were acquired and analyzed with Data Pilot Desktop v2.0.31.

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

- Notes/Memos are not reported for the iPhone 5S, iPhone 6S Plus, and iPad Air v7.1.
- Notes/Memos are partially reported. Long notes/memos are truncated for the iPhone 7, iPhone 8 Plus, iPhone X, iPad Mini 2 v 11.3.1, and iPad Air v11.2.1.
- SMS are not reported for the iPhone 5S and iPad Air v7.1.
- MMS Image and Video are partially reported (i.e. attachments are not associated with the text portion of the message. Attachments found under the Image Files and Audio Files categories) for the iPhone 5S.
- MMS Audio messages are not reported for the iPhone 5S.
- Outgoing Audio MMS is not reported for the iPad Mini 2 v11.3.1 and iPad v11.2.1.
- MMS are not reported for the iPad Air v7.1
- Document files (i.e., can't be accessed/opened) are partially reported for the iPhone 6S Plus.
- Document files (i.e., pdf files) are not reported for the iPhone 7 and iPad Air v7.1.
- Stand-alone files (i.e., audio) are not reported for the iPhone 5S and iPad Air 7.1.
- Social media related data (i.e., Facebook, Twitter, LinkedIn) is not reported for the iPhone 5S and iPad Air v7.1.
- Social media related data (i.e., Facebook, Twitter, Instagram) is not reported for the iPhone 6S Plus and iPhone 7.
- Social media related data (i.e., Facebook, Twitter, Instagram, Pinterest, SnapChat) is partially reported, only account and profile information reported for the iPhone 8 Plus.
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Instagram, Pinterest, SnapChat) is partially reported (account, profile related information) for the iPhone X.
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Pinterest) is partially reported (account, profile related information) for the iPad Mini 2 v11.3.1.
- Social media related data (i.e., Facebook, Twitter, LinkedIn, Pinterest) is not reported for the iPad Air v11.2.1.
- Internet Related Data (i.e., Browser/History data) is not reported for the iPad Mini 2 v11.3.1.
- GPS related data (i.e., longitude, latitude coordinates) is not reported for the iPhone 5S, iPhone 6S Plus, iPhone 7, iPhone 8 Plus, iPhone X, iPad Mini 2 v11.3.1, iPad v11.2.1, and iPad Air v7.1.

See Tables 4a, 4b below for more details.

Data Pilot Desktop v2.0.31							
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: iOS*						
		iPhone 5S	iPhone 6S Plus	iPhone 7	iPhone 8 Plus	iPhone X	iPad Mini v11.3.1	iPad Air v11.2.1
Acquisition	Acquire All	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Disrupted	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Reporting	Preview-Pane	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Generated Reports	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Equipment/ User Data	IMEI/MEID/ ESN	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	MSISDN	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
PIM Data	Contacts	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Calendar	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Memos/Notes	Not As Expected	Not As Expected	Partial	Partial	Partial	Partial	Partial
Call Logs	Incoming	As Expected	As Expected	As Expected	As Expected	As Expected	NA	NA
	Outgoing	As Expected	As Expected	As Expected	As Expected	As Expected	NA	NA
	Missed	As Expected	As Expected	As Expected	As Expected	As Expected	NA	NA
SMS Messages	Incoming	Not As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Outgoing	Not As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
MMS Messages	Graphic	Partial	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Audio	Not As Expected	As Expected	As Expected	As Expected	As Expected	Partial	Partial
	Video	Partial	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Stand-alone Files	Graphic	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Audio	Not As Expected	NA	NA	As Expected	As Expected	As Expected	As Expected
	Video	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
Application Data	Documents (txt, pdf files)	As Expected	Partial	Not As Expected	As Expected	As Expected	As Expected	As Expected

Data Pilot Desktop v2.0.31							
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: iOS*					
		iPhone 5S	iPhone 6S Plus	iPhone 7	iPhone 8 Plus	iPhone X	iPad Mini v11.3.1	iPad Air v11.2.1
Social Media Data	Facebook	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Partial*	*Partial*	*Partial*	*Not As Expected*
	Twitter	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Partial*	*Partial*	*Partial*	*Not As Expected*
	LinkedIn	*Not As Expected*	*As Expected*	*As Expected*	*As Expected*	*Partial*	*Partial*	*Not As Expected*
	Instagram	*NA*	*Not As Expected*	*Not As Expected*	*Partial*	*Partial*	*NA*	*NA*
	Pinterest	*NA*	*NA*	*NA*	*Partial*	*Partial*	*Partial*	*Not As Expected*
	SnapChat	*NA*	*NA*	*NA*	*Partial*	*Partial*	*NA*	*NA*
	WhatsApp	*NA*	*NA*	*NA*	*As Expected*	*As Expected*	*NA*	*NA*
Internet Data	Bookmarks	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
	History	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*Not As Expected*	*As Expected*
	Email	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
GPS Data	Coordinates/ Geo-tagged	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*	*Not As Expected*
Non-Latin Character	Reported in Native Format	*As Expected*	*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*	*As Expected*
Case File Data Protection	Modify Case Data	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*	*As Expected*
SQLite Data	Report Active Data	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	Run SQLite Commands	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

Table 4a: iOS Devices

Data Pilot Desktop v2.0.31		
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: iOS*
		iPad Air v7.1
Acquisition	Acquire All	*As Expected*
	Disrupted	*As Expected*
Reporting	Preview-Pane	*As Expected*
	Generated Reports	*As Expected*
Equipment/ User Data	IMEI/MEID/ ESN	*As Expected*
	MSISDN	*As Expected*
PIM Data	Contacts	*As Expected*
	Calendar	*As Expected*
	Memos/Notes	*Not As Expected*
Call Logs	Incoming	*NA*
	Outgoing	*NA*
	Missed	*NA*
SMS Messages	Incoming	*Not As Expected*
	Outgoing	*Not As Expected*
MMS Messages	Graphic	*Not As Expected*
	Audio	*Not As Expected*
	Video	*Not As Expected*
Stand-alone Files	Graphic	*As Expected*
	Audio	*Not As Expected*
	Video	*As Expected*
Application Data	Documents (txt, pdf files)	*Not As Expected*

Data Pilot Desktop v2.0.31		
Test Cases – Internal Memory Acquisition		*Mobile Device Platform: iOS*
		iPad Air v7.1
Social Media Data	Facebook	*Not As Expected*
	Twitter	*Not As Expected*
	LinkedIn	*Not As Expected*
	Instagram	*NA*
	Pinterest	*NA*
	SnapChat	*NA*
	WhatsApp	*NA*
Internet Data	Bookmarks	*As Expected*
	History	*As Expected*
	Email	*NA*
GPS Data	Coordinates/ Geo-tagged	*Not As Expected*
Non-Latin Character	Reported in Native Format	*As Expected*
Hashing	Case File/ Individual Files	*As Expected*
Case File Data Protection	Modify Case Data	*As Expected*
SQLite Data	Report Active Data	*NA*
	Run SQLite Commands	*NA*

Table 4b: iOS Devices