



Secure View v4.3.1

Test Results for Mobile Device Acquisition Tool

November 30, 2017



**Homeland
Security**

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.

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Introduction

The Computer Forensics Tool Testing (CFTT) program is a joint project of the Department of Homeland Security (DHS), the National Institute of Justice (NIJ), and the National Institute of Standards and Technology Special Program Office (SPO) 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. Interested parties in the computer forensics community can review and comment on the specifications and test methods posted on the [CFTT Web site](http://www.cftt.nist.gov/) (<http://www.cftt.nist.gov/>).

This document reports the results from testing Secure View v4.3.1 across supported mobile devices.

Test results from other tools can be found on the [DHS S&T-sponsored digital forensics](http://www.dhs.gov/science-and-technology/nist-cftt-reports) 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. The [full test data](http://www.cftt.nist.gov/mobile_devices.htm) is available at http://www.cftt.nist.gov/mobile_devices.htm.

Test Results for Mobile Device Acquisition Tool

Tool Tested:	Secure View
Software Version:	v4.3.1
Supplier:	Susteen, Inc.
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1 Results Summary

Secure View provides users with the ability to acquire and analyze numerous mobile devices, including Android and iOS devices. The software captures Contacts, Call History, Text Messages, MMS, Calendar, Application Data, Deleted Data and other accessible data, while providing a graphical interface.

Secure View was tested for its ability to acquire active data from the internal memory of supported mobile devices. Except for the following anomalies, the tool acquired all supported data objects completely and accurately for all mobile devices tested.

Connectivity:

- Connectivity was not established. (Devices: *Galaxy S7, HTC 10, Galaxy S7 Edge, BBQ10, BBZ10, BBZ30*)
- Connectivity was not established when performing a data extraction for individual data elements. (Devices: *iPhone 5S, iPhone 6S Plus, iPad Mini, iPad Air, iPad Pro*)
- Connectivity disruption while attempting to acquire a device does not generate an error message. (Devices: *Samsung J3, LG Revere 3, LG Cosmos 3, LG Extravert 2*)

Reporting:

- Generated PDF report misses data reported in the preview pane. (Devices: *Galaxy S3, Galaxy S5, Motorola Droid Turbo 2, Galaxy S6 Edge+, Google Pixel XL, Galaxy Tab S2, iPad Mini, iPad Air, iPad Pro*)
- Preview Pane reports partial data. (Devices: *iPhone 5S, iPhone 6S Plus, iPad Mini, iPad Air*)

Subscriber, Equipment related data:

- The MSISDN and IMEI are not reported. (Devices: *Samsung J3, Google Pixel XL*)

Personal Information Management (PIM) data:

- Address Book/Contact entries are partially reported i.e., long contact entries are truncated. (Devices: *Android, iPhone 7, iPad Mini, iPad Air, iPad Pro, LG Revere 3, LG Cosmos 3, LG Extravert 2*)
- Calendar entries are partially reported. (Device: *iPad Air*)
- Memos are categorized incorrectly. (Device: *Galaxy S3*)
- Memos are not acquired. (Devices: *Galaxy S5, Motorola Droid Turbo 2, Galaxy S6 Edge+, Samsung J3, Google Pixel XL, Galaxy Tab S2, iPad Mini, iPhone 6S Plus*)
- Memos are partially acquired. (Devices: *iPhone 5S, iPhone 7*)
- Call logs (i.e., incoming, outgoing, missed) via Hangouts Dialer are not reported. (Device: *Galaxy Tab S2*)
- The call logs status (i.e., incoming, outgoing, missed) are incorrectly reported as deleted. (Device: *iPhone 6S Plus*)
- SMS messages are partially reported. (Devices: *LG G5, Motorola Droid Turbo 2, Galaxy S6 Edge+, Samsung J3, Google Pixel XL, iPhone 7, iPad Mini*)
- SMS messages are not acquired. (Device: *Galaxy Tab S2*)
- MMS messages containing audio or video attachments are not acquired. (Device: *Galaxy Tab S2*)
- Application Data (e.g., txt, pdf files) is not acquired. (Devices: *iPhone 7, iPad Mini, iPad Air, iPad Pro*)

Social media Data:

- Facebook and LinkedIn related data is not reported. (Device: *Galaxy S3*)
- Facebook, Twitter, LinkedIn, Instagram related data are not acquired. (Device: *Galaxy S5*)
- Twitter related data partially acquired. (Devices: *LG G5, Samsung J3, Google Pixel XL, Galaxy Tab S2*)
- Facebook related data is partially reported. (Devices: *Motorola Droid Turbo 2, Galaxy Tab S2*).
- Facebook, LinkedIn, Instagram related data is not reported. (Devices: *LG G5, Samsung J3, Google Pixel XL and Galaxy Tab S2*)
- Twitter and LinkedIn related data is not acquired. (Device: *Motorola Droid Turbo2*)
- Social media data not reported. (Device: *Galaxy S6 Edge+*)
- LinkedIn and Instagram related data are not acquired. (Devices: *Galaxy Tab S2*)
- Facebook, Twitter, LinkedIn related data are not acquired. (Device: *iPhone 5S, iPad Air*)
- Facebook and Instagram related data are not acquired. (Devices: *iPhone 6S Plus, iPhone 7, iPad Mini, iPad Pro*)
- Facebook and Twitter related data are not acquired. (Device: *iPad Air*)

Internet Related Data:

- Email related data is partially reported. (Device: *Galaxy S3*)
- Email related data is not reported. (Device: *Motorola Droid Turbo 2*)
- Internet related data (i.e., bookmarks, history, email) are not reported. (Devices: *Samsung J3, Google Pixel XL, Galaxy Tab S2*)

GPS:

- GPS related data (i.e., longitude, latitude coordinates) was not acquired. (Devices: *LG G5, Samsung J3, Google Pixel XL, iPhone 6S Plus, iPad Mini*)

NOTE: Bluetooth connectivity was attempted for the BlackBerry devices.

For more test result details see section 4.

2 Mobile Devices

The following table lists the mobile devices used for testing Secure View v4.3.1.

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 iPad	Mini	iOS 9.2.1 (13B143)	4.32.00	CDMA
Apple iPad	Air	iOS 7.1 (11D167)	2.18.02	CDMA
Apple iPad	Pro	iOS 9.2.1 (13C75)	4.52.00	CDMA
Samsung Galaxy	S3 SGH-1747	Android 4.1.2	1747UCDMG2	GSM
Samsung Galaxy	S5 SM-G900V	Android 4.2.2	G900V.05	CDMA
Motorola Droid	Turbo2	Android 5.1.1	LCK23.130-23	CDMA
Samsung Galaxy	S6 Edge Plus – SM-G928V	Android 5.1.1	LMY47X.G928VVRU2AOJ2	CDMA
Samsung J3	J3 – SM-J320V	Android 6.0.1	MMB29M.J320VVRU2AP12	CDMA
Google Pixel XL	XL	Android 7.1.1	NMF26U	CDMA
Samsung GS7	GS7 – SM-G930V	Android 6.0.1	MMB29M.G930VVRU4AP13	CDMA
HTC 10	HTC6545LVW	Android 6.0.1	1.85.605.8.8.0_g CL774095	CDMA
Samsung GS7 Edge	GS7 Edge SM-935V	Android 6.0.1	MMB29M.G935VVRU4APH1	CDMA
Samsung Galaxy	Tab S2	Android 5.1.1	LMY47X.T817BVRU2AOJ2	CDMA
LG	Revere 3	Brew MP 1.0.2	VN17011A	CDMA
LG	Cosmos 3	Brew MP 1.0.2	VN251ZV6	CDMA
LG	Extravert 2	Brew MP 1.0.3	VN37010B	CDMA
LG	G5	Android 6.0.1	MMB29M	CDMA
LG	G4	Android 5.1		
BB Q10	BB-423A	BlackBerry 10 v10.2.1.2174	672849	CDMA
BB Z10	STL100-4	BlackBerry 10 v10.2.1.2174	672849	CDMA
BB Z30	STL100-3	BlackBerry 10 v10.3.2.858	857418	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

Secure View v4.3.1 was installed on Windows 7 v6.1.7601.

3.2 Internal Memory Data Objects

Secure View v4.3.1 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>
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>
Text Messages	<i>Incoming SMS – Read</i>
	<i>Incoming SMS – Unread</i>
	<i>Outgoing SMS</i>
	<i>Incoming EMS – Read</i>
	<i>Incoming EMS – Unread</i>
	<i>Outgoing EMS</i>
	<i>Incoming SMS – Deleted</i>
	<i>Outgoing SMS – Deleted</i>
	<i>Incoming EMS – Deleted</i>
	<i>Outgoing EMS – Deleted</i>

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

Table 2: Internal Memory Data Objects

4 Test Results

This section provides the test cases results reported by the tool. Sections 4.1 – 4.4 identify the mobile device operating system type, media (e.g., Android, iOS) and the make and model of mobile devices used for testing Secure View v4.3.1.

The *Test Cases* column (internal memory acquisition) in sections 4.1 - 4.4 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 mobile forensic application is unable to perform the test or 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 Secure View v4.3.1.

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

- Connectivity was not established for the Galaxy S7, HTC 10 and Galaxy S7 Edge.
- Disrupting connectivity while attempting to acquire the device does not generate an error for the Samsung J3.
- The generated PDF report misses data reported in the preview pane, e.g., *Device Information, Contacts, Call History and Calendar*, for the Galaxy S3, Galaxy S5, Motorola Droid Turbo 2, Galaxy S6 Edge+, Google Pixel XL and Galaxy Tab S2.
- Subscriber and Equipment related data (i.e., MSISDN, IMEI) are not reported for the Samsung J3 and Google Pixel XL.
- Long Address Book/Contacts entries are truncated for all Android devices.
- Memos are acquired but incorrectly categorized. The *short memo* entry is reported as a graphic file and the *long memo* entry is reported within the web browser/email directory for the Galaxy S3.
- Memos are not acquired for the Galaxy S5, Motorola Droid Turbo 2, Galaxy S6 Edge+, Samsung J3, Google Pixel XL and Galaxy Tab S2.
- Call logs (i.e., incoming, outgoing, missed) via Hangouts Dialer are not reported for the Galaxy Tab S2.
- Outgoing SMS text messages sent to multiple recipients are reported individually for each of the recipients included in the group for the LG G5, Galaxy S6 Edge+, Samsung J3, Google Pixel XL.
- Only the last contact entry of SMS text messages sent to multiple recipients is acquired for the Motorola Droid Turbo 2.
- SMS text messages were not reported for the Galaxy Tab S2.
- MMS messages containing audio or video attachments are not acquired for the Galaxy Tab S2.
- Facebook and LinkedIn related data is not reported for the Galaxy S3.
- Facebook social media related data is not reported for the Galaxy S5.
- Twitter social media related data is partially reported (i.e., graphic files) for the LG G5, Samsung J3, Google Pixel XL and Galaxy Tab S2.
- Facebook social media related data is partially reported (i.e., emoticons) for the Motorola Droid Turbo 2 and Galaxy Tab S2.
- Social media related data (i.e., Facebook, LinkedIn, Instagram) are not reported for the LG G5, Samsung J3, Google Pixel XL.
- Social Media related data (i.e., Facebook, LinkedIn, Twitter, Instagram) not acquired for the Galaxy S6 Edge +.
- Twitter and LinkedIn related data not acquired for the Motorola Droid Turbo 2.
- LinkedIn and Instagram related data are not acquired for the Galaxy Tab S2.
- Internet related data (i.e., email) is partially reported for the Galaxy S3. Only one email was acquired.
- Internet related data (i.e., email) is not reported for the Motorola Droid Turbo 2.
- Internet related data (i.e., email, bookmarks, browsing history) is not reported for the Samsung J3, Google Pixel XL and Galaxy Tab S2.

- GPS related data is not reported for the LG G5, Samsung J3 and Google Pixel XL.

NOTES:

- Device Information (e.g., IMEI, MSISDN) is inconsistently acquired. Multiple acquisition attempts may be needed in order to get the device information for the LG G5, Galaxy S6 Edge+ and Galaxy Tab S2.
- Deleted Data (i.e., memos) was partially acquired for the LG G5.
- The tool was inconsistent (e.g., when performing back to back data extractions) at acquiring data from the Motorola Droid Turbo 2. The tool had to be re-started multiple times before completing a successful data extraction.
- Acquisitions performed when selecting the make and model versus the Android general option does not acquire the device information for the Motorola Droid Turbo 2.
- During the acquisition of the Motorola Droid Turbo 2, Secure View activates the device camera and graphic files/pictures are taken, changing the original contents of the device.
- No deleted data (i.e., contacts, calendar entries, graphic files, etc.) acquired for the Motorola Droid Turbo 2, Galaxy S6 Edge+ and Galaxy Tab S2.
- Acquisitions performed when selecting the make and model versus the Android general option does not acquire Internet related data (e.g., bookmarks, browsing history) for the Galaxy Tab S2.

See Table 3 below for more details.

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Test Cases – Internal Memory Acquisition		Mobile Device Platform: Android							
		Galaxy S3	Galaxy S5	LG G5	Moto Droid Turbo 2	Galaxy S6 Edge +	Samsung J3	Google Pixel XL	Galaxy Tab S2
Acquisition	Acquire All	As Expected	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	Not As Expected	As Expected	As Expected
Reporting	Preview-Pane	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected	As Expected
	Generated Reports	Partial	Partial	As Expected	Partial	Partial	As Expected	Partial	Partial
Equipment/ User Data	IMEI	As Expected	As Expected	As Expected	As Expected	As Expected	Not As Expected	Not As Expected	As Expected
	MEID/ESN	NA	NA	NA	NA	NA	NA	NA	NA
	MSISDN	As Expected	As Expected	As Expected	As Expected	As Expected	Not As Expected	Not As Expected	As Expected
PIM Data	Contacts	Partial	Partial	Partial	Partial	Partial	Partial	Partial	Partial

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Test Cases – Internal Memory Acquisition		<i>Mobile Device Platform: Android</i>							
		Galaxy S3	Galaxy S5	LG G5	Moto Droid Turbo 2	Galaxy S6 Edge +	Samsung J3	Google Pixel XL	Galaxy Tab S2
	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>	As <i>Expected</i>	As <i>Expected</i>
	Memos/Notes	Partial	Not As <i>Expected</i>	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>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>
	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>	As <i>Expected</i>	Not As <i>Expected</i>
	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>	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>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>
	Outgoing	As <i>Expected</i>	As <i>Expected</i>	Partial	Partial	Partial	Partial	Partial	Not 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>	As <i>Expected</i>	As <i>Expected</i>
	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>	As <i>Expected</i>	Not As <i>Expected</i>
	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>	As <i>Expected</i>	Not 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>	As <i>Expected</i>	As <i>Expected</i>
	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>	As <i>Expected</i>	As <i>Expected</i>
	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>	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>	As <i>Expected</i>	As <i>Expected</i>
Social Media Data	Facebook	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Partial	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Partial
	Twitter	As <i>Expected</i>	As <i>Expected</i>	Partial	Not As <i>Expected</i>	Not As <i>Expected</i>	Partial	Partial	Partial
	LinkedIn	Not As <i>Expected</i>	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>	Not As <i>Expected</i>
	Instagram	NA	NA	Not As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
Internet Data	Bookmarks	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
	History	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
	Email	Partial	As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>	Not As <i>Expected</i>
GPS Data	Coordinates/Geo-tagged	As <i>Expected</i>	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>	NA

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Test Cases – Internal Memory Acquisition		Mobile Device Platform: Android							
		Galaxy S3	Galaxy S5	LG G5	Moto Droid Turbo 2	Galaxy S6 Edge +	Samsung J3	Google Pixel XL	Galaxy Tab S2
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>	<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>	<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>	<i>As Expected</i>	<i>As Expected</i>

Table 3: Android Mobile Devices

4.2 iOS Mobile Devices

The internal memory contents for iOS devices were acquired and analyzed with Secure View v4.3.1.

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

- Connectivity was not established when selecting acquisition of an individual data elements (e.g., only *Deleted Data, Application Data*) for extraction for the iPhone 5S, iPhone 6S Plus, iPad Mini, iPad Air and iPad Pro. NOTE: However, if a different individual element is selected (e.g., *Contacts*) connectivity is established.
- The preview pane truncates long contact entries but it is complete under the file system directory for the iPhone 5S and iPhone 6S Plus.
- The preview pane does not report Memos for the iPhone 5S and iPad Air. Memos are found under the file system directory.
- The preview pane does not report Twitter data, this data is found under the file system directory for the iPad Mini.
- The generated PDF report misses data reported in the preview pane (e.g., *graphic files associated with MMS messages, Application and Deleted Data (i.e., contact entry, calendar entry, etc.)*) for the iPad Mini, iPad Air and iPad Pro.
- Long contact entries are truncated for the iPad Mini, iPad Air, iPad Pro and iPhone 7.
- Calendar entries without a title/subject are not acquired for the iPad Air.
- Long Memos are truncated for the iPhone 5S and iPhone 7.
- Memos are not acquired for the iPad Mini and iPhone 6S Plus.
- Active call logs are incorrectly reported with a status of deleted for the iPhone 6S Plus.
- Group SMS text messages sent to multiple recipients are reported individually for each recipient. Messages are not identified as a group message, for the iPad Mini and iPhone 7.
- Stand-alone documents (i.e., txt, pdf files) are not reported for the iPad Mini, iPad Air, iPad Pro and iPhone 7.
- Social media related data (i.e., Facebook, Twitter, LinkedIn) is not reported for the iPhone 5S and iPad Air.
- Social media related data (i.e., Facebook, Instagram) is not reported for the iPhone 6S Plus, iPhone 7, iPad Mini, iPad Pro.
- GPS related data is not reported for the iPhone 6S Plus and iPad Mini.

NOTES:

- Deleted data (i.e., contacts, calendar entries, graphic files, etc.) was partially acquired for the iPhone 5S. Only *memo* entries are recovered.
- Deleted data (i.e., contacts, calendar entries, graphic files, etc.) was partially acquired for the iPhone 6S Plus. Only *SMS* are acquired.
- Deleted data (i.e., contacts, calendar entries, graphic files, etc.) was partially acquired for the iPad Air. Only *SMS* and *memos* are acquired.
- The preview pane does not report Twitter data. This data is found under the file system directory.

- Acquisition of Contacts, Files, Application Data and Deleted Data are the only data elements supported for the iPad Mini and iPad Air when selecting the exact Make and Model of the device. If the general iOS general option is selected, **all data elements** are supported (e.g., Social Media, SMS, MMS).
- Emails are acquired for the iPad Air only when selecting the iOS general option for acquisition.
- Emails are acquired for the iPad Air within the iMessage data.
- SMS are found under file system directory when the tool does not support acquisition of SMS for the iPad Pro.
- Twitter information is found under the file system directory for the iPad Pro.

See Table 4 below for more details.

Secure View v4.3.1							
Test Cases – Internal Memory Acquisition		<i>Mobile Device Platform: iOS</i>					
		iPhone 5S	iPhone 6S Plus	iPhone 7	iPad Mini	iPad Air	iPad Pro
Acquisition	Acquire All	<i>Partial</i>	<i>Partial</i>	<i>As Expected</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>
	Disrupted	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Reporting	Preview-Pane	<i>Partial</i>	<i>Partial</i>	<i>As Expected</i>	<i>Partial</i>	<i>Partial</i>	<i>As Expected</i>
	Generated Reports	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>
Equipment/ User Data	IMEI	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
	MEID/ESN	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	MSISDN	<i>As Expected</i>	<i>As Expected</i>	<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>Partial</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>
	Calendar	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>Partial</i>	<i>As Expected</i>
	Memos/Notes	<i>Partial</i>	<i>Not As Expected</i>	<i>Partial</i>	<i>Not As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
Call Logs	Incoming	<i>As Expected</i>	<i>Partial</i>	<i>As Expected</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	Outgoing	<i>As Expected</i>	<i>Partial</i>	<i>As Expected</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	Missed	<i>As Expected</i>	<i>Partial</i>	<i>As Expected</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
	Incoming	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>

Secure View v4.3.1							
Test Cases – Internal Memory Acquisition		Mobile Device Platform: iOS					
		iPhone 5S	iPhone 6S Plus	iPhone 7	iPad Mini	iPad Air	iPad Pro
SMS Messages	Outgoing	<i>As Expected</i>	<i>As Expected</i>	<i>Partial</i>	<i>Partial</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>	<i>As Expected</i>	<i>As Expected</i>
	Audio	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
	Video	<i>As Expected</i>	<i>As Expected</i>	<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>	<i>As Expected</i>	<i>As Expected</i>
	Audio	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>
	Video	<i>As Expected</i>	<i>As Expected</i>	<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>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>
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>
	Twitter	<i>Not As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>Not As Expected</i>	<i>As Expected</i>
	LinkedIn	<i>Not As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>As Expected</i>	<i>Not As Expected</i>	<i>As Expected</i>
	Instagram	<i>NA</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>Not As Expected</i>	<i>NA</i>	<i>Not As Expected</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>
	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>
	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>Not As Expected</i>	<i>As Expected</i>	<i>Not 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>

Table 4: iOS Mobile Devices

4.3 BlackBerry, Feature Phones

The internal memory contents for BlackBerry and Feature phones were acquired and analyzed with Secure View v4.3.1.

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

- Connectivity was not established to the following devices: BlackBerry Q10, BlackBerry Z10 the BlackBerry Z30. Connectivity was attempted using the Bluetooth feature.
- Disrupting connectivity while attempting to acquire the device does not generate an error message for the LG Revere 3, LG Cosmos 3 and LG Extravert 2.
- Long contact entries are truncated for the LG Revere 3, LG Cosmos 3 and LG Extravert 2.

NOTES:

- Acquisition of only contact entries and pictures/graphic files were supported for the LG Revere 3, LG Cosmos 3 and LG Extravert 2.

See Table 5 below for more details.

Secure View v4.3.1				
Test Cases – Internal Memory Acquisition		Mobile Device Platform: BlackBerry/Brew		
		LG Revere 3	LG Cosmos 3	LG Extravert 2
Acquisition	Acquire All	As Expected	As Expected	As Expected
	Disrupted	Not As Expected	Not As Expected	Not As Expected
Reporting	Preview-Pane	As Expected	As Expected	As Expected
	Generated Reports	As Expected	As Expected	As Expected
Equipment/ User Data	IMEI/IMSI	NA	NA	NA
	MEID/ESN	NA	NA	NA
	MSISDN	NA	NA	NA
PIM Data	Contacts	Partial	Partial	Partial

Secure View v4.3.1				
Test Cases – Internal Memory Acquisition		Mobile Device Platform: BlackBerry/Brew		
		LG Revere 3	LG Cosmos 3	LG Extravert 2
	Calendar	NA	NA	NA
	Memos/Notes	NA	NA	NA
Call Logs	Incoming	NA	NA	NA
	Outgoing	NA	NA	NA
	Missed	NA	NA	NA
SMS Messages	Incoming	NA	NA	NA
	Outgoing	NA	NA	NA
MMS Messages	Graphic	NA	NA	NA
	Audio	NA	NA	NA
	Video	NA	NA	NA
Stand-alone Files	Graphic			
	Audio	NA	NA	NA
	Video	NA	NA	NA
Application Data	Documents (txt, pdf files)	NA	NA	NA
Social Media Data	Facebook	NA	NA	NA
	Twitter	NA	NA	NA
	LinkedIn	NA	NA	NA
	Instagram	NA	NA	NA
Internet Data	Bookmarks	NA	NA	NA
	History	NA	NA	NA
	Email	NA	NA	NA
GPS Data	Coordinates/Geo-tagged	NA	NA	NA
Non-Latin Character	Reported in native format	NA	NA	NA

Secure View v4.3.1				
Test Cases – Internal Memory Acquisition		Mobile Device Platform: BlackBerry/Brew		
		LG Revere 3	LG Cosmos 3	LG Extravert 2
Hashing	Case File/ Individual Files	NA	NA	NA
Case File Data Protection	Modify Case Data	NA	NA	NA

Table 5: BlackBerry and Feature Devices