2Q 2020 MD-Series
Release Note Highlights

MD-NEXT v1.88.1~v1.89.4

- New iOS Full Filesystem(Checkm8) Extraction applied to iPhone series SE/6s/6s+/7/7+/8/8+/X
- New Physical Extraction for Samsung Galaxy Exynos Chipset, Android 10
- Bootloader Pro Extraction supports the latest version of Android 10
- Unlock support for Xiaomi models with MIUI 10 to 11

MD-RED v3.5.3~v3.6.8

- Added Report Exporting feature for 'MD-Explorer' viewer program
- Analysis of Samsung Secure Folder
- Analysis support for iOS Full Filesystem image format from Cellebrite 'UFED' (*.dar)
- iOS Full File System (Added system logs analysis)
- Supports analysis for Android apps installed in Parallel Space app

MD-LIVE v3.3.10~v3.3.14

- New Device Log Analysis Feature
- Supports analysis for Android apps installed in Parallel Space app
- User can decide proceeding downgrade according to the state of app installation

MD-VIDEO v3.1.0~v3.2.0

- Resume the abnormally terminated case
- The image can be enhanced by adjusting the brightness, contrast, and color of the analysis results
- AI Analysis has added function that allows users to filter only the objects matched by the selected area and by the selected color in the Object Gallery

MD-CLOUD v1.3.0

- Added 'Telegram' extraction module - Credential file authentication (Android), Mobile authentication (Android, iOS, etc.)

MD-NEXT v1.88.1~v1.89.4

New Features

> ### New iOS Full Filesystem(Checkm8) Extraction applied to iPhone series SE/6s/6s+/7/7+/8/8+/X

- **'Full Filesystem' extraction method is newly added for iOS devices which uses a jailbreaking agent to exploit 'Checkm8' vulnerability.**
    - ✓ Supported Models with iOS 13.0 up to iOS 13.5.1: iPhone SE (A1662, A1723, A1724), iPhone 6s (A1633, A1688, A1691, A1700), iPhone 6s Plus (A1634, A1687, A1690, A1699), iPhone7 (A1660, A1778, A1779, A1780), iPhone7 Plus (A1661, A1784, A1785, A1786)
    - ✓ Supported Models with iOS 12.4 up to iOS 13.5.1: iPhone 8 (A1863, A1905, A1906, A1907), iPhone 8 Plus (A1864, A1897, A1898, A1899), iPhone X (A1865, A1901, A1902)
- **Added Full Filesystem extraction method which uses a jailbreaking agent to exploit 'checkm8' vulnerability.**
- **Model:** iPhone7 (A1660, A1778, A1779, A1780), iPhone7 Plus (A1661, A1784, A1785, A1786)
- **Version:** From iOS 13.0 to iOS 13.4.1
- **Supported models :**
    - ✓ Version : iPhone models with iOS 12.4 to 13.5.1
    - ✓ Models : iPhone SE (A1662, A1723, A1724), iPhone 6s (A1633, A1688, A1691, A1700), iPhone 6s Plus (A1634, A1687, A1690, A1699), iPhone 7 (A1660, A1779, A1780 Plus)

> ### New Physical Extraction for Samsung Exynos chipset, Android 10

- **Extraction Method: Bootloader (Pro)**
- **It supports bypass Screen lock, data extraction for Samsung secure folder.**
- **Supported models**: Samsung Galaxy S9(SM-G960N, SM-G960F)/Galaxy S9+(SM-G965N, SM-G965F)/Galaxy Note 9(SM-N960N) series with Exynos chipset.

Improvements

> ### Unlock support for Xiaomi models with MIUI 10 to 11

- **Supported models:**
  - ✓ **Version** : Xiaomi models with MIUI 10 to 11
  - ✓ **Models** : Mi Pad 4, Redmi Note 6 Pro, Redmi Note 7, Mi 8 Lite (M1808D2TG), Mi MAX 3 (M1804E4A), Mi 6X

New Models — Total 6 Extraction Methods, 15 Manufacturers

Method	Manufacturer	Model
Android Live	LG(1)	Q61 (LM-Q630N), LM-G900N(Velvet)
	LG(5)	LM-Q510N (Q51), LM-V600N (V60 ThinQ), LM-Y120K (Folder 2), LM-Y120L (Folder 2), LM-Y120S (Folder 2)
	SAMSUNG (2)	Galaxy A Quantum (SM-A716N, SM-A716S), SM-P610 (Galaxy Tab S6 Lite (Wi-Fi)), SM-P615 (Galaxy Tab S6 Lite (LTE))
	SAMSUNG (6)	SM-A315F (Galaxy A31), SM-A315F_DS (Galaxy A31), SM-A315N (Galaxy A31), SM-A516F (Galaxy A51), SM-A516F_DS (Galaxy A51), SM-A516N (Galaxy A51)
	SAMSUNG (25)	SM-A260F (Galaxy A2 Core), SM-A260F_DS (Galaxy A2 Core), SMA260G (Galaxy A2 Core), SM-A260G_DS (Galaxy A2 Core), SMA5070 (Galaxy A50s), SM-A507F (Galaxy A50s), SM-A507F_DS (Galaxy A50s), SM-A507FN (Galaxy A50s), SM-A507FN_DS (Galaxy A50s), SM-C9008 (Galaxy C9 Pro), SM-C900F (Galaxy C9 Pro), SM-C900Y (Galaxy C9 Pro), SM-J400F (Galaxy J4), SM-J400F_DS (Galaxy J4), SM-J400G (Galaxy J4), SM-J400G_DS (Galaxy J4), SMJ400M (Galaxy J4), SM-J810F (Galaxy J8), SM-J810F_DS (Galaxy J8), SM-J810G (Galaxy J8), SM-J810G_DS (Galaxy On8), SMJ810GF (Galaxy J8), SM-J810M (Galaxy J8), SM-J810Y (Galaxy J8), SM-J810Y_DS (Galaxy On8)
	HUAWEI (4)	COR-AL00 (Honor Play), COR-AL10 (Honor Play), COR-L09 (Honor Play), COR-L29 (Honor Play)
	Oneplus (5)	A4000 (One Plus 4), A5000 (One Plus 5), A5010 (One Plus 5T), A6010 (One Plus 6T), A6013 (One Plus 6T)
Unlock	BlackBerry (8)	BBB100-1 (Keyone), BBB100-2 (Keyone), BBB100-3 (Keyone), BBB100-4 (Keyone), STV100-1 (Priv), STV100-2 (Priv), STV100-3 (Priv), STV100-4 (Priv)
	HTC (1)	OPKV100 (One M8s)
	HUAWEI (8)	HRY-AL00a (Honor 10 Lite), HRY-LX1 (Honor 10 Lite), HRYLX1MEB (Honor 10 Lite), HRY-LX2 (Honor 10 Lite), HRY-TL00 (Honor 10 Lite), LDN-L21 (Nova 2 Lite), LDN-LX2 (Nova 2 Lite), LDN-TL10 (Nova 2 Lite)
	Xiaomi (1)	Mi 6X
	Vivo (2)	Y67, Y67A
ADB Pro 5	ALCATEL (3)	5046D (A3), 5046U (A3), 5046Y (A3)
	Amazon (1)	SX0340T (Fire HD 8 (2017))
	BLU (2)	R2 Plus, R2 Plus (2019)
	OPPO (1)	A83t
iOS Backup	APPLE (11)	A2068 (iPad Pro 11 inch (2rd Gen)), A2069 (iPad Pro 12.9 inch (4rd Gen)), A2228 (iPad Pro 11 inch (2rd Gen)), A2229 (iPad Pro 12.9 inch (4rd Gen)), A2230 (iPad Pro 11 inch (2rd Gen)), A2231 (iPad Pro 11 inch (2rd Gen)), A2232 (iPad Pro 12.9 inch (4rd Gen)), A2233 (iPad Pro 12.9 inch (4rd Gen)), A2275 (iPhone SE 2), A2296 (iPhone SE 2), A2298 (iPhone SE 2)
Bootloader	SONY (6)	E5303 (Xperia C4), E5306 (Xperia C4), E5333 (Xperia C4 Dual), E5343 (Xperia C4 Dual), E5353 (Xperia C4), E5363 (Xperia C4 Dual)
	SAMSUNG (4)	SM-A260F (Galaxy A2 Core), SM-A260F_DS (Galaxy A2 Core), SMA260G (Galaxy A2 Core), SM-A260G_DS (Galaxy A2 Core)
	GiONEE (1)	S9
	OPPO (2)	CPH1938 (A9), PCAM10 (A9)
Local Backup	Xiaomi (2)	Mi 6X, Redmi Note 9S

Updated Models   Total 10 Extraction Methods, 6 Manufacturers

Method	Manufacturer	Model
Unlock	**Xiaomi (5)**	Mi Pad 4, Redmi Note 6 Pro, Redmi Note 7, Mi 8 Lite (M1808D2TG), Mi MAX 3 (M1804E4A)
Bootloader (Pro | Version 10)	**SAMSUNG (1)**	Galaxy A7 2018 (SM-A750N)
Bootloader Pro	**SAMSUNG (1)**	SM-A600N (Galaxy A6 2018)
Bootloader	**SAMSUNG (5)**	SM-G960F (Galaxy S9), SM-G960N (Galaxy S9), SM-G965F (Galaxy S9+), SM-G965N (Galaxy S9+), SM-N960N (Galaxy Note9)
Bootloader > Custom Image	**Samsung (12)**	SCV33, SC-02H, SM-G930A, SM-G930P, SM-G930T, SM-G930T1, SM-G930V, SM-G935A, SM-G935P, SM-G935T, SM-G935T1, SMG935V
Full Filesystem (checkm8)	**APPLE (22)**	iPhone SE (A1662, A1723, A1724), iPhone X (A1865, A1901, A1902), iPhone6s (A1633, A1688, A1691), iPhone6s Plus (A1634, A1687, A1690, A1699), iPhone6s Unlocked (A1700), iPhone8 (A1863, A1905, A1906, A1907), iPhone8 Plus (A1864, A1897, A1898, A1899)
	APPLE (8)	A1660 (iPhone7), A1661 (iPhone7 Plus), A1778 (iPhone7), A1779 (iPhone7), A1780 (iPhone7), A1784 (iPhone7 Plus), A1785 (iPhone7 Plus), A1786 (iPhone7 Plus)
ADB Pro 5	**OPPO (3)**	CPH1835 (R15), PACM00 (R15), PACT00 (R15)
	LG (3)	LM-X510K (X5 2018), LM-X510L (X5 2018), LM-X510S (X5 2018)
ADB Pro 4	**SAMSUNG (6)**	SM-A520F (Galaxy A5 2017), SM-A520F_DS (Galaxy A5 2017), SM-A520K (Galaxy A5 2017), SM-A520L (Galaxy A5 2017), SMA520S (Galaxy A5 2017), SM-A520W (Galaxy A5 2017)
	SAMSUNG (7)	SM-G950F (Galaxy S8), SM-G950FD (Galaxy S8), SM-G955F (Galaxy S8+), SM-G955FD (Galaxy S8+), SM-N950F (Galaxy Note8), SM-N950FD (Galaxy Note8 Duos), SM-N950N (Galaxy Note8)
Unlock	**SAMSUNG (4)**	SM-A720F (Galaxy A7 2017), SM-A720K (Galaxy A7 2017), SMA720L (Galaxy A7 2017), SM-A720S (Galaxy A7 2017)
JTAG	**PANTECH (1)**	IM-A860L (Vega No6)

MD-RED v3.5.3~v3.6.8

New Features

> **Added Report Exporting feature for 'MD-Explorer' viewer program**

> **Analysis of Samsung Secure Folder**
> • Supports analysis of contents saved in Samsung Secure Folder.

> **Analysis support for iOS Full Filesystem image format from Cellebrite 'UFED' (*.dar)**

> **iOS Full File System (Added system logs analysis)**
> • Camera, WiFi, Activity, AirDrop, Widget, Shortcuts, TiemZone, Notifications
> • Keybag Status, Browser History, Siri

Improvements

> **Some of the filesystem issues fixed while parsing the extracted image file of GrayKey**

> **'Blob' data view is improved in PList Viewer**
> • Blob' data is now displayed and highlighted with 'BLOB' prefix and 'B' icon.
> • HexViewer can be newly called by double-clicking the value cell.

> **Full name is displayed as its language setting**
> • Korean: Last / First / Middle (ex. Radcliffe Daniel Jacob)
> • English: First / Middle / Last (ex. Daniel Jacob Radcliffe)

> **Supports analysis for Android apps installed in Parallel Space app**
> • Supported Apps: WhatsApp, Telegram, Facebook, Facebook Messenger, WeChat, Line, Chrome, KakaoTalk

> **Automatic snapshot of the checkbox status on opening the case**
> • Whenever the case is opened, the checkbox status of the case will be automatically saved as a new snapshot named after case and time.
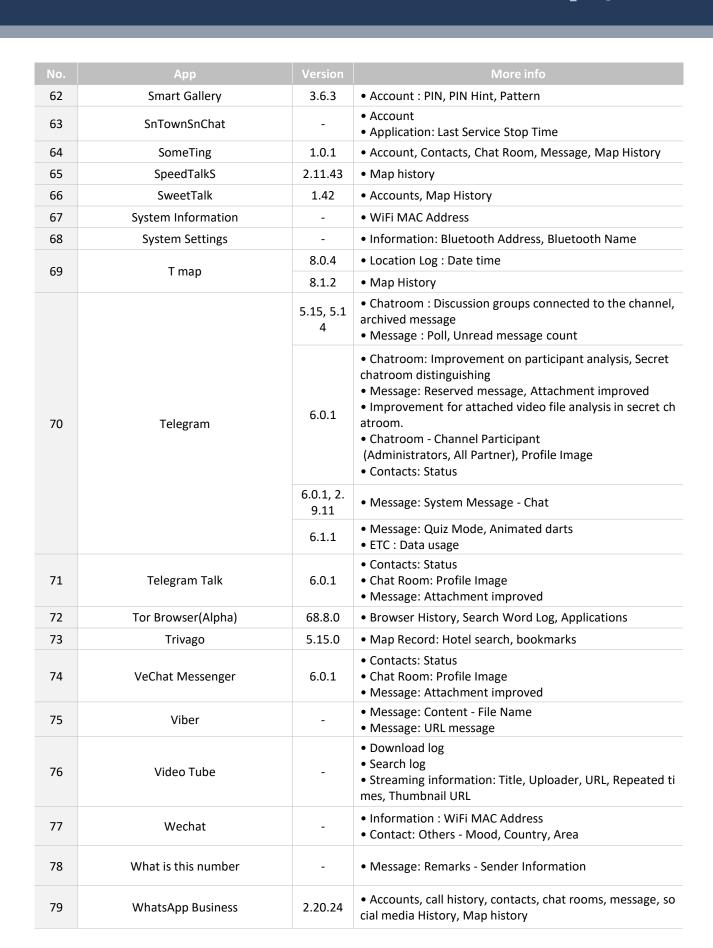
HANCOM WITH | We Empower Your Investigation!

Android Supported Apps(88)

No.	App	Version	More info
1	4shared	3.94.0	• Download Log: Attachments
2	8Talk	6.0.1	• Contacts: Status • Chat Room: Profile Image • Message: Attachment improved
3	Alarm	-	• Schedule : Alarm
4	AlTalk	1.4	• Account: app screen lock message
5	AngSaTalk	1.03	• Account, Contacts, Chatroom, Message
6	AngTalk	1.0.3	• Account, Contacts, Chat Room, Message
7	AngTing	-	• The latest version of 'Attachments' • Add analysis target: kr.co.ating.atingos
7	AngTing	1.0.4, 1.0.8	• Account, Contacts, Chat Room, Message
8	AngTingZulTing	1.0.4, 1.0.8	• Account, Contacts, Chat Room, Message
9	AppLock Aurora	-	• Multimedia: Decryption on encrypted file.
10	ASTRO File Manage	8.0.2	• Media log
11	Awesome Note	-	• Notes: Remarks - Attachment file path
12	Baidu Input	8.6.7.10	• Search Log
13	BIGO LIVE	4.32.5	• Message: Notification
14	Bookpal Talk	-	• Chatroom - Channel Participant (Administrators, All Partner)
14	Bookpal Talk	6.0.1	• Contacts: Status • Chat Room: Profile Image • Message: Attachment improved
15	Call History	-	• Call History : Type – Rejected • Call Records: Type - Auto Reject for OPPO devices
16	Carrot Market	-	• Account, Search log
17	Chat More Dating	4.0.1	• Message :'Type' analysis improved
18	Chat More Dating S	1.2.3	• Account, Contact, Message, Chatroom and Application
19	Color Note	4.1.4	• Memo : Category - Recycle BIn, Storage, Calendar
20	ContextProvider	-	• Applications: Execution Duration, Last Service Start Time
21	DaTalk	1.12.5	• Account: Name, Region, etc. • Message: system message
22	Dictionary	-	• Search Log
23	Discord	14	• Analysis for latest version of app supported • Message, Chatroom

No.	App	Version	More info
24	Download List	-	• Download History: Remarks - App Package Name, Class Name
25	Facebook Messenger	258.0.0.18.119	• Message: Sticker, message in Secret Chat (TINCAN)
26	Fake Text Message	6.6	• Message, Anti-Forensic App
27	FlyingFile	2.3.3	• Account, etc
28	Gmail Go	-	• Account, Contacts, E-mail, Cloud Log
29	Google Calendar	-	• Information : Multiple account support
30	Google Drive	2.20.101.11.45	• Cloud Log: Type - Shared
		23	• Cloud Log: 'Recent Open Time' analysis improved
31	Google Play Services	-	• Network Log : Cell Tower • Information: Advertising ID
32	GoToMeeting	4.2.3.1	• Account, Schedule, Etc.
33	imo	2020.04.2031	• Message: Sticker
34	imo Beta	2020.04.4032	• Account, Contacts, Chat Room, Message
35	Information (Live)	-	• Information : IMEI (dual SIM)
36	InssaChatting	7.0.4	• Accounts, Message (Talk)
37	Instagram	-	• Account: Login Time • Message: Title - Call, Audio
38	Kakao Story	5.7.5	• Social media History: Post URL
39	Kakao Talk	-	• Message: Contents – Temporary message format : Json • ETC: Talk Drive
		8.8.0	• Decryption support for version 8.8.0
		8.8.1	• Message – Attachments
		8.8.5	• Account: MCCMNC (MCC: Mobile Country Code, MNC: Mobile Network Code) • Message: Emoticon reply message, Remarks - Voice Command
40	KakaoTaxi	4.1.8	• Account • Map History: History, Search Location
41	KeepSafe	-	• Multimedia: Taken photo when Break-in alerts activated
42	Line	-	• Message: Attachment - Link to the original video file instead of the Thumbnail. • Contacts: 'Profile Image' designation algorithm improved
43	LINE WORKS	-	• Message : Type - System Message (Participation), Chatroom Settings

No.	App	Version	More info
44	LockMyPix (SD Card)	4.2.5	• Supports decryption for encrypted photos • Supports for multimedia files in SD card • A paid-version of LockMyPix
45	MEGA	3.7.4	• Account, Contacts, Chat Room, Messages
46	Message	-	• Message: Remarks - Expiration Day of attachment and File Path for OPPO devices • Message : System Message
47	Message (Daigyeo)	-	• Message : Sent Message, .dat file • Misc. : Synchronization date/time, loaded message content
48	Message viewer	1.6.5.7	• 'Attached File', 'Partner' analysis improved
49	My Files	-	• Media Log : FileCache.db.file • Download History: Remarks - download origin URL
50	Naver Band	-	•Message : Attachment File - .0 Attachment file source • Message - Contents: Sticker message URL
51	NumberPlusII	3	• Account : Phone Number, Dual Number
52	Opera Browser	56.1.2780.51589	• Search log
		57.1.2830.5248 0	• Browser History: Bookmark
53	Photo & Video Hide	6.7.0	• Account: E-Mail, First Login Time, Last Log-in Time
54	Plus Messenger	-	• Chatroom - Channel Participant (Administrators, All Partner)
		6.0.1	• Contacts: Status • Chat Room: Profile Image • Message: Attachment improved
55	ProtonMail	1.13.1	• Supports analysis for non-encrypted data • Account, E-Mail (Title, Attachment Count, File Name, etc.)
56	Schedule (Live)	-	• Schedule: Notification - Repetition Rule
57	Secret Album	4	• Account: Number • Contacts • Notes: Note, Reminder • Browser History: Bookmark
58	Secure Folder	-	• Media log: move item
59	Signal Private Messenger	-	• Message: Type - Draft , System Message, title - View-once media, content - disappear message time setting improved • Chatroom: Name - Note To Self (Chat Room With Me) added • Contact: name set by the other party
60	SimgTing	1.0.4, 1.0.8	• Account, Contacts, Chat Room, Message
61	Skype	8.59.0.77	• Chat Room: Name, Create Time, Remarks (Creator, Type)

No.	App	Version	More info
62	Smart Gallery	3.6.3	• Account : PIN, PIN Hint, Pattern
63	SnTownSnChat	-	• Account • Application: Last Service Stop Time
64	SomeTing	1.0.1	• Account, Contacts, Chat Room, Message, Map History
65	SpeedTalkS	2.11.43	• Map history
66	SweetTalk	1.42	• Accounts, Map History
67	System Information	-	• WiFi MAC Address
68	System Settings	-	• Information: Bluetooth Address, Bluetooth Name
69	T map	8.0.4	• Location Log : Date time
69	T map	8.1.2	• Map History
70	Telegram	5.15, 5.14	• Chatroom : Discussion groups connected to the channel, archived message • Message : Poll, Unread message count
70	Telegram	6.0.1	• Chatroom: Improvement on participant analysis, Secret chatroom distinguishing • Message: Reserved message, Attachment improved • Improvement for attached video file analysis in secret chatroom. • Chatroom - Channel Participant (Administrators, All Partner), Profile Image • Contacts: Status
70	Telegram	6.0.1, 2.9.11	• Message: System Message - Chat
70	Telegram	6.1.1	• Message: Quiz Mode, Animated darts • ETC : Data usage
71	Telegram Talk	6.0.1	• Contacts: Status • Chat Room: Profile Image • Message: Attachment improved
72	Tor Browser(Alpha)	68.8.0	• Browser History, Search Word Log, Applications
73	Trivago	5.15.0	• Map Record: Hotel search, bookmarks
74	VeChat Messenger	6.0.1	• Contacts: Status • Chat Room: Profile Image • Message: Attachment improved
75	Viber	-	• Message: Content - File Name • Message: URL message
76	Video Tube	-	• Download log • Search log • Streaming information: Title, Uploader, URL, Repeated times, Thumbnail URL
77	Wechat	-	• Information : WiFi MAC Address • Contact: Others - Mood, Country, Area
78	What is this number	-	• Message: Remarks - Sender Information
79	WhatsApp Business	2.20.24	• Accounts, call history, contacts, chat rooms, message, social media History, Map history

No.	App	Version	More info
80	Wickr Me	5.49.3	• Contacts : Profile image • Message : Type – reply, attachment files, location, message ID
		-	• Message: Type - Send Fail added
81	Wire - Private Messenger	3.46.890	• Accounts: Logged in device (device ID, model name, logged in time, etc.), profile image • Contact: Connection status • Chatroom: Mute settings time, creator, whether to archive • Map history : logged in location
		-	• Chatroom: Timer •Multimedia: Additional analysis for attachments of deleted message • Message: Attachments - Additional analysis on cache file . • Message: System Message
82	Xabber	2.6.6.645	• Account, Message, Chat Room
83	YellowRubberBand	1.0.1	• Account • Message: Only last message
84	YoungChat	1.0.2	• Message: Type - Draft • Account: Email
85	Y-Tube Play	-	• Search Log
86	Zalo	20.01.01	• Account: Login time • Network Log: IP Address • Map Record: Last location
87	ZleChat	1.0.8	• Account, message (last talk)
88	ZulTalk	28.6	• Add analysis target: kr.co.infinio.ztalkos

iOS   Supported Apps(41)

No.	App	Version	More info
1	SnChat	2.6.2	• Account
2	8Talk	-	• Account, Contact, Chatroom, Message, Map Record, Call History • Message: System Message
3	Any.do	4.29.6.12	• Schedule: Remarks - Memo, Attachment file name
4	Calendar	-	• Calendar: Attachments
5	DingTalk	-	• Message: Attachment - Solved the issue when the name of 'saved file' column has duplicate extension. • ex) a.jpg.JPG
6	Dingtone	-	• Message: Type - System Message
7	Discord - Messenger for Gammers	13.1	• Account, Contacts, Chatroom, Messages
7		-	• Message: System Message
7		20	• Account, Contacts • Message: System message, Call History
8	Facebook Messenger	-	• Account, Contacts, Chatroom, Message, Social Media • Log : Story • Contacts, messages, SNS record • Secret Conversation analysis from FFS image • Message: Improvement for Korean character expression
8		258.0.0.38.114	• Chatroom: Mute, Profile Image
8		258	• Multiple Accounts Analysis • Chatroom: Remarks - Type (Chat Room With Me) • Application: Version
9	Gmail	6.0.190822.955	• Account : Multiple account support (Profile URL per each accounts)
9		942	• Contacts : Multiple account support
9		-	• E-Mail: *.gml file analysis
10	GoToMeeting	7.7.0.11	• Account
11	ICQ	-	• Contacts: Remarks - Owner Account
12	Instagram	112.0.0.17.121	• Account: Phone Number, Name
12		144.0.0.17.119	• Improvement for Korean character expression
13	KakaoTalk	8.7.8	• Message : Temporary message, system message
13		8.8.2	• Search Log: Open Chat
13		8.8.5	• Message: reply message by emoticons • Message - Remarks: Voice command • 'Export Chat' analysis improved

No.	App	Version	More info
14	Kakao TV Live	1.7	• Search log
15	KeyChain	-	• Information: Keychain
16	Line	10.2.1	• Message : Poll (Voting) • Chatroom : Group Chatroom Members
		10.5.0	• Message: Attachment - Link to the original image instead of the Thumbnail image.
		-	• Contacts: Profile Image
17	Mail.Ru	11.8.0.15946	• Account, Contacts, E-mail
18	MEGA	4.1	• Account, Contacts, Chat Room, Messages
19	Memo	1.0.2	• Memo : Account, Category
		-	• Notes: Locked Memo (Requires user-set password for decryption), Content - Table
20	Messenger VPN Secure	-	• Account, Contact, Chatroom, Message, Map Record, Call History • Message: System Message
21	Multimedia Log	-	• Media Log : Creation time of Original file • Map History: Type - Photo Location • Media log: Media type - Live Photo
22	Naver Band	-	• Message : Chatting room Message - Message ID • Message: Attachment - Video Thumbnail Attachment
		7.0.13	• Social media History : Post
23	Naver Map	-	• Map History: Recent Route, Destination
24	Nicegram	5.15.5	• Account, Contact, Chatroom, Message, Map Record, Call History
		-	• Message: System Message
25	Reminders	-	• Analysis result added following major app upgrade • Schedule: Category, Completion, Remarks - URL, Flagged
26	Signal	3.6.1.4	• Account, Contacts, Chatroom, Messages
27	Signal Private Messenger	-	• Message: Type - System message, attachment files • Chatroom: Remarks - mute settings time • Chatroom: Profile Image
28	Skype	-	• Contacts: Status
29	Slack	-	• Account, contacts, contact groups, message, chat room
30	Somoim	2.6.9	• Accounts: profile image Message: emoticon message
31	System Info	-	• System Log: Battery capacity, Application usage records, etc • System Log: Audio device name, Media play log, Audio log, Application log • Bluetooth Log • System Log: Contents - Camera Usage Log. (App Package Name) • Application: App installation history, Recently Deleted Apps • System Log: Camera, WiFi, Activity, AirDrop, Widget, Shortcuts, TimeZone, Notifications, Keybag Status, Browser History, Siri • System Log: Application Log - Installed/Delete/Update, Power On Log • System information

No.	App	Version	More info
32	Telegram	-	▪ Accounts : Status message, profile image ▪ Contacts : Status message, profile image ▪ Chatroom: archived message, profile images, secret chat - recipients/creation time ▪ Message: URL message, forwarding message, sender inner ID of original message ▪ Contacts: Profile image ▪ Message: Reserved message, sent ▪ Chatroom: Create time, recent time ▪ Additional data analysis (group.ph.telegra.Telegraph) ▪ Message - Attachments ▪ Chatroom - Unread counts ▪ Number of participants displayed in 'Remarks' tab. ▪ Message: System Message
33	Telegram X	-	▪ Message: System Message
34	Twitter	-	▪ Account : Multiple account
		8.17	▪ Supports analysis for latest version 8.17
35	User Dictionary	-	▪ Etc.: Item – Auto Correction, Text Replacement (Shortcut, Phrase)
36	USIM Information	-	▪ Information: USIM information
37	Viber	13.1.1	▪ Message : System Message
38	Wechat	-	▪ Message : Attached file - attached file for original file (.pic_hd) ▪ Chat room: Profile image
		7.0.11	▪ Account : Last Connected ▪ Account Message : Quote Message
39	Wickr Me	5.49.1	▪ Account, Contacts, Chatroom, Message, Call Log
		-	▪ Message : Attachment files
40	Wire - Private Messenger	3.54	▪ Support multi-account analysis ▪ Account : Contents - Phone number, profile image ▪ Chatroom : Participants, remarks - chatroom folder ▪ Message: Type - Draft/System message, attachment files
		-	▪ Message: Timer of system message, Attachment files ▪ Chatroom: Timer ▪ Message: Location
41	ZletalkLive	1.0.4	▪ Account, Contacts, Applications

MD-LIVE v3.3.10~v3.3.14

New Features

> ## New Device Log Analysis Feature

- Use Android Logcat to analyze user activities such as app execution and camera shooting
- Support device log filtering by date, app, action, and custom filters

Improvements

> ## Major App Analysis Improvement

- Supports analysis for Android apps installed in Parallel Space app.
- For more information, please refer to the App Change Information

> ## Android Live Extraction

- Now user can decide proceeding downgrade according to the state of app installation.
- Popup guide message with 'App Downgrade Extraction' alerts user if there are apps with the following cases,
  - ✓ Target app is installed in the Samsung Secure Folder.
  - ✓ Target app is installed in the Android multi-account space. ex) Dual messenger.
  - ✓ Multiple accounting app is installed in the target mobile. ex) Parallel Space.
  - ✓ Installed applications from any other sources except Google Play Store
  - ✓ Default system applications

New Models   Total 6 Manufacturers

Manufacturer	Model
Google (11)	G020, G020I, G020M, G020P, GA01180-US, GA01181-US, GA01182-US, GA01187-US, GA01188-US, GA01189-US, GA01191-US
LG (5)	LM-Q510N, LM-V600N, LG-VS660, LM-G900N, LM-Q630N
Nokia (5)	TA-1047, TA-1056, TA-1060, TA-1066, TA-1079
OPPO (3)	A57, A83t, CPH1701
SAMSUNG (10)	SM-P610, SM-P615, SM-A315F, SM-A315F_DS, SM-A315N, SM-A516F, SM-A516F_DS, SM-A516N, SM-A716N, SM-A716S
XIAOMI (1)	Mi 9

Android   Supported Apps(80)

No.	App	Version	More info
1	4shared	3.94.0	▪ Download Log: Attachments
2	8Talk	6.0.1	▪ Contacts: Status ▪ Chat Room: Profile Image ▪ Message: Attachment improved
3	AITalk	1.4	▪ Account: app screen lock message
4	AngSaTalk	1.03	▪ Account, Contacts, Chatroom, Message
5	AngTalk	1.0.3	▪ Account, Contacts, Chat Room, Message
6	AngTing	-	▪ The latest version of 'Attachments' ▪ Add analysis target: kr.co.ating.atingos
7		1.0.4, 1.0.8	▪ Account, Contacts, Chat Room, Message
8	AngTingZulTing	1.0.4, 1.0.8	▪ Account, Contacts, Chat Room, Message
9	AppLock Aurora	-	▪ Multimedia: Decryption on encrypted file.
10	ASTRO File Manager	8.0.2	▪ Media log
11	Awesome Note	-	▪ Notes: Remarks - Attachment file path
12	Baidu Input	8.6.7.10	▪ Search Log
13	Bookpal Talk	-	▪ Chatroom - Channel Participant (Administrators, All Partner)
		6.0.1	▪ Contacts: Status ▪ Chat Room: Profile Image ▪ Message: Attachment improved
14	Call History	-	▪ Call Records: Type – Auto Reject for OPPO devices
15	Chat More Dating	4.0.1	▪ Message: 'Type' analysis improved
16	Chat More Dating S	1.2.3	▪ Account, Contact, Message, Chatroom and Application
17	ContextProvider	-	▪ Applications: Execution Duration, Last Service Start Time
18	DaTalk	1.12.5	▪ Account: Name, Region, etc. ▪ Message: system message
19	Dictionary	-	▪ Search Log
20	Discord	14	▪ Analysis for latest version of app supported ▪ Message, Chatroom
21	Download List	-	▪ Download History: Remarks - App Package Name, Class Name
22	Facebook Messenger	258.0.0.18.119	▪ Message: Sticker, message in Secret Chat (TINCAN)
23	Fake Text Message	6.6	▪ Message, Anti-Forensic App
24	Gmail Go	-	▪ Account, Contacts, E-mail, Cloud Log

No.	36App	Version	More info
25	Google Drive	-	▪ Cloud Log: 'Recent Open Time' analysis improved
26	Google Play Services	-	▪ Information: Advertising ID
27	GoToMeeting	4.2.3.1	▪ Account, Schedule, Etc.
28	imo	2020.04.2031	▪ Message: Sticker
29	imo Beta	2020.04.4032	▪ Account, Contacts, Chat Room, Message
30	InssaChatting	7.0.4	▪ Accounts, Message (Talk)
31	Instagram	-	▪ Account: Login Time ▪ Message: Title - Call, Audio
32	Kakao Story	5.7.5	▪ Social media History: Post URL
33	KakaoTalk	8.8.1	▪ Message – Attachments
		8.8.5	▪ Account: MCCMNC (MCC: Mobile Country Code, MNC: Mobile Network Code) ▪ Message: Emoticon reply message, Remarks – Voice Command
34	KakaoTaxi	4.1.8	▪ Account ▪ Map History: Favorite Place, History, Search Location ▪ Etc: Car Info
35	KeepSafe	-	▪ • Multimedia: Taken photo when Break-in alerts activated
36	Line	-	▪ Message: Attachment - Link to the original video file instead of the Thumbnail. ▪ Contacts: 'Profile Image' designation algorithm improved
37	LockMyPix (SD Card)	4.2.5	▪ Supports decryption for encrypted photos ▪ Supports for multimedia files in SD card ▪ A paid-version of LockMyPix
38	MEGA	3.7.4	▪ Account, Contacts, Chat Room, Messages
39	Message	-	▪ Message: System Message, Remarks – Expiration Day of attachment and File Path for OPPO devices
40	Message Viewer	1.6.5.7	▪ 'Attached File', 'Partner' analysis improved
41	My Files	-	▪ Download History: Remarks - download origin URL
42	Naver Band	-	▪ Message – Contents: Sticker message URL
43	NumberPlusII	3	▪ Account: Phone Number, Dual Number
44	Opera Browser	57.1.2830.52480	▪ Browser History: Bookmark
45	Photo & Video Hide	6.7.0	▪ Account: E-Mail, First Login Time, Last Log-in Time

No.	App	Version	More info
46	Plus Messenger	- 6.0.1	▪ Chatroom - Channel Participant (Administrators, All Partner) ▪ Contacts: Status ▪ Chat Room: Profile Image ▪ Message: Attachment improved
47	ProtonMail	1.13.1	▪ Supports analysis for non-encrypted data ▪ Account, E-Mail (Title, Attachment Count, File Name, etc)
48	Schedule (Live)	-	▪ Schedule: Notification – Repetition Rule
49	Secret Album	4	▪ Account: Number ▪ Contacts ▪ Notes: Note, Reminder ▪ Browser History: Bookmark
50	Secure Folder	-	▪ Media log: move item
51	Signal Private Messenger	-	▪ Message: Type – Draft, System Message ▪ Chatroom: Name – Note To Self (Chat Room With Me) added ▪ Message title 　– View-once media, content 　– Disappear message time setting improved ▪ Contact: name set by the other party
52	SimgTing	1.0.4, 1.0.8	▪ Account, Contacts, Chat Room, Message
53	Skype	8.59.0.77	▪ Chat Room: Name, Create Time, Remarks (Creator, Type)
54	Smart Gallery	3.6.3	▪ Account: PIN, PIN Hint, Pattern
55	SnTownSnChat	-	▪ Account ▪ Application: Last Service Stop Time
56	SomeTing	1.0.1	▪ Account, Contacts, Chat Room, Message, Map History
57	SpeedTalkS	2.11.43	▪ Map history
58	SweetTalk	1.42	▪ Accounts, Map History
59	System Information	-	▪ WiFi MAC Address
60	System Settings	-	▪ Information: Bluetooth Address, Bluetooth Name
61	Telegram	6.0.1 6.1.1	▪ Contacts: Status ▪ Chatroom: Improvement on participant analysis, Secret chatroom distinguishing, Channel Participant (Administrators, All Partner), Profile Image ▪ Message: Reserved message, Improvement for attached video file analysis in secret chatroom, System Message – Chat, Attachment improved ▪ Message: Quiz Mode ▪ Message: Animated darts ▪ ETC: Data usage
62	Telegram Talk	6.0.1	▪ Contacts: Status ▪ Chat Room: Profile Image ▪ Message: Attachment improved

No.	App	Version	More info
63	T map	8.1.2	▪ Map History
64	Tor Browser(Alpha)	68.8.0	▪ Browser History, Search Word Log, Applications
65	Trivago	5.15.0	▪ Map Record: Hotel search, bookmarks
66	VeChat Messenger	6.0.1	▪ Contacts: Status ▪ Chat Room: Profile Image ▪ Message: Attachment improved
67	Viber	-	▪ Message: Content – File Name ▪ Message: URL message
68	Video Tube	-	▪ Download log ▪ Search log ▪ Streaming information: Title, Uploader, URL, Repeated times, Thumbnail URL
69	Wechat	-	▪ Contact: Others - Mood, Country, Area
70	Wire – Private Messenger	-	▪ Chatroom: Timer ▪ Multimedia: Additional analysis for attachments of deleted message ▪ Message: Attachments – Additional analysis on cache file, System Message
71	What is this number	-	▪ Message: Remarks – Sender Information
72	WhatsApp Business	2.20.24	▪ Accounts, call history, contacts, chat rooms, message, social media History, Map history
73	Wickr Me	-	▪ Message: Type – Send Fail added
74	Xabber	2.6.6.645	▪ Account, Message, Chat Room
75	YellowRubberBand	1.0.1	▪ Account ▪ Message: Only last message
76	YoungChat	1.0.2	▪ Message: Type - Draft ▪ Account: Email
77	Y-Tube Play	-	▪ Search Log
78	Zalo	20.01.01	▪ Account: Login time ▪ Network Log: IP Address ▪ Map Record: Last location
79	ZleChat	1.0.8	▪ Account, message (last talk)
80	ZulTalk	28.6	▪ Add analysis target: kr.co.infinio.ztalkos

iOS   Supported Apps(37)

No.	App	Version	More info
1	8Talk	-	▪ Account, Contact, Chatroom, Message, Map Record, Call History ▪ Message: System Message
2	Any.do	4.29.6.12	▪ Schedule: Remarks - Memo, Attachment file name
3	Calendar	-	▪ Calendar: Attachments
4	DingTalk	-	▪ Message: Attachment – Solved the issue when the name of 'saved file' column has duplicate extension. ▪ ex) a.jpg.JPG
5	Dingtone	-	▪ Message: Type – System Message
6	Discord	-	▪ Message: System Message
6	Discord	20	▪ Account, Contacts ▪ Message: System message, Call History
7	Facebook Messenger	-	▪ Secret Conversation analysis from FFS image. ▪ Message: Improvement for Korean character expression
7	Facebook Messenger	258.0.0.38.114	▪ Chatroom: Mute, Profile Image ▪ Multiple Accounts Analysis ▪ Chatroom: Remarks – Type (Chat Room With Me) ▪ Application: Version
8	Gmail	-	▪ E-Mail: *.gml file analysis
9	GoToMeeting	7.7.0.11	▪ Account
10	ICQ	-	▪ Contacts: Remarks – Owner Account
11	Instagram	112.0.0.17.121	▪ Account: Phone Number, Name
11	Instagram	144.0.0.17.119	▪ Improvement for Korean character expression

No.	App	Version	More info
12	KakaoTalk	8.8.2	▪ Search Log: Open Chat
		8.8.5	▪ Message: reply message by emoticons ▪ Message – Remarks: Voice command ▪ 'Export Chat' analysis improved
13	Line	-	▪ Contacts: Profile Image
		10.5.0	▪ Message: Attachment - Link to the original image instead of the Thumbnail image.
14	Mail.Ru	11.8.0.15946	▪ Account, Contacts, E-mail
15	MEGA	4.10	▪ Account, Contacts, Chat Room, Messages
16	Memo		▪ Memo: Account, Category ▪ Notes: Locked Memo (Requires user-set password for decryption), Content - Table
17	Messenger VPN Secure	-	▪ Account, Contact, Chatroom, Message, Map Record, Call History ▪ Message: System Message
18	Multimedia Log	-	▪ Map History: Type – Photo Location ▪ Media log: Media type – Live Photo
19	Naver Band	-	▪ Message: Attachment – Video Thumbnail Attachment
		7.0.13	▪ Social media History: Post
20	Naver Map	-	▪ Map History: Recent Route, Destination
21	Nicegram	5.15.5	▪ Account, Contact, Chatroom, Message, Map Record, Call History ▪ Message: System Message

No.	App	Version	▪ More info
22	Reminders	-	▪ Analysis result added following major app upgrade ▪ Schedule: Category, Completion, Remarks - URL, Flagged
23	Signal Private Messenger	-	▪ Chatroom: Profile Image
24	Skype	-	▪ Contacts: Status
25	Slack	-	▪ Account, contacts, contact groups, message, chat room
26	SnTownSnChat	2.6.2	▪ Account
27	Somoim	2.6.9	▪ Accounts: profile image ▪ Message: emoticon message
28	System Info	-	▪ System Log: Battery capacity, Application usage records, Audio device name, Media play log, Audio log, Application log ▪ Bluetooth Log ▪ Application: App installation history, Recently Deleted Apps ▪ System Log: Camera, WiFi, Activity, AirDrop, Widget, Shortcuts, TimeZone, Notifications, Keybag Status, Browser History, Siri. App Package Name, Installed/Delete/Update, Power On Log
29	Telegram		▪ Contacts: Profile image ▪ Message: Reserved message, sent, Attachments, System Message ▪ Chatroom: Create time, recent time, Unread counts ▪ Number of participants displayed in 'Remarks' tab. ▪ Additional data analysis (group.ph.telegra.Telegraph)
30	Telegram X	-	▪ Message: System Message
31	Twitter	8.17	▪ Supports analysis for latest version 8.17
32	User Dictionary	-	▪ Etc: Item – Auto Correction, Text Replacement (Shortcut, Phrase)
33	USIM Information	-	▪ Information: USIM information
34	Viber	13.1.1	▪ Message: System Message
35	Wechat	-	▪ Chat room: Profile image
36	Wire - Private Messenger		▪ Message: Timer of system message, Attachment files ▪ Chatroom: Timer ▪ Message: Location
37	ZletalkLive	1.0.4	▪ Account, Contacts, Applications

MD-VIDEO v3.1.0~v3.2.0

New Features

> **Resume the abnormally terminated case**

- **"Restore Case" notification window will be displayed when running MD-VIDEO if there is the case that has been terminated abnormally.**
- **If the user selects 'Y: Open case', the interrupted case can be resumed.**

> **Image adjustment and enhancement**

- **The image can be enhanced by adjusting the brightness, contrast, and color of the analysis results at the [Image Enhancement] tab of the detailed view.**
- **Supported adjustment features:** Density (Brightness, Contrast, Gamma), Color (Red, Green, Blue), Edge Sharpening, Noise Reduction
- **If the user checks 'Apply Filter' and clicks 'Save', the adjustment will be applied to the image.**

> **AI Analysis**

- **Added function that allows users to filter only the objects matched by the selected area and by the selected color in the Object Gallery**
- **Object Duplication**
  - ✓ Deduplication of same static objects in Object Gallery
  - ✓ Display the number of deduplicated objects
  - ✓ Added functions for user to manage the deduplicated object
  - ✓ Export Scenes
  - ✓ Improved the display of exported video

MD-CLOUD v1.3.0

New Features

> **Extraction Module**

- **Added 'Telegram' extraction module**
    - ✓ **Credential file authentication (Android)**
        - Credential file extracted from Android device's physical/logical dump image (should be logged into Telegram)
    - ✓ **Mobile authentication (Android, iOS, etc.)**
        - Authenticate via phone number and 2FA login code sent to the actual device or Telegram account

MD-Series common feature

New Features

- License Management Feature

- Display all installed license states on the 'HELP' menu.

- Notify license expiration by pop up window

- Enable creation of renewal request file(*.c2v) and license key(*.v2c) application from 'HELP'