## ■ Data Analysis Table (<u>ADBFieldDetective Option Table</u>) \* Blue: Option Number

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Type of Timestamp	Keywords	Additional Explanation	Raw Data(example)
		App Start/End	dumpsys usagestats	Last 24 hour events	YYYY-MM-DD HH:mm:ss	ACTIVITY_RESUMED ACTIVITY_STOPPED	'package': package_name 'instanceID': Activity instance tracking	time="2022-11-17 17:02:10" type=ACTIVITY_RESUMED package=com.kakao.talk class=com.kakao.talk.activity.main.MainActivity instanceld=257324370 taskRootPackage=com.kakao.talk taskRootClass=com.kakao.talk.activity.TaskRootActivity flags=0x0 time="2022-11-17 17:02:13" type=ACTIVITY_STOPPED package=com.kakao.talk.activity.main.MainActivity instanceld=257324370 taskRootPackage=com.kakao.talk taskRootPackage=com.kakao.talk taskRootClass=com.kakao.talk taskRootClass=com.kakao.talk.activity.TaskRootActivity flags=0x0
		App Last Usage Information		In-memory daily stats In-memory monthly stats	YYYY-MM-DD HH:mm:ss	lastTimeUsed totalTimeUsed lastTimeComponentUsed	'package': package_name	package=com.kakaopay.app totalTimeUsed="05:57" lastTimeUsed="2023-01-31 00:49:46" totalTimeVisible="06:10" lastTimeVisible="2023-01-31 00:49:46" lastTimeComponentUsed="2023-01-31 00:49:44" totalTimeFS="00:00" lastTimeFS="1970-01-01 09:00:00" appLaunchCount=8 fgServiceLaunchCount=0
	App		dumpsys media.camera	Camera service events log	MM-DD HH:mm:ss	CONNECT device DISCONNECT device	'package {pkg_name}': App using camera	03-29 21:14:03: CONNECT device 4 client for package client.pid<1495> (PID 1495, priority 200) 03-29 21:12:56: DISCONNECT device 1 client for package com.sec.android.app.camera (PID 14358)
	① - 1	Camera On/Off	dumpsys media.camera.wor ker (only samsung)	Dump of CameraServiceWorker COMMON Activity	YYYY-MM-DD HH:mm:ss.sss +0900	Open camera Close camera	'for {pkg_name}': App using camera	2023-05-11 15:23:03.113 +0900, Open camera(0) for com.jeyluta.timestampcamerafree 2023-05-11 15:23:18.123 +0900, Close camera(0) for com.jeyluta.timestampcamerafree
User		Call Start/End	dumpsys telecom	Historical Events:	YYYY. MM. DD. {오전/오후} HH:mm:ss / HH:mm:ss.sss	'SET_ACTIVE': Call connected 'SET_DISCONNECTED': Call terminated	'AUDIO_ROUTE (Entering state ActiveEarpieceRoute/ActiveBluetoothRo ute/ActiveHeadsetRoute)': audio connected to the phone's earpiece/BT_device/wired_headset 'Code: (MISSED) Reason: (210. INCOMING_MISSED)': Incoming call was not answered 'Code: (LOCAL) Reason: (200, LOCAL)': ended by local user 'Code: (REMOTE) Reason: (210, NORMAL)': ended by the remote user	CallTC@17 [2023. 5. 13. 오후 8:41:16](MT - incoming) 20:41:19.716 - AUDIO_ROUTE (Entering state ActiveEarpieceRoute):ICA.aC->CSFM.rF->CAMSM.pM_1002->CARSM.pM_SWITC H_FOCUS(csai)@CEQ 20:41:19.737 - SET_ACTIVE (active set explicitly):CSW.sA(cap)@CEo 20:41:29.683 - SET_DISCONNECTED (disconnected set explicitly> DisconnectCause [ Code: (REMOTE) Label: () Description: () Reason: (210, NORMAL) Tone: (27) TelephonyCause: 2/-1 ImsReasonInfo: ImsReasonInfo:: [510: CODE_USER_TERMINATED_BY_REMOTE, 210, null]]):CSW.sDc(cap)@CHY
Interaction		Screen On/Off	dumpsys activity	mars history (only samsung)	MM/DD HH:mm:ss.sss	[SCR ON] [SCR OFF]	-	[05/11 15:22:53.322] [SYS] [SCR ON] [05/11 15:33:21.510] [SYS] [SCR OFF]
(Direct user behavior)			dumpsys usagestats	Last 24 hour events	YYYY-MM-DD HH:mm:ss	SCREEN_INTERACTIVE SCREEN_NON_INTERACTI VE	package={pkg_name}	time="2023-01-30 16:59:58" type=SCREEN_INTERACTIVE package=android flags=0x0
1	Device ① - 2	Fingerprint Registration/Deletion, Authentication Success/Failure	dumpsys fingerprint (only samsung)	log	MM/DD HH:mm:ss.sss	-	'Event Type {E/A/R}': Enroll/Action/Remove 'Event Result {M/N/U}': Match/Nomatch/Unknown	E, com.samsung.android.biometrics.app.setting, 05/15 12:53:26.281, 05/15 12:53:50.629, 0, 8, 8, S A, com.android.systemui, 05/15 12:53:55.181, 05/15 12:53:58.852, 176, 0, 0, M A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:03.164, 539, 0, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:04.490, 440, 0, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:07.699, 413, 0, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:07.149, 519, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:08.513, 465, 0, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:08.513, 465, 0, 0, N A, com.android.systemui, 05/15 12:54:00.516, 05/15 12:54:08.513, 05/15 12:54:08.523, 0, 5, 0, U R, client, 05/15 12:54:20.015, 05/15 12:54:20.015, 0, 0, 0, null
		Wi-Fi On/Off	dumpsys wifi	UserActionEvents	MM-DD HH:mm:ss.sss	EVENT_TOGGLE_WIFI_ON EVENT_TOGGLE_WIFI_OF F	'EVENT_MANUAL_CONNECT': Manually change network	01-05 13:25:17.614 eventType=EVENT_TOGGLE_WIFI_ON startTimeMillis=46801319 WifiStatus: isConnected=false isValidated=false lastRssi=0 estimatedTxKbps=0 estimatedRxKbps=0 isStuckDueToUserConnectChoice=false 01-05 13:26:21.294 eventType=EVENT_TOGGLE_WIFI_OFF startTimeMillis=46864999 isEphemeral=false isPasspoint=false WifiStatus: isConnected=true isValidated=true lastRssi=-68 estimatedTxKbps=232527 estimatedRxKbps=110144 isStuckDueToUserConnectChoice=false NetworkDisableReason: DisableReason=15 configTemporarilyDisabled=false configPermanenttyDisabled=true bssidDisableReasons=[] 01-05 13:25:35.282 eventType=EVENT_MANUAL_CONNECT startTimeMillis=46818987 isEphemeral=false isPasspoint=false WifiStatus: isConnected=false isValidated=false lastRssi=0 estimatedTxKbps=0 estimatedRxKbps=0 isStuckDueToUserConnectChoice=false NetworkDisableReason: DisableReason=15 configTemporarilyDisabled=false configPermanentlyDisabled=true bssidDisableReasons=[]

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Type of Timestamp	Keywords	Additional Explanation	Raw Data(example)
		Wi-Fi On/Off	dumpsys wifi	wificonnectivity manager	YYYY-MM-DD THH:mm:ss.ssssss	Set WiFi disabled Set WiFi enabled	'prepareForForcedConnection': Manually change network	2023-01-05T13:26:21.606548 - Set WiFi disabled 2023-01-05T13:26:46.948977 - Set WiFi enabled 2023-01-05T13:25:58.672099 - prepareForForcedConnection: SSID="DFRC_5G" # All data is recorded 1-4 seconds late. (Same for dumpsys wifi)
			dumpsys bluetooth_	Log (only samsung)	MM-DD HH:mm:ss.sss	USER_TURN_ON BLE_STOPPED	-	05-09 21:48:27.816AdapterState Current state: BT ON, message: USER_TURN_OFF 01-01 21:13:01.401AdapterState Current state: Turning BLE OFF, message: BLE_STOPPED
		Bluetooth On/Off	manager	Enable log	MM-DD HH:mm:ss	com.android.systemui	* 'com.android.systemui': not necessarily by the user	05-22 12:40:24 Enabled due to APPLICATION_REQUEST by com.google.android.gms 05-22 12:40:24 Enabled due to APPLICATION_REQUEST by com.android.systemui
			dumpsys telecom	CallsManager- BluetoothDeviceManager	YYYY-MM-DD THH:mm:ss.ssssss	Device connected Device disconnected	'address: {BT_MAC_Address}'	2022-12-20T23:09:30.380353 - Device connected address: C8:BD:4D:98:##:## isHeadingAid: false 2022-12-20T23:30:49.298957 - Device disconnected address: C8:BD:4D:98:##:## isHeadingAid: false
		Charger Connection/Disconnect ion	dumpsys batterystats	BatteryHistory	+(HH)h(mm)m(ss)s(sss) ms (Elapsed time since reference time)	status=charging status=discharing	'plug=ac': AC charging 'plug=usb': USB charging 'plug=wireless': Wireless charging	+11h36m10s476ms (7) 059 status=charging plug=ac temp=287 volt=3870 txshare_event=0x0 online=3 current_event=0x40000001 misc_event=0x10000 +11h38m05s335ms (6) 061 status=discharging health-unknown plug=none temp=315 volt=4122 txshare_event=0x0 online=6 current_event=0x40000004 misc_event=0x10000 charge=2772 -plugged # Able to identify the type of plug
		USB Connection/Disconnect ion	dumpsys activity b	Historical broadcasts summary [foreground]	YYYY-MM-DD HH:mm:ss.ssssss	USB_PORT_CHANGED	'connected={true/fale}': USB connection/disconnection 'currentMode=utf': MTP mode (Additional research needed) #'extras: Bundle{{data}}': Varies by device availability.	#6: act=android.hardware.usb.action.USB_PORT_CHANGED flg=0x11000010 (has extras) +1ms dispatch 0 finish enq=2023-05-15 20:49:45.860 disp=2023-05-15 20:49:45.861 fin=2023-05-15 20:49:45.861 extras: Bundle[{portStatus=UsbPortStatus{connected=true, currentMode=ufp, currentPowerRole=sink, currentDataRole=device, supportedRoleCombinations=[source:host, sink:device], contaminantDetectionStatus=0, contaminantPortectionStatus=0}, port=android.hardware.usb.ParcelableUsbPort@b9e8331}]
	Anti- forensics	Factory Reset, Reboot	getprop	persist.sys.boot.reason. history ro.boot.bootreason sys.boot.reason sys.boot.reason.last	Unix Timestamp(sec)	reboot,factory_reset reboot,userrequested	'userrequested': User-requested manual reboot" 'reboot,ota': Automatic reboot due to update or other reasons 'cold': No record	# Factory Reset reboot,factory_reset,1677488147,reboot,1677488033 reboot,factory_reset reboot,factory_reset reboot  # Reboot reboot,userrequested,1677466067, reboot,factory_reset,1668480912 reboot,userrequested reboot,userrequested reboot,userrequested reboot,userrequested
	① - 3	App Deletion Information	dumpsys activity b	Historical broadcasts summary [backgroud]	YYYY-MM-DD HH:mm:ss.ssssss	PACKAGE_REMOVED	'dat=package:{pkg_name}' #The package_name is not displayed in Android 13.	#59: act=android.intent.action.PACKAGE_REMOVED dat=package:com.lguplus.navi flg=0x4000010 (has extras) +56ms dispatch +6ms finish enq=2023-05-03 19:42:21.009 disp=2023-05-03 19:42:21.065 fin=2023-05-03 19:42:21.071
		Reboot Record	dumpsys sdhms	CONFIG LIST	YYYY-MM-DD THH:mm:ss	BOOT_COMPLETED	-	87 [2023-01-17 17:33:13] 55 0 BOOT_COMPLETED
		Last Boot Time	YYYY-MM-DDTHH:mm		-	-	2023-02-27 19:08:14	
User Data (Result of user behavior)	Call ② - 1	Call Start/End (+Incoming/Outgoing, End Reason)	dumpsys telecom	Analytics:	Unix Timestamp(millisec)	Call TC@{number}	'start'Time: {start_ts}': Call start time('0' if connection fails) 'end'Time: {end_ts}': Call end time 'direction: {0UT/IN}': Call direction 'Reason: ({200 / 210}': 200 → Owner ended / 210 → Other ended	Call TC@111: startTime: 1675145236312 endTime: 1675145204795 direction: OUTGOING callTerminationReason: DisconnectCause [ Code: (LOCAL) Label: () Description: () Reason: (200, LOCAL) Tone: (27) TelephonyCause: 3/-1 ImsReasonInfo: ImsReasonInfo: :: {501 : CODE_USER_TERMINATED, 200, null}] #Omitted unnecessary parts from the original
2		Call Start/Duration (+Contact Number, Saved Contact Name)	content queryuri content:// call_log/calls	-	Unix Timestamp(millisec)	ROW: {number}	'type: {call_type}': Call type (1-5: incoming, outgoing, missed, voicemail, reject) 'duration: {num}': Call duration in seconds	Row: 0 date=1683789022642 type=5, duration=0, number=0105081####, _id=167 #Omitted unnecessary parts from the original

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Type of Timestamp	Keywords	Additional Explanation	Raw Data(example)
	Message ② - 2	SMS and MMS Send/Receive, Send Time, Content	content query uri content://	sms	Unix Timestamp (millisec)	-	'type={1 / 2}': Received / Sent	address=0108840####, date=1677580382325, body=[######] 고객님의 상품(5714570621##)이 배송되었습니다.▶인수자(위탁):문앞, type=1 #Omitted unnecessary parts from the original
				mms	Unix Timestamp (sec)	-	'msg_box={1 / 2}': Received / Sent 'sub': encoded strings 'm_size': bytes	date=1684413598, msg_box=2, read=1, sub= <i<math>^{9}\x90i\x9d`i\x8aoi</i<math>
		Wi-Fi Connection Completion/Disconnect ion	dumpsys wifi	WifiClientModeImpl (Mutiple exist)	fiConfigManager - nfigured networks Begin  MM-DD HH:mm:ss.sss / Unix Timestamp (millisec)	NETWORK_CONNECTION_ EVENT NETWORK_DISCONNECTI ON_EVENT	'reasonCode: {num}': Disconnection reason (1 Network issue / 3 User termination)	rec[10]: time=01-05 13:25:36.007 processed=ConnectingOrConnectedState org=L2ConnectingState dest=L3ProvisioningState what=NETWORK_CONNECTION_EVENT screen=on 10 false 70:5d:cc:b3:##:## nid=10 "DFRC_2.4G"WPA_PSK last="DFRC_2.4G"WPA_PSK rec[25]: time=01-05 13:27:15.376 processed=L3ConnectedState org=L3ConnectedState dest=DisconnectedState what=NETWORK_DISCONNECTION_EVENT screen=on ssid: "DESKTOP-ACING84 1013" bssid: 06:ea:56:7c:##:## reasonCode: 3
	Wi-Fi ② - 3	Past Connected Wi-Fi Information		WifiConfigManager - Configured networks Begin		SSID: "{network_name}" lastConnected: {timestamp}	'numRebootsSinceLastUse:'The number of reboots since the last use	ID: 9 SSID: "DESKTOP-ACING84 1013" PROVIDER-NAME: null BSSID: null FQDN: null HOME-PROVIDER-NETWORK: false PRIO: 0 HIDDEN: false PMF: falseCarrierId: -1SubscriptionId-1  NetworkSelectionStatus NETWORK_SELECTION_ENABLED connect choice: "DFRC_2.4G"WPA_PSK connect choice rssi: -60 hasEverConnected: true hasNeverDetectedCaptivePortal: true numAssociation 1  validatedInternetAccess shared trusted macRandomizationSetting: 3  mRandomizedMacAddress: 8a:a7:85:66:##:##  randomizedMacExpirationTimeMs: 01-06 13:26:50.749  (omitted for brevity)  lastConnected: 01-05 13:26:50.767  numRebootsSinceLastUse: 0  recentFailure: Association Rejection code: 0, last update time: 0
		Wi-Fi Connection Record		WifiMetrics		SSID="{network_name}" BSSID={##:##:##:##:##}	'durationMillis': The duration of the connection in milliseconds 'wifiState={WIFI_DISCONNECTED/ WIFI_ASSOCIATED}': Turned on from off / Network transition	startTime=05-15 15:39:50.213, SSID="DFRC_5G", BSSID=70:5d:cc:b3:48:3c, durationMillis=1066, connectionResult=1, wifiState=WIFI_DISCONNECTED, screenOn=true, useRandomizedMac=true, networkType=TYPE_WPA3, interfaceName=wlan0, isFirstConnectionAfterBoot=true #Omitted unnecessary parts from the original
		Recent Scanned SSID/BSSID		WifiNetworkScoreCache (only android12)		"{SSID}"{BSSID}	-	"####Univ AP"64:a0:e7:f9:##:##: -128 "eduroam"64:a0:e7:f9:##:##: -128
		Last Scanned Wi-Fi Information	dumpsys sem_wifi (only samsung)	scanpool:	-	SSID: {network_name} BSSID: {##:##:##:**:*#}	'timestamp:' microseconds since initial scanner detection	SSID: iptime101, BSSID: 70:5d:cc:**:**ide, capabilities: [WPA2-PSK-CCMP][RSN-PSK-CCMP][ESS][WPS], level: -90, frequency: 2437, timestamp: 1204980544256, (omitted for brevity)
		Connected Bluetooth Device Information	dumpsys bluetooth_ manager	AdapterProperties- Bonded devices, Restored devices	-	Bonded devices Retored devices	'[BR/EDR]': Bluetooth mode for continuous connections '[ DUAL ]': Devices supporting both key Bluetooth modes(LE mode and BR/EDR mode)	Bonded devices:  C8:BD:4D:98:##:## [BR/EDR] Galaxy Buds2 (2472) (omitted for brevity) (Connected) 58:A6:39:F5:##:## [ DUAL ] Galaxy Watch4 (969V) (omitted for brevity) 68:84:70:2C:##:## [BR/EDR] NIRO (Handsfree,AudioSink,AvrcpController) Restored devices: E8:E8:B7:6C:##:## [BR/EDR] CARNIVAL
	Bluetooth ② - 4	Bluetooth History	dumpsys bluetooth_ manager	Log (only samsung)	MM-DD HH:mm:ss.sss	-	'message: {USER_TURN_ON/USER_TURN_OFF}' 'BTCS-{create/destroy}' 'HFIF- {connect_audio/disconnect_audio}' # All logs do not specifically determine the phone's call connection status # If BT is turned on, the BTCS logs are recorded even if not connected to a device	12-18 14:41:35.908AdapterState Current state: BLE ON, message: USER_TURN_ON 12-21 14:33:26.762BTCS-create 12-21 23:04:50.699-HFIF-disconnect_audio([1] c8bd4d_2) #Omitted unnecessary parts from the original

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Type of Timestamp	Keywords	Additional Explanation	Raw Data(example)
	Account	Logged Account	dumpsys account	User UserInfo-		Accounts:	_	Account {name=#hc####@gmail.com, type=com.google}
	② - 5	Information (Partial)	dumpsys account	Accounts:		Accounts.		Account {name=#hc####@kakao.com, type=com.toast.android.paycoaccount}
	Location ② - 6	Last Location Information	dumpsys location	Location Provider	+(DD)d(HH)h(mm)m (ss)s(sss)ms (Elapsed time since reference time)	last location=Location	'hAcc': Altitude error(smaller value = more accurate altitude) 'vAcc': Location error(smaller value = more precise location) 'et': Fix time estimate(smaller value = faster fix acquisition)	Location Providers:     passive provider:     last location=Location[network 37.5##703,127.0##459 hAcc=14.078 et=+1d18h4m52s181ms alt=58.400001525878906 vAcc=2.0450206 [Bundle[mParcelledData.dataSize=68]] network provider:     last location=Location[network 37.5##703,127.0##459 hAcc=14.078 et=+1d18h4m52s181ms alt=58.400001525878906 vAcc=2.0450206 [Bundle[mParcelledData.dataSize=68]]] fused provider:     last location=Location[fused 37.5##703,127.0##459 hAcc=14.078 et=+1d18h4m52s181ms alt=58.400001525878906 vAcc=1.3145491] gps provider:     last location=Location[gps 37.5##963,127.0##420 hAcc=128.0 et=+1d17h48m38s807ms alt=1.9319239231975636 vAcc=74.200386 vel=0.0 sAcc=1.0611838 {Bundle[{satellites=8, maxCn0=34, meanCn0=27}]}] (Some unnecessary data omitted for brevity)
		Nearby Network Router Information (Scanned but not connected)	dumpsys wifi	wificonnectivity manager	YYYY-MM-DDT HH:mm:ss.sss	Networks filtered out due to low signal strength	'{SSID}:{MAC address}({frequency})- {RSSI}'	2023-02-28T14:37:19.014 - Networks filtered out due to low signal strength: eduroam:00:f2:8b:83:##:##(5GHz)-77 / #####Univ AP:00:f2:8b:83:##:##(5GHz)-77 / eduroam:f4:1f:c2:5b:##:##(5GHz)-90 / AT_504_HWWA9K_F2_7cb2:4c:bc:e9:c5:##:##(2.4GHz)-81 / #####Univ AP:f4:1f:c2:5b:##:#(5GHz)-90 / 666:58:d9:d5:8b:##:##(2.4GHz)-87 / PET-5G:58:86:94:a5:##:##(5GHz)-90 / SK_WiFiGIGA675E_2.4G:42:23:aa:58:##:##(2.4GHz)-86 / PET-server:58:86:94:a5:##:##(2.4GHz)-83 / beautiful2:80:ca:4b:6b:##:##(2.4GHz)-87 / SK_WiFiGIGA00DC:00:23:aa:bc:##:##(2.4GHz)-84 / SK_WiFiGIGA00DC_2.4G:42:23:aa:bc:##:##(2.4GHz)-84 / ailab-ex:58:86:94:49:##:##(2.4GHz)-86 / jinmo:e8:48:b8:9b:##:##(2.4GHz)-84
		Package Usage Summary Information	dumpsys sdhms (only samsung)	Process usage summary	MM-DD HH:mm:ss	-	-	[12-20 22:04:23 ~ 12-20 22:16:21]   uid
	Арр	Package Process End Time	dumpsys activitiy	activity exit-info	YYYY-MM-DD HH:mm.ss.sss	ApplicationExitInfo	package: {pkg_name}	package: com.google.android.apps.youtube.music Historical Process Exit for uid=10449 ApplicationExitInfo #0: timestamp=2022-12-20 23:01:00.707
	App Package	Recent Specific Period Package Foreground Duration (Battery Usage Order)	dumpsys sdhms (only samsung)	Batterystats Collector	(HH)h(mm)m(ss)s	-	-	UID   POWER   Foreground Time   Background Time   Package Name
		Package Capacity	dumpsys diskstats	log	-	-	-	Package Name: com.korail.talk Package Size=26105344 bytes Data Size=13758464 bytes Cache Size=885072 bytes Total Size=48698880 bytes # The data format after normalization
		Last Access Record of	dumpsys dbinfo	Applications Database	YYYY-MM-DDT	Database files in {path of	'ctime': Change Time(last modification	KakaoTalk2.db 15183872b ctime=2023-02-08T06:36:03Z

Primary	Secondary	Control	ADB commands	Component	The second of th	W li	A LPC and Find and a	P. D. (* 1)
Category	Category	Content	('adb shell +')	(Particular Section)	Type of Timestamp	Keywords	Additional Explanation	Raw Data(example)
		Database			HH:mmZ	db file}	time of file attributes) 'mtime': Modified Time(last modification time of file content) 'atime': Access Time(last access time of the file)	mtime=2023-02-08T06:36:03Z atime=2022-05-17T07:05:15Z
		Executed Database List		Info:	YYYY-MM-DD HH:mm.ss.sss	Most recently executed operations	-	Most recently executed operations: 9: [2022-12-20 20:57:38.073] [Pid:(2730)]executeForCursorWindow took 0ms - succeeded, sql="SELECT profileld, packageName, lastUpdated, version, theme, size FROM shortcut_and_widget_previews", path=/data/user/0/com.sec.android.app.launcher/databases/widgetpreviews.db
	11 1	Manufacturer		ro.product.manufacturer	-	-	-	samsung
	Hardware Information 3 - 1	Model Name		ro.product.model	-	-	-	SM-N971N
	0 - 1	Serial Number		ro.serialno	-	_	_	R3CN102Z8PL
		Software Country		ro.csc.country_code	-	-	-	Korea
		Android Version		ro.build.version.release	-	-	-	12
		USB Settings	getprop	persist.sys.usb.config	-	-	'mtp': Media file transfer. 'conn_gadget': USB tethering. 'adb': Debugging and command execution.	mtp,conn_gadget,adb
	os	Firmware Version		gms.version.baseband	-	-	-	N971NKOU2HWB1
	Information	Encryption Method		ro.crypto.type	-	-	-	file
	3 - 2	Bootloader Version		ro.boot.bootloader	-	-	-	N971NKSU2HWB1
Device		Security Patch Date		ro.build.version.security _patch	YYYY-MM-DD	-	-	2023-02-01
Info		UTC Time Zone		persist.sys.timezone	-	-	-	'Asia/Seoul'
3		Mobile Phone Time	date	+"%Y-%m-%d-%A"	YYYY-MM-DD HH:mm.ss	-	-	2023-02-27 19:08:14
	Package Information 3 - 3	List of All Installed Packages	pm list packages -f -u	-	-	-	'package:{the path of APK file}={pkg_name}	package:/data/app/~~1ToCTjkmvcUONc_JFNMIGA==/com.samsung.android.vtcamerasettings-
	Network	WiFi Name	settings	get global device_name	-	-	-	Galaxy Note10 5G
	Basic Information 3 - 4	Bluetooth Name, MAC Address	settings	get secure bluetooth_name get secure bluetooth_address	-	-	-	Galaxy Note10 5G 74:9E:F5:7F:##:##
	screen Information ③ - 5	Screen activation status	dumpsys wifi	WifiClientModeImpl	MM-DD HH:mm:ss.sss	screen={on/off}	'screen': Indicates screen status at a given time, not user intent.	rec[0]: time=11-21 19:26:24.292 processed=ConnectableState org=DisconnectedState dest= <null> what=CMD_RESET_SIM_NETWORKS screen=off 2 0 rec[1]: time=11-21 19:26:24.453 processed=ConnectableState org=DisconnectedState dest=<null> what=what:131372 screen=on 0 0</null></null>
	Documents	*.hwp and 16 Other Types						".hwp", ".doc", ".docx", ".ppt", ".pptx", ".xls", ".xlsx", ".pdf", ".txt", ".rtf", ".csv" ".odt", ".odp", ".ods", ".pages", ".key", ".numbers",
User Files	Videos	*.mp4 and 12 Other Types	. 11. 1 1	-all -shared -system	YYYY:MM:DD			.mp4", ".3gp", ".mkv", ".mov", ".avi", ".flv", ".wmv", ".m4v", ".mpeg", ".mpg" ".vob", ".rm", ".swf",
4	Audios	*.mp3 and 9 Other Types	adb backup	-apk -f	HH:mm:ss	-	-	".mp3", ".m4a", ".aac", ".wav", ".ogg", ".flac", "alac", ".wma", ".opus", "amr",
	Images	*.jpg and 10 Other Types						".jpg", ".jpeg", ".png", ".bmp", ".gif", ".webp", ".tiff", ".ico", ".raw", ".svg", "psd",
	Others	9 Types						".zip", ".rar", ".tar", ".gz", ".7z", ".bz2", "xz", ".iso", "tar.gz", "tar.bz2

## ■ Volatility Analysis Table (ADBFieldDetective Volatility Table) \* Blue: Option Number

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Storage Duration	Storage Capacity Limit	Reboot Resistance	Remarks
		App Start/End	dumpsys	Last 24 hour events	24h	-	0	-
		App Last Usage Information	usagestats	In-memory daily stats In-memory monthly stats	Under 1 day Under 1 month	-	0	Approximately 12 hours Approximately 10 days
	Ann		dumpsys media.camera	Camera service events log	-	100 lines	X	-
	App  ① - 1	Camera On/Off	dumpsys media.camera.work er (only samsung)	Dump of CameraServiceWorker COMMON Activity	1+ months	600+ lines	Х	-
		Call Start/End (+Recording/Speakerphone/Blue tooth Usage, End Reason)	dumpsys telecom	Historical Events:	-	20 records	X	-
		0.101	dumpsys activity	mars history (only samsung)	-	5000 Lines	X	-
		Screen On/Off	dumpsys usagestats	Last 24 hour events	24 hours	-	0	-
User		Fingerprint Registration/Deletion, Authentication Success/Failure	dumpsys fingerprint (only samsung)	log	-	20 lines	Х	-
Interaction (Direct user		Wi-Fi On/Off	dumpsys wifi	UserActionEvents:	2+ months	130+ lines	X	Additional research needed
behavior)	Device  (1) - 2	Wi-Fi On/Off	dumpsys wifi	wificonnectivity manager	-	1024 lines	X	Remove past records after reaching 1024 lines
1	O	Bluetooth On/Off	dumpsys bluetooth_	Log	1 week to 2 month (Subject to usage)	-	0	-
			manager	Enabled	-	20 lines	X	-
			dumpsys telecom	CallsManager- BluetoothDeviceManager	-	20 lines	X	-
		Charger Connection/Disconnection	dumpsys batterystats	BatteryHistory	Reset when fully charged	-	0	Further research required
		USB Connection/Disconnection	dumpsys activity b	Historical broadcasts summary [foreground]	-	300 records	X	-
	Anti- forensics	Factory Reset, Reboot	getprop	persist.sys.boot.reason.histo ry ro.boot.bootreason sys.boot.reason sys.boot.reason.last	-	-	-	Last reboot reason recorded
	① - 3	App Deletion Information	dumpsys activity b	Historical broadcasts summary [foreground]	-	300 records	X	-
		Reboot Record	dumpsys sdhms	CONFIG LIST	-	-	-	All data retained after reset
		Last Boot Time	uptime	-S	-	-	-	Latest boot time
	Call	Call Start/End (+Incoming/Outgoing, End Reason)	dumpsys telecom	Analytics:	-	100+ records	X	-
	② - 1	Call Start/Duration (+Contact Number, Saved Contact Name)	content queryuri content://	call_log/calls	-	-	0	Untile deleted from the UI
User Data	Message 2 - 2	SMS and MMS Send/Receive, Send Time, Content	content queryuri content://	sms, mms	-	-	-	Untile deleted from the UI
(Result of user	-	Wi-Fi Connection Completion/Disconnection		WifiClientModeImpl: (Mutiple exist)	-	100 records	X	-
behavior)	Wi-Fi	Past Connected Wi-Fi Information	dumpsys wifi	WifiConfigManager - Configured networks Begin 	-	-	0	-
		Wi-Fi Connection Record	]	WifiMetrics:	Before reboot (estimated)	-	X	2+ months of research
	② - 3	Recent Scanned SSID/BSSID		WifiNetworkScoreCache (only android12)	-	-	0	Before reset
		Last Scanned Wi-Fi Information	dumpsys sem_wifi	scanpool:	Before reboot (estimated)	-	х	-

Primary Category	Secondary Category	Content	ADB commands ('adb shell +')	Component (Particular Section)	Storage Duration	Storage Capacity Limit	Reboot Resistance	Remarks
34.0301)	Bluetooth	Connected Bluetooth Device Information	dumpsys bluetooth_ manager	AdapterProperties	-	-	-	All data retained after reset
	② - 4	Bluetooth History	dumpsys bluetooth_ manager	log	3+ weeks	13,000+ lines	0	Additional research needed
	Account 2 - 5	Logged Account Information (Partial)	dumpsys account	User UserInfo	-	-	0	before account logout
	Location	Last Location Information	dumpsys location	Location Provider	-	-	X	-
	② - 6	Nearby Network Router Information (Scanned but not connected)	dumpsys wifi	wificonnectivity manager	-	1024Line (overlap)	X	-
		Package Usage Summary Information	dumpsys sdhms (only samsung)	Process usage summary	1.5 hours	-	0	-
		Package Process End Time	dumpsys activitiy	activity exit-info	-	Recent 15 items per package	0	-
	App Package	Recent Specific Period Package Foreground Duration (Battery Usage Order)	dumpsys sdhms (only samsung)	Batterystats Collector	Data within 48 hours (based on dumping time)	-	0	-
	② - 7	Package Capacity	dumpsys diskstats	log	-	-	0	-
		Last Access Record of			-	-	0	
		Database Executed Database List	dumpsys dbinfo	Applications Database Info:	-	-	0	checking
	Hardware	Manufacturer		ro.product.manufacturer	-	-	O	-
	Information	Model Name	getprop	ro.product.model	-	-	O	-
	③ - 1	Serial Number		ro.serialno	-	-	Ο	-
		Software Country		ro.csc.country_code	-	_	0	_
		Android Version		ro.build.version.release	-	-	0	-
		USB Settings		persist.sys.usb.config	-	-	0	-
	OS	Firmware Version		gms.version.baseband	-	-	0	-
		Encryption Method		ro.crypto.type	-	-	0	-
	Information	Bootloader Version		ro.boot.bootloader	-	-	0	-
	3 - 2	Security Patch Date		ro.build.version.security_pat ch	-	-	0	-
Device Info		UTC Time Zone		persist.sys.timezone	-	-	0	-
3		Mobile Phone Time	date	+"%Y-%m-%d-%A"	-	-	0	-
	Package Information 3 - 3	List of All Installed Packages	pm list packages -f -u	-	-	-	0	-
	Network Basic	WiFi Name	settings	get global device_name	-	-	0	-
	Information  3 - 4	Bluetooth Name, MAC Address	settings	get secure + bluetooth_address, bluetooth_name	-	-	0	-
	screen Information 3 - 5	Screen activation status	dumpsys wifi	WifiClientModeImpl	-	100 records	Х	-
User Files	Documents Videos Audios Images Others	*.hwp and 16 Other Types  *.mp4 and 12 Other Types  *.mp3 and 9 Other Types  *.jpg and 10 Other Types  9 Types	adb backup	-all -shared -system -apk -f	-	-	0	Data unrecoverable after deletion