

netBravo



netBravo Mobile Raw Data Format

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netBravo Mobile Raw Data Format

Within the “netBravo” mobile application the owner can save to an external file the measurements made by the device.

The Android and iOS application can extract the “Broadband measurements” file. In addition, only the Android application can extract the “Cellular measurements” and the “Wi-Fi measurements” files.

All file are CSV comma separated file with the first row containing the column name and this document explain the format and the meaning of each field. Text identifier is the character “”.

Android devices save the files on external storage directory under the subdirectory. /netbravo. The external storage directory name depends on the device brand, but usually is the directory shared when connected to the host computer. (Example: '/storage/sdcard0/netbravo). Android application show the extracted file names on the user interface.

iOS devices save the CSV file into 'Application Document' directory, that is manageable only via iTunes. The file can be also shared directly inside the netBravo application using AirDrop or the tools available in the standard sharing panel.

Broadband measurements file

This file contains data from the “Broadband history” with detail about:

- Date, time and duration of tests
- Location in which the test was made
- Network related information (IP network information, network type, etc.)
- Mobile cell or Wi-Fi cell information

The extracted file name is in the form: netbravo_broadband_yyyyMMddhhMMss.csv

Next table show the file format. The application extract all the listed fields. When some property is not available on a platform (Avail. On android and Avail on iOS columns) the field is empty.

Field name	Field type	Description	Example	Android	iOS
starttime	Datetime	Date time in wich the test started in the ISO 8601 Format (yyyy-MM-dd hh:mm:ss)	2015-02-05 12:10:28	Y	Y
endTime	DateTime	Date time in wich the test ended in the ISO 8601 Format (yyyy-MM-dd hh:mm:ss)	2015-02-05 12:11:15	Y	Y
locLat	Double	the latitude	45.810104	Y	Y
locLng	Double	the longitude	8.629137	Y	Y
locAlt	Double	the altitude	210.726501	Y	Y
locBearing	Double	the bearing of the phone	34.453125	N	Y
locProvider	String	location provider (can be GPS or NETWORK)	GPS	Y	N
locAccuracy	Double	estimated accuracy in meters	10.000000	Y	Y
locSpeed	Double	the speed in meters/second	0.260000	Y	Y

locvaccuracy	Double	estimated vertical accuracy in meters	3.000000	N	Y
testhost	String	The IP address of the speed test server.	255.1.1.4	Y	Y
externalIP	String	The ip used by the device in Internet	254.1.1.4	Y	Y
deviceIP	String	The local lan device IP address	192.168.1.4	Y	Y
gatewayIP	String	The ip address of the gateway, if present, for local network	192.168.1.1	Y	Y
netType	String	WIFI or GSM	GSM	Y	Y
gsm_netType	String	The cellular network type if NetType = 'GSM'. See the cellular type possible values	HDPSA	Y	Y
gsm_cid	Int	if NetType = 'GSM': CID 28-bit UMTS Cell Identity described in TS 25.331, 0..268435455, Integer.-1 if unknown. Used by GSM, and WCDMA types.	6584549	Y	N
gsm_lac	Int	if NetType = 'GSM': 16-bit Location Area Code, 0..65535, Integer.-1 if unknown. Used by GSM, and WCDMA types	15065	Y	N
gsm_mcc	Int	if NetType = 'GSM': 3-digit Mobile Country Code, 0..999, Integer -1 if unknown. Used by GSM, WCDMA, LTE (If available on the device).	222	Y	Y
gsm_mnc	Int	if NetType = 'GSM': 2 or 3-digit Mobile Network Code, 0..999, Integer.-1 if unknown. Used by GSM, WCDMA, LTE (If available on the device).	10	Y	Y
gsm_psc	Int	if NetType = 'GSM': 9-bit UMTS Primary Scrambling Code described in TS 25.331, 0..511, Integer.-1 if unknown. Used by GSM, WCDMA. (If available on the device).	360	Y	N
gsm_cdmabsid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': base Station Id 0..65535, Integer.-1 if unknown. Used by CDMA . (If available on the device).	34251	Y	N

gsm_cdmalat	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': base station latitude, which is a decimal number as specified in 3GPP2 C.S0005-A v6.0. It is represented in units of 0.25 seconds and ranges from -- 1296000 to 1296000, both values inclusive (corresponding to a range of - 90 to +90 degrees). Integer.-1 if unknown. Used by CDMA. (If available on the device).	551067	Y	N
gsm_cdmalng	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': Base station longitude, which is a decimal number as specified in 3GPP2 C.S0005-A v6.0. It is represented in units of 0.25 seconds and ranges from - 2592000 to 2592000, both values inclusive (corresponding to a range of - 180 to +180 degrees). Integer.- 1 if unknown.Used by CDMA.	10625222	Y	N
gsm_cdmanid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': Network Id 0..65535, Integer.-1 if unknown. Used by CDMA.	4	Y	N
gsm_cdmasid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': System Id 0..32767, Integer.-1 if unknown. Used by CDMA.	23	Y	N
gsm_lteci	Int	if NetType = 'GSM' and gsm_cellType = 'LTE': 28-bit Cell Identity, Integer.-1 if unknown. Used by LTE.	6584549	Y	N
gsm_ltepci	Int	if NetType = 'GSM' and gsm_cellType = 'LTE': Physical Cell Id 0..503, Integer.-1 if unknown. Used by LTE.	10071	Y	N
gsm_ltetac	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': 16-bit Tracking Area Code, Integer.-1 if unknown. Used by LTE.	12089	Y	N
wifi_freq	Int	The frequency in MHz during the test	2450	Y	N
wifi_lnspeed	Int	The connection speed with the hotspot in Mb/s duringm the test speed	54	Y	Y
wifi_bssid	String	if NetType = 'WIFI': the base station device identifier	00:15:63:10:21:00	Y	Y

wifi_ssid	String	if NetType = 'WIFI': the network name	A hash of the actual SSID, for privacy reasons	Y	Y
wifi_hiddenssid	Bool	if NetType = 'WIFI': true if this network does not broadcast its SSID, so an SSID-specific probe request must be used for scans.	True/false	Y	Y
wifi_capabilities	String	if NetType = 'WIFI': describes the authentication, key management, and encryption schemes supported by the access point	[WPA-PSK-TKIP][ESS]	Y	N
wifi_macaddress	String	if NetType = 'WIFI': device MAC address	04:46:35:78:72:B8	Y	N
wifi_networkid	Int	if NetType = 'WIFI': Each configured network has a unique small integer ID	3	Y	N
wifi_opened	Bool	if NetType = 'WIFI': true if the network requires no authentication	True/false	Y	N
Pingtest_type	String	Connection type to compute the latency	ICMP or TCP	Y	Y
pingtest_besttime	Int	best response time in nanoseconds	2946556791	Y	Y
pingtest_avgtime	Int	average response time in nanoseconds	3436556791	Y	Y
pingtest_numofpings	Int	Number of ping run on the test	3	Y	Y
down_speed	Int	Download average speed in bps	182502	Y	Y
down_nanosec	Long	Download speed duration in nanoseconds	38925175249	Y	Y
down_bytes	Long	Number of transferred bytes during download speed test	22566592	Y	Y
down_threads	Int	Number of threads used during download speed test	3	Y	Y
down_rxtraffic	Long	Number of total number of bytes received by the device in the 500 milliseconds preceding the download test	1024	Y	N
down_txtraffic	Long	Number of total number of bytes transmitted by the device in the 500 milliseconds preceding the download test	1024	Y	N
up_speed	Int	Upload average speed in bps	182502	Y	Y
up_nanosec	Long	Upload speed duration in nanoseconds	38925175249	Y	Y
up_bytes	Long	Number of transferred bytes during upload speed test	22566592	Y	Y

up_threads	Int	Number of threads used during upload speed test	3	Y	Y
up_rxtraffic	Long	Number of total number of bytes received by the device in the 500 milliseconds preceding the upload test	1024	Y	N
up_txtraffic	Long	Number of total number of bytes transmitted by the device in the 500 milliseconds preceding the upload test	1024	Y	N
neutrality_testtype_code_1	Int	Code field of the netBravo network protocol lookup table	2	Y	Y
neutrality_testtype_description_1	String	Description field of the netBravo network protocol lookup table	SIP	Y	Y
neutr_attempts_1	Int	Number of attempts until the test is considered failed	5	Y	Y
neutr_success_1	Boolean	True if the test succeeded	True	Y	Y
neutr_status_1	String	More specific results of the test	'The expected response on protocol UDP port 89766 was not received'	Y	Y
neutrality_testtype_code_2..n	int	Repeat the previous structure because more test will be added dynamically			
neutrality_testtype_description_2..n	String	Repeat the previous structure because more test will be added dynamically			
neutr_attempts_2..n	Int	Repeat the previous structure because more test will be added dynamically			
neutr_success_2..n	Boolean	Repeat the previous structure because more test will be added dynamically			
neutr_status_2..n	String	Repeat the previous structure because more test will be added dynamically			

Cellular measurements file

This file contains data from background mobile network measurement process and contains:

- Date and time of measurements
- Location in which the measurement was made
- Mobile cell information
- Mobile Signal strength information

The extracted file name is in the form: netbravo_cell_yyyyMMddhhMMss.csv

Next table show the file format. The application extract all the listed fields. When some property is not available on a particular cellular network (GSM, HDMA, WHDMA e LTE has different properties).

Field name	Field type	Description	Example
datetime	Datetime	The time at which the measurement was made	2014-10-31 11:56:55.0000000
netType	String	The cellular network type if NetType = 'GSM'. See the cellular type possible values	HDPSA
cellType	String	if NetType = 'GSM': Can be: GSM, CDMA, LTE, WCDMA	CDMA
cid	Int	if NetType = 'GSM': CID 28-bit UMTS Cell Identity described in TS 25.331, 0..268435455, Integer.-1 if unknown. Used by GSM, and WCDMA types.	6584549
lac	Int	if NetType = 'GSM': 16-bit Location Area Code, 0..65535, Integer.-1 if unknown. Used by GSM, and WCDMA types	15065
mcc	Int	if NetType = 'GSM': 3-digit Mobile Country Code, 0..999, Integer -1 if unknown. Used by GSM, WCDMA, LTE (If available on the device).	222
mnc	Int	if NetType = 'GSM': 2 or 3-digit Mobile Network Code, 0..999, Integer.-1 if unknown. Used by GSM, WCDMA, LTE (If available on the device).	10
psc	Int	if NetType = 'GSM': 9-bit UMTS Primary Scrambling Code described in TS 25.331, 0..511, Integer.-1 if unknown. Used by GSM, WCDMA. (If available on the device).	360
cdmabsid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': base Station Id 0..65535, Integer.-1 if unknown. Used by CDMA . (If available on the device).	34251

cdmalat	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': base station latitude, which is a decimal number as specified in 3GPP2 C.S0005-A v6.0. It is represented in units of 0.25 seconds and ranges from --1296000 to 1296000, both values inclusive (corresponding to a range of -90 to +90 degrees). Integer.-1 if unknown. Used by CDMA. (If available on the device).	551067
cdmalng	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': Base station longitude, which is a decimal number as specified in 3GPP2 C.S0005-A v6.0. It is represented in units of 0.25 seconds and ranges from -2592000 to 2592000, both values inclusive (corresponding to a range of -180 to +180 degrees). Integer.-1 if unknown.Used by CDMA.	10625222
cdmanid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': Network Id 0..65535, Integer.-1 if unknown. Used by CDMA.	4
cdmasid	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': System Id 0..32767, Integer.-1 if unknown. Used by CDMA.	23
lteci	Int	if NetType = 'GSM' and gsm_cellType = 'LTE: 28-bit Cell Identity, Integer.-1 if unknown. Used by LTE.	6584549
ltepci	Int	if NetType = 'GSM' and gsm_cellType = 'LTE: Physical Cell Id 0..503, Integer.-1 if unknown. Used by LTE.	10071
ltetac	Int	if NetType = 'GSM' and gsm_cellType = 'CDMA': 16-bit Tracking Area Code, Integer.-1 if unknown. Used by LTE.	12089
localt	Double	the latitude	45.810104
loclng	Double	the longitude	8.629137
localt	Double	the altitude	210.726501
locbearing	Double	the bearing of the phone	34.453125
locprovider	String	location provider (can be GPS or NETWORK)	GPS
locaccuracy	Double	estimated accuracy in meters	10.000000
locspeek	Double	the speed in meters/second	0.260000
locvaccuracy	Double	estimated vertical accuracy in meters	3.000000
asu	Int	signal level as an ASU value	12
dbm	Int	the signal strength as dBm	-103
level	Int	the signal quality level	11
cdmadb	Int	CDMA RSSI value	-1
cdmaecio	Int	CDM Ec/Io value in dB*10	-1
evdodbm	Int	EVDO RSSI value in dBm	-89
evdoecio	Int	EVDO Ec/Io value in dB*10	

evdosnr	Int	the signal to noise ratio	
ltetmadv	Int	the timing advance value for LTE	
lteCqi	Int	Channel quality indicator	
lteRsrp	int	Reference signal received power	

WiFi measurements file

This file contains data from background Wi-Fi hotspots measurement process and contains:

- Date and time of measurements
- Location in which the measurement was made
- Hotspot Wi-Fi information
- Wi-Fi Signal strength information

The extracted file name is in the form: netbravo_wifi_yyyyMMddhhMMss.csv

Next table show the file format.

Field name	Field type	Description	Example
datetime	Datetime	The time at which the measurement was made	2014-10-31 11:56:55.0000000
bssid	String	the base station device identifier	00:15:63:10:21:00
ssid	String	the network name	A hash of the actual SSID, for privacy reasons
hiddenssid	Bool	true if the SSID is not being broadcast	True/false
capabilities	String	describes the authentication, key management, and encryption schemes supported by the access point	[WPA-PSK-TKIP][ESS]
macaddress	String	device MAC address	04:46:35:78:72:B8
networkId	Int	Each configured network has a unique small integer ID	3
opened	Bool	true if the network requires no authentication	True/false
locLat	Double	the latitude	45.810104
locLng	Double	the longitude	8.629137
locAlt	Double	the altitude	210.726501
locBearing	Double	the bearing of the phone (actually not available)	34.453125
locProvider	String	location provider (can be GPS or NETWORK)	GPS
locAccuracy	Double	estimated accuracy in meters	10.000000
locSpeed	Double	the speed in meters/second	0.260000
locVAccuracy	Double	estimated vertical accuracy in meters (actually not available)	3.000000
freq	Int	frequency in kHz of the Wi-Fi channel used	2462
lnkSpeed	Int	the link speed in Mb/s during the measurement (available when the wifi is connected)	39
rsSI	Int	connection power in dBm	-78
level	Int	connection quality level	20

NETWORK PROTOCOL LOOKUP TABLE

1	ICMP	
2	SIP	
3	FTP	
4	POP	
5	SMTP	
6	IMAP	
7	DNS	
8	IPP	
9	HTTP	
10	MDNS	
11	NTP	
12	NETBIOS	
13	NFS	
14	SSDP	
15	BGP	
16	SNMP	
17	XDMCP	
18	SMB	
19	SYSLOG	
20	DHCP	
21	PostgreSQL	
22	MySQL	
23	TDS	
24	DirectDownloadLink	
25	I23V5	
26	AppleJuice	
27	DirectConnect	
28	Socrates	
29	WinMX	
30	VMware	
31	PANDO	
32	Filetopia	
33	iMESH	
34	Kontiki	
35	OpenFT	
36	Kazaa/Fasttrack	
37	Gnutella	
38	eDonkey	
39	Bittorrent	

40	OFF	
41	AVI	
42	Flash	
43	OGG	
44	MPEG	
45	QuickTime	
46	RealMedia	
47	Windowsmedia	
48	MMS	
49	XBOX	
50	QQ	
51	MOVE	
52	RTSP	
53	Feidian	
54	Icecast	
55	PPLive	
56	PPStream	
57	Zattoo	
58	SHOUTCast	
59	SopCast	
60	TVAnts	
61	TVUplayer	
62	VeohTV	
63	QQLive	
64	Thunder/Webthunder	
65	Soulseek	
66	GaduGadu	
67	IRC	
68	Popo	
69	Jabber	
70	MSN	
71	Oscar	
72	Yahoo	
73	Battlefield	
74	Quake	
75	VRRP	
76	Steam	
77	HalfLife2	
78	World of Warcraft	
79	Telnet	
80	STUN	

81	IPSEC	
82	GRE	
83	IGMP	
84	EGP	
85	SCTP	
86	OSPF	
87	IP in IP	
88	RTP	
89	RDP	
90	VNC	
91	PCAnywhere	
92	SSL	
93	SSH	
94	USENET	
95	MGCP	
96	IAX	
97	TFTP	
98	AFP	
99	StealthNet	
100	Aimini	
101	Truphone	
102	ICMPv6	
103	DHCPv6	
104	Armagetron	
105	CrossFire	
106	Dofus	
107	Fiesta	
108	Florensia	
109	Guildwars	
110	HTTP Application Activesync	
111	Kerberos	
112	LDAP	
113	MapleStory	
114	msSQL	
115	PPTP	
116	WARCRAFT3	
117	World of Kung Fu	
118	MEEBO	
119	FaceBook	
120	Twitter	
121	DropBox	

122	Gmail	
123	Google Maps	
124	YouTube	
125	Skype	
126	Google	
127	DCE RPC	
128	NetFlow_IPFIX	
129	sFlow	
130	HTTP Connect (SSL over HTTP)	
131	HTTP Proxy	
132	Netflix	
133	Citrix	
134	CitrixOnline/GotoMeeting	
135	Apple (iMessage, FaceTime...)	
136	Webex	
137	WhatsApp	
138	Apple iCloud	
139	Viber	
140	Apple iTunes	
141	Radius	
142	WindowsUpdate	
143	TeamViewer	
144	Tuenti	
145	LotusNotes	
146	SAP	
147	GTP	
148	UPnP	
149	LLMNR	
150	RemoteScan	
151	Spotify	
152	H323	
153	OpenVPN	
154	NOE	
155	CiscoVPN	
156	TeamSpeak	
157	Tor	
158	CiscoSkinny	
159	RTCP	
160	RSYNC	
161	Oracle	

162	Corba	
163	UbuntuONE	
164	CNN	
165	Wikipedia	
166	Whois-DAS	
167	Collectd	
168	Redis	
169	ZeroMQ	
170	Megaco	