

Analysis of Device Categories and Acquisition of Network Parameters

1. Types of Devices Included:

- iPhone

2. Data Collected:

Understanding and collecting the following parameters will be important in identifying and diagnosing problems related to mobile networks:

- International Mobile Equipment Identity (IMEI) Number:
 - Unique identifier given to each mobile phone 15 digit in length Its importance is in tracing or locking the mobile if stolen.
 - **IMEI Number :35 307669 747160 8**
- MAC Address, Media Access Control Address:
 - A unique hardware identifier for network interfaces in Wi-Fi communications.
 - **MAC Address: 94:5C:9A:F2:7D:38**
- Internet Protocol Address (IP Address):
 - The address assigned to a device connected to the internet, which is useful in identifying or identifying network activities.
 - **IP Address: 4A:6B:A2:26:BE:8B (Airtel 5G)**
- Service Provider/Brand:
 - That is the cellular service provider, for example, AT&T, Verizon. Knowing the operator can sometimes be useful in solving network-specific problems.
 - **Airtel**
- Network Type :
 - Says what generation and type of network a device is connected to: 5G is much faster, older varieties, such as 4G, may be slower.
 - **5G**

- Signal Strength (Quantified in dBm):
 - Shows the strength of the network signal, typically between -30 dBm (excellent) and -110 dBm (poor).
 - **Signal Strength : -93DBM**
- Download/Upload Bandwidth:
 - These values determine the rate of uploading or downloading data over the internet, and therefore signify a network's performance.
 - **Bandwidth: 20MHz**
- Mobile Location Information (LAC and CID):
 - The Location Area Code (LAC) and Cell ID (CID) serve to pinpoint the position of the associated cell tower, which is **beneficial** for monitoring the geographical reach of the network.
 - **Mobile Location Information :55357**

3. Setup Entering Field Test Mode Procedure:

The access to the "Field Test Mode" is device-specific, but the idea is to access the main network diagnostics

- About iPhone Devices:

Steps taken:

1. Input ``*3001#12345#*` and dial Call to access *Field Test Mode*.
2. Informations on signal strength, network operator and cell ID can be found in "Serving Cell Info".
3. Take pictures of the essential network parameters and then preserve them.
4. Precise Meaning of Key Parameters:

Screenshots Requirement:

Field Test Mode:

10:14

◀ Phone

4G 43

FTM Dashboard

Carrier:

AirTel

Capabilities:

5G NSA

TAC:

55357

Network PLMN:

404 94

Phone Number:

+919778393574

LTE

Band

1

Bandwidth

20 MHz

RSRP

-93 dBm

Dashboard