

Testing Your WIFI Connection

The Testing Your WIFI Connection process guides users in diagnosing wireless network stability on Android handheld devices using a third-party application. Its primary purpose is to help identify signal drops and channel congestion that may disrupt real-time communication with the server. This article is intended for OPSCOM administrators and field enforcement staff.

Setup and Configuration

To accurately test your network connection, you must install a specific third-party diagnostic application on your Android handheld device.

Admin Side:

1. Open the Google Play Store on your Android handheld device.
2. Search for and download **WifiAnalyzer (open-source)** by VREM Software Group. This is a free utility application.

Using this Feature

Administrators and staff can use this application to take a precise measurement of their Wi-Fi strength and identify the source channel to aid in troubleshooting.

Monitoring Wi-Fi Strength

1. Open the **WifiAnalyzer** application on your device.

2. **Tap** the hamburger icon (three parallel lines) located at the top left of the screen to open the main menu.
3. **Tap Access Points** to view a graphic representation of your available networks and their current signal strengths.
4. **Tap** the hamburger icon again and select **Channel Graph** to view a visual representation of channel congestion and overlapping network signals.

Visual Cues & Status Indicators

- **Signal Strength Graph:** The signal strength is visually represented as a column of color rising from the bottom of the graph, typically ranging from -100 dBm to -20 dBm.
 - **Reading dBm Values:** Signal strength is measured in negative numbers. The smaller the negative number, the higher (stronger) the signal. Keep in mind that a value closer to zero (e.g., -20 dBm) indicates a much better signal than a lower number (e.g., -100 dBm).
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Best Practices & Considerations

- **Monitor signal fluctuations throughout the day.** It is highly recommended to check the app periodically, especially when drops in signal occur. Observing how much the signal goes up and down can help pinpoint exactly when connectivity drops.
- **Check channel congestion.** Pay close attention to how many devices or networks are broadcasting on the exact same channel. Too many devices trying to access the same channel simultaneously will create interference and have a severe adverse effect on your connectivity strength.

- **Capture data for support. Please provide screen captures of both the Access Points and Channel Graph screens when contacting OPSCOM support.** Having a visual record of the exact dBm reading for your Wi-Fi source and the channel congestion allows the support team to assist you much more effectively.

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