Weak Wi-Fi and its effects

> The How weak Wi-Fi can affect OPSCOM guide outlines how network connectivity impacts the application. Its primary purpose is to help administrators and field officers troubleshoot Wi-Fi issues, understand how data synchronizes, and ensure offline records are properly uploaded to the main server. This article is intended for OPSCOM administrators and field enforcement personnel.

Setup and Configuration

Data synchronization occurs natively within the application, but administrators can customize how frequently the device attempts to auto-sync when idle.

Admin Side: Administrators or supervisors can adjust the idle Auto-Sync time interval (or disable it entirely) by accessing the **System Settings** menu on the handheld device.

User Side (Enforcement Staff): Officers must ensure the device's Wi-Fi receiver is turned on and connected to a reliable network when starting a shift, or when returning to a dispatch area to upload offline data.

Using this Feature

Enforcement personnel do not need a constant connection to issue violations, but they must interact with the application's synchronization tools to push that data to the main database.

Testing Connectivity in the Field

If you suspect you have lost your Wi-Fi connection while on patrol:

1. Open the native web browser on your tablet device.
2. Attempt to load any standard public web page. If the browser cannot connect to the website, the device does not have sufficient signal strength to connect with the OPSCOM server.

Manually Synchronizing Data

When you return to an area with known Wi-Fi coverage (like the main office or a connected vehicle), you can manually push your offline data.

1. Tap **Synchronize Data** from the main menu of the OPSCOM application. The synchronization process will begin immediately.

Understanding Auto-Sync

The application is designed to automatically sync in three specific instances to protect your data:

- **Startup:** A sync is performed automatically when the app is launched, provided you have connectivity. *(Note: If you have poor connectivity upon startup, the app will display an error and will not allow you to log in).*
- **Logout:** The unit will run a final auto-sync when you use the formal logout button.
- **Idle:** The unit will auto-sync when the device has been completely idle for the duration specified in the system settings.

> **Idle Timer Behavior** The idle Auto-Sync is a precaution to ensure syncing happens when an officer has not manually synced in a while. If your idle setting is 15 minutes, the unit must remain completely untouched for 15 minutes. If the tablet is used for any task during that time, the 15-minute timer restarts.

Visual Cues and Status Indicators

- **Data Available Warning:** When offline data is waiting to be uploaded, a red flashing message will appear at the top of the screen indicating **Data available to sync:** followed by the number of violations and vehicles stored locally.
- **Sync Successful:** Once a proper sync has occurred and all data is transferred to the main server, the red data available warning will disappear from the screen.

Best Practices and Considerations

- **Understand environmental signal interference: Be aware that structural objects, concrete, brick, and load-bearing walls severely affect signal strength.** Keep this in mind if patrolling interiors such as parking garages or underground levels, as you will likely lose connection and need to sync later.
- **Perform an end-of-shift sync: Always return to the main menu and allow a sync, or force a manual sync, before logging out for the day at the end of your shift.** This guarantees all field data is securely uploaded.

- **Log out properly: Do not simply put the app in the background, close it from the recent apps menu, or power off the unit while it is running.** You must log out of the application properly using the interface to trigger the final logout auto-sync.
- **Consider electrical interference: Be aware that devices operating on the 2.4GHz frequency (such as certain appliances and older electronics) can interfere with Wi-Fi signals.** While not the most common cause of complete signal loss, it is worth considering if you repeatedly fail to sync in a specific indoor location.

> **Don't Panic!** If you cannot sync immediately due to a dead zone, it is not a critical issue. The OPSCOM app is designed to store your work locally. As long as you perform a manual sync when you return to an area with better connectivity, your data is safe.

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