

Based on the **cahier des charges** for your geolocation and fleet management platform, here is an exhaustive list of notifications, alerts, and the WebSockets needed for effective management, along with a classification of which notifications should be sent to the admin, clients, or both.

1. Types of Notifications & Alerts

A. Admin Notifications:

1. **Boîtier de suivi désactivé** – Alert in case a tracking device on a vehicle is deactivated.
2. **Vitesse excessive** – Notification when a vehicle exceeds a set speed limit.
3. **Niveau de carburant bas** – Alert when a vehicle's fuel level is low.
4. **Notifications d'événements** – Trigger alerts for specific events like hood opening or tracking device disconnection.
5. **Notifications de maintenance** – Alerts for vehicle maintenance (e.g., insurance, oil changes, and vignette deadlines).
6. **Paiement en attente** – Notification of pending payments.
7. **Commande d'envoi** – Ability to send commands to tracking devices via integration (e.g., Teltonika commands).
8. **Gestion des utilisateurs et des GPS** – Administrative notifications for adding, modifying, or removing users, vehicles, and GPS devices.

B. Client Notifications:

1. **Consultation d'historique et de données des véhicules** – Updates for clients regarding their vehicles' status, history, and data changes.
2. **Vitesse excessive** – Alert for clients when their vehicles exceed a speed limit.
3. **Niveau de carburant bas** – Notifications regarding low fuel levels in client vehicles.
4. **Notifications de maintenance** – Reminders for clients about upcoming vehicle maintenance like insurance, oil changes, and vignette expiration.
5. **Paiement en attente** – Notifications about pending payments or dues related to vehicle services.
6. **Commandes aux boîtiers** – Clients can also send specific commands to their vehicle's GPS units (e.g., requests for IMEI, delete records).
7. **Modification des informations de véhicules** – Notifications about successful or failed attempts to modify vehicle information.

C. Shared Notifications (Admin & Client):

1. **Rapports d'événements** – Notifications for both clients and admins about event reports such as speeding violations or fuel consumption.
2. **Notifications de paiement** – Both the client and admin receive payment-related alerts.

3. **Ouverture du capot, désactivation du boîtier** – Specific alerts triggered for critical events like hood opening or device tampering.
-

2. WebSocket Endpoints for Real-Time Notifications

To ensure efficient notification delivery, here are the suggested WebSocket channels and events:

A. WebSockets for Admin:

1. **/admin/boitier-desactivation** – Notification when a tracking device is deactivated.
2. **/admin/vehicle-alerts** – For events such as speeding or low fuel alerts.
3. **/admin/maintenance-alerts** – Alerts for upcoming vehicle maintenance.
4. **/admin/pending-payments** – Real-time updates on pending payments.
5. **/admin/gps-management** – Notifications related to GPS management tasks (add, modify, or delete GPS devices).

B. WebSockets for Clients:

1. **/client/vehicle-status** – Real-time updates on the vehicle's current status and modifications.
2. **/client/vehicle-alerts** – Speeding or fuel level alerts specific to the client's fleet.
3. **/client/maintenance-notifications** – Notifications regarding scheduled or overdue vehicle maintenance.
4. **/client/payment-notifications** – Real-time updates for clients on their pending payments.
5. **/client/device-commands** – Real-time feedback on commands sent to vehicle tracking devices.

C. Shared WebSockets (Admin & Clients):

1. **/notifications/vehicle-events** – Event reports accessible to both admin and clients for violations, consumption, and other critical vehicle data.
 2. **/notifications/payment-alerts** – Shared channel for real-time payment alerts and updates.
-

3. Notification Delivery for Different Roles

- **Admin-only:** Boîtier désactivé, gestion des utilisateurs, gestion des GPS, envoi de commandes spécifiques aux GPS.
- **Client-only:** Notifications sur l'historique, consultations des véhicules, commandes à distance.

- **Both Admin and Client:** Alertes d'événements, alertes de paiement, maintenance notifications.