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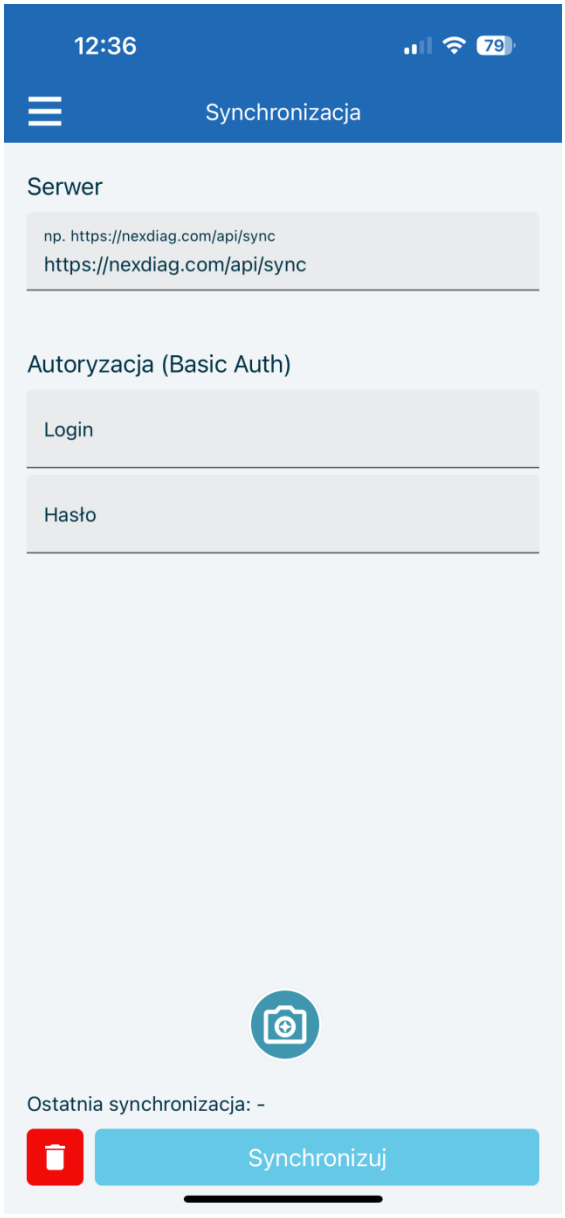
KOMUNIKACJA API

Informacje ogólne

API umożliwia komunikację oraz przesłanie danych z aplikacji NexPTG do serwera klienta. W celu wysyłki danych, należy po stronie serwera zaimplementować **RESTful Web Service** z metodą **POST**, która pozwoli na przekazywanie danych z aplikacji do serwera np. https://nexdiag.com/api/sync oraz przetworzy je według wcześniej zdefiniowanej logiki. Dane będą odbierane w formacie **application/json**, który jest powszechnie stosowany do przesyłania struktury danych między aplikacjami.

Komunikację API można dodatkowo zabezpieczyć poprzez dodanie na serwerze **Basic Authentication**, czyli zabezpieczenie dostępu do zasobów poprzez przesyłanie danych uwierzytelniających (nazwy użytkownika oraz hasła) w nagłówku żądania http.



Jak przesłać dane?

Aby przesłać dane z aplikacji NexPTG do serwera, należy wejść w zakładkę **Synchronizacja** a następnie wpisać adres serwera oraz nazwę użytkownika oraz hasło (jeśli na serwerze zaimplementowano Basic Authentication). Dane są wysyłane przyrostowo, czyli tylko najnowsze dane, które zostały zapisane od ostatniej synchronizacji zostają wysyłane. Aplikacja zapamiętuje raz zapisany adres oraz dane uwierzytelniające. W systemie **Android** synchronizacja następuje automatycznie po każdym zapisaniu raportu lub historii pomiarów. W systemie **iOS** synchronizację można wykonać tylko ręcznie.

Komunikaty podczas synchronizacji

200 – Synchronizacja przebiegła pomyślnie

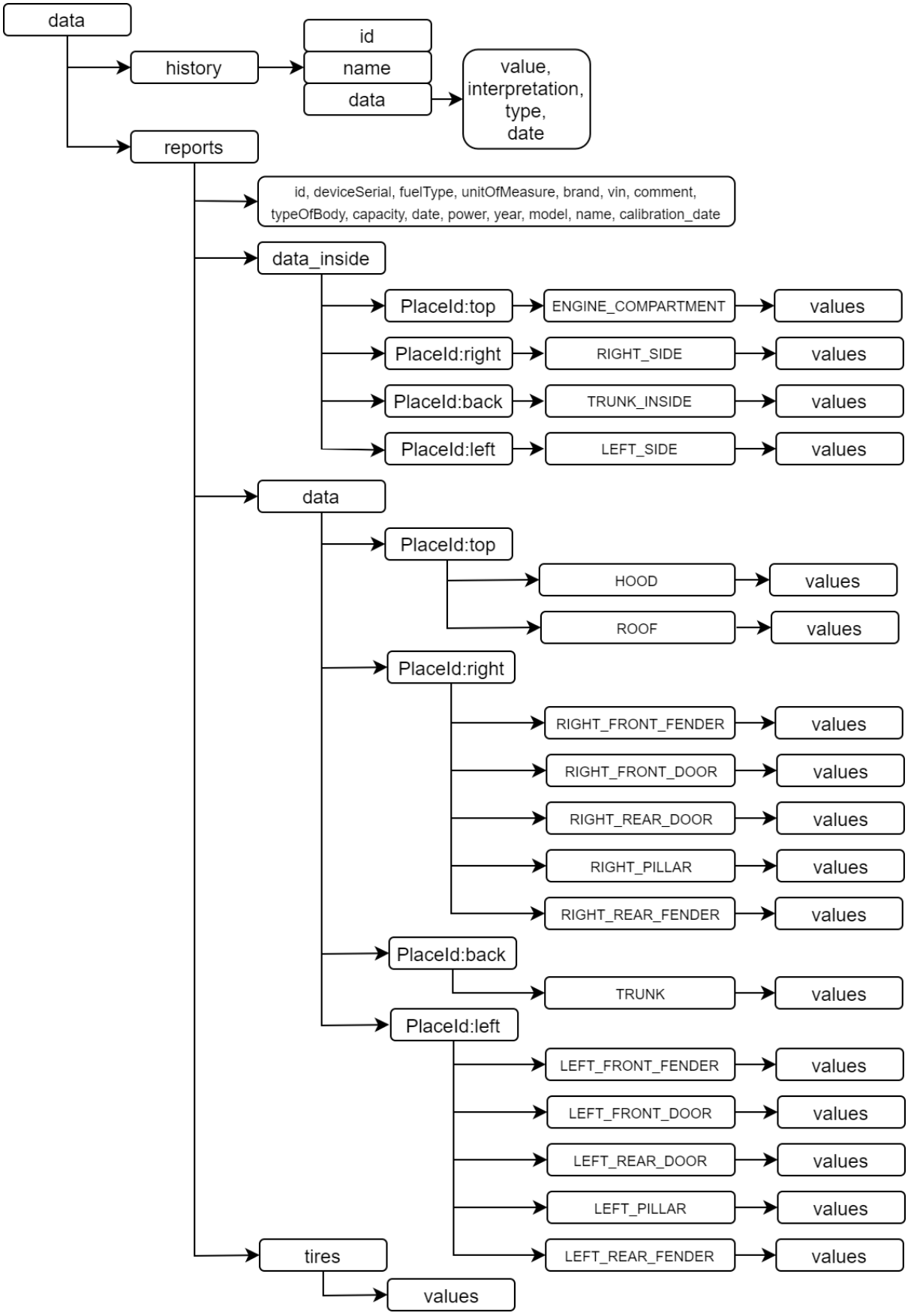
400 – Błąd

403 – Błąd autoryzacji

404 – Adres API jest niepoprawny

500-599 – Błąd serwera

Struktura wysyłanych danych



Jakie dane są przesyłane podczas synchronizacji?

history – historia pomiarów (id, nazwa, pomiary)

reports – dane umieszczone w raporcie. Typ reports dzieli się na:

- dane ogólne takie jak id – numer raportu, deviceSerial – numer seryjny urządzenia itd.
- data_inside – pomiary wewnętrzne w raporcie
- data – pomiary zewnętrzne w raporcie
- tires – informacje o oponach umieszczone w raporcie

Przykładowa synchronizacja

{"data":
{"history":[
{"id":1,"name":"General","data":[
{"value":656,"interpretation":4,"type":"Zn","date":1702629359},
{"value":233,"interpretation":2,"type":"Al","date":1702629357},
{"value":105,"interpretation":1,"type":"Fe","date":1702629353},
{"value":456,"interpretation":3,"type":"Zn","date":1702629350}]}],

"reports":[
{"id":56,"name":"Report","date":1702629560,"calibrationDate":1701264763,"deviceSerialNumber":"18416 Professional", "model":"Mondeo","brand":"Ford","typeOfBody":"SEDAN", "capacity":"105", "power":"1999","vin":"","fuelType":"Diesel","year":"2010", "unitOfMeasure":"µm","extraFields":[],"comment":"Comment in report",

"data":[
{"placeId":"left","data":[
{"type":"**LEFT_FRONT_FENDER**","values":[
{"value":"375","interpretation":3,"type":"Al","timestamp":1702629432,"position":1}]},
{"type":"**LEFT_FRONT_DOOR**","values":[
{"value":"110","interpretation":1,"type":"Al","timestamp":1702629434,"position":1},
{"value":"108","interpretation":1,"type":"Al","timestamp":1702629435,"position":2}]},
{"type":"**LEFT_REAR_DOOR**","values":[
{"value":"96","interpretation":1,"type":"Fe + Zn","timestamp":1702629437,"position":1}]},
{"type":"**LEFT_PILLAR**","values":[
{"value":"427","interpretation":3,"type":"Fe","timestamp":1702629440,"position":1}]},
{"type":"**LEFT_REAR_FENDER**","values":[
{"value":"108","interpretation":1,"type":"Fe","timestamp":1702629443,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629444,"position":2}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_FRONT_FENDER**","values":[
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629472,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629473,"position":2}]},
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{"value":"425","interpretation":3,"type":"Fe","timestamp":1702629468,"position":1}]},

{"type":"**RIGHT_REAR_DOOR**","values":[
{"value":"213","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":1},
{"value":"211","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":2}]},
{"type":"**RIGHT_PILLAR**","values":[
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629459,"position":1}]},
{"type":"**RIGHT_REAR_FENDER**","values":[
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629455,"position":1},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629456,"position":2},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629457,"position":3}]}]},

{"placeId":"top","data":[
{"type":"**HOOD**","values":[
{"value":"107","interpretation":1,"type":"Fe","timestamp":1702629422,"position":1},
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629423,"position":2}]},
{"type":"**ROOF**","values":[
{"value":"217","interpretation":2,"type":"Fe + Zn","timestamp":1702629426,"position":1},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629427,"position":2},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629428,"position":3}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK**","values":[
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":1},
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":2}]}]}],

"dataInside":[
{"placeId":"left","data":[
{"type":"**LEFT_SIDE**","values":[
{"value":"213","interpretation":3,"type":"Fe + Zn","timestamp":1702629484,"position":1}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_SIDE**","values":[
{"value":"638","interpretation":5,"type":"Fe","timestamp":1702629495,"position":1}]}]},
{"placeId":"top","data":[
{"type":"**ENGINE_COMPARTMENT**","values":[
{"value":"105","interpretation":2,"type":"Fe","timestamp":1702629480,"position":1}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK_INSIDE**","values":[
{"value":"382","interpretation":4,"type":"Al","timestamp":1702629488,"position":1}]}]}],

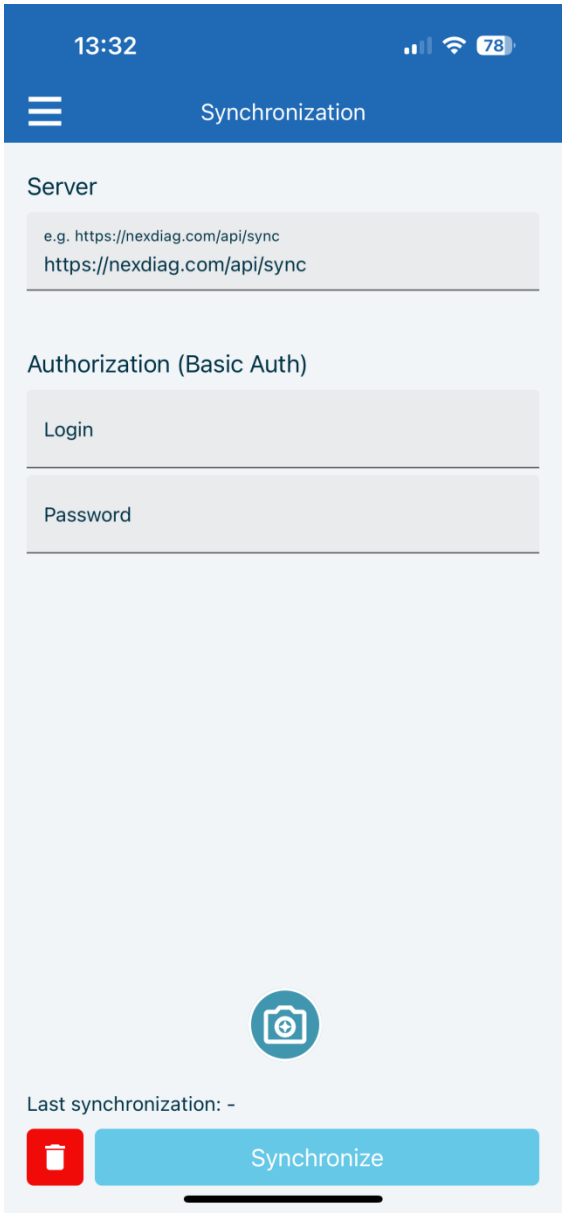
"tires":[
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left front","value1":"1","value2":"2"},
{"width":"150","profile":"60","diameter":"16","maker":"Barum","season":"Winter",
"section":"Right front","value1":"5","value2":"2"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left rear","value1":"1.2","value2":"3"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Right rear","value1":"2.2","value2":"6"}]}]}

API COMMUNICATION

General information

The API enables communication and data transfer from the NexPTG application to the client server. In order to send data, a **RESTful Web Service** with the **POST** method should be implemented on the server side, which will allow data to be transferred from the application to the server, e.g. https://nexdiag.com/api/sync , and will process it according to previously defined logic. The data will be received in the **application/json** format, which is commonly used to transfer data structure between applications.

API communication can be additionally secured by adding **Basic Authentication** on the server, i.e. securing access to resources by sending authentication data (username and password) in the http request header.



How to send data?

To send data from the NexPTG application to the server, enter the **Synchronization** tab and then enter the server address, username and password (if Basic Authentication is implemented on the server). Data is sent incrementally, i.e. only the latest data that has been saved since the last synchronization is sent. The application remembers the address and authentication data once saved. In **Android**, synchronization occurs automatically each time a report or measurement history is saved. On **iOS**, synchronization can only be done manually.

Messages during synchronization

200 – Synchronization was successful

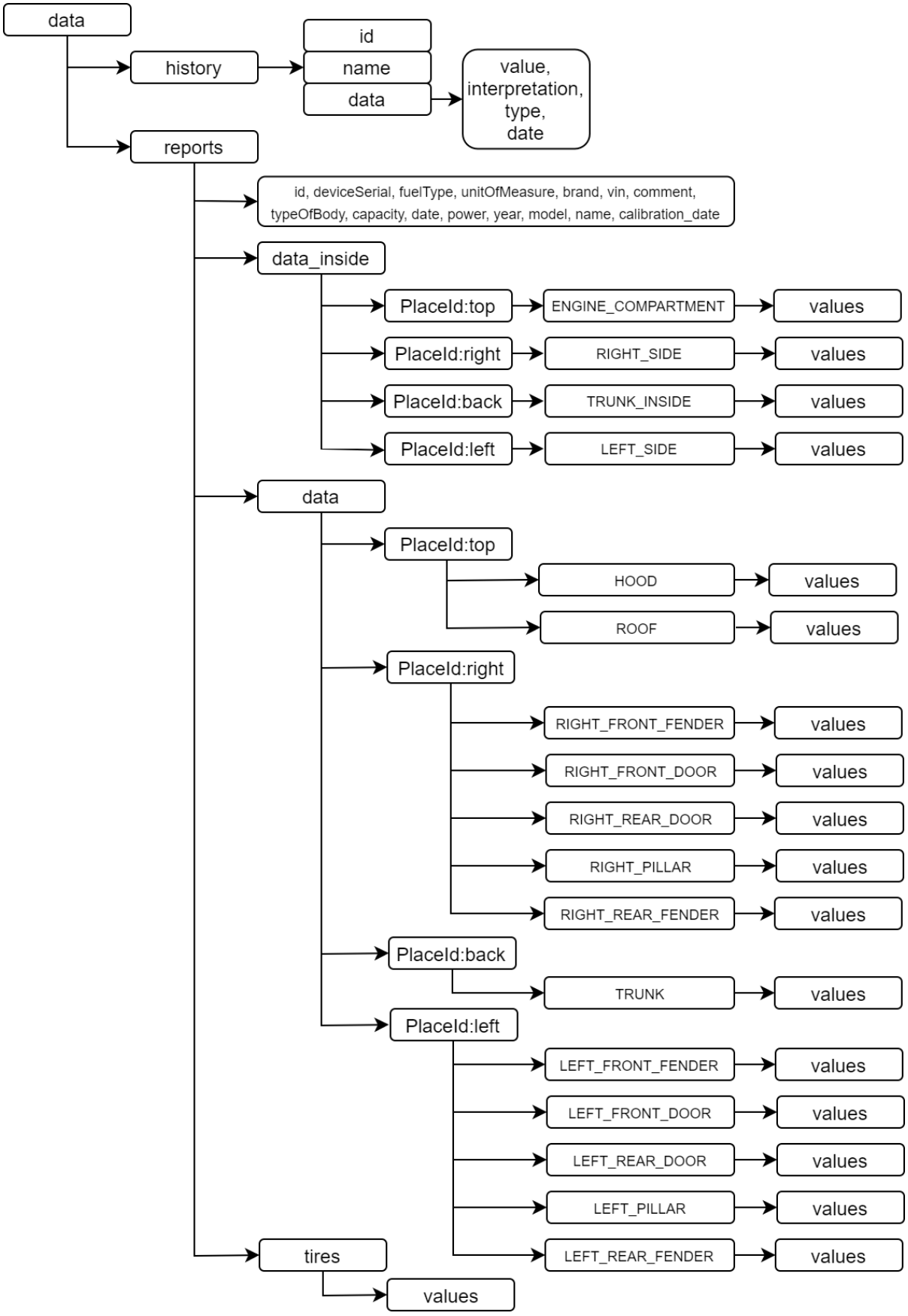
400 – Error

403 – Authorization error

404 – API address is invalid

500-599 – Server error

Structure of sent data



What data is transferred during synchronization?

history – measurement history (id, name, measurements)

reports – data included in the report. The reports type is divided into:

- general data such as id – report number, deviceSerial – device serial number, etc.
- data_inside – internal measurements in the report
- data – external measurements in the report
- tires – information about tires included in the report

Sample synchronization

{"data":

{"history":[

{"id":1,"name":"General","data":[

{"value":656,"interpretation":4,"type":"Zn","date":1702629359},

{"value":233,"interpretation":2,"type":"Al","date":1702629357},

{"value":105,"interpretation":1,"type":"Fe","date":1702629353},

{"value":456,"interpretation":3,"type":"Zn","date":1702629350}]}],

"reports":[

{"id":56,"name":"Report","date":1702629560,"calibrationDate":1701264763,"deviceSerialNumber":"18416 Professional", "model":"Mondeo","brand":"Ford","typeOfBody":"SEDAN", "capacity":"105", "power":"1999","vin":"","fuelType":"Diesel","year":"2010", "unitOfMeasure":"µm","extraFields":[],"comment":"Comment in report",

"data":[

{"placeId":"left","data":[

{"type":"**LEFT_FRONT_FENDER**","values":[

{"value":"375","interpretation":3,"type":"Al","timestamp":1702629432,"position":1}]},

{"type":"**LEFT_FRONT_DOOR**","values":[

{"value":"110","interpretation":1,"type":"Al","timestamp":1702629434,"position":1},

{"value":"108","interpretation":1,"type":"Al","timestamp":1702629435,"position":2}]},

{"type":"**LEFT_REAR_DOOR**","values":[

{"value":"96","interpretation":1,"type":"Fe + Zn","timestamp":1702629437,"position":1}]},

{"type":"**LEFT_PILLAR**","values":[

{"value":"427","interpretation":3,"type":"Fe","timestamp":1702629440,"position":1}]},

{"type":"**LEFT_REAR_FENDER**","values":[

{"value":"108","interpretation":1,"type":"Fe","timestamp":1702629443,"position":1},

{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629444,"position":2}]}]},

{"placeId":"right","data":[

{"type":"**RIGHT_FRONT_FENDER**","values":[

{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629472,"position":1},

{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629473,"position":2}]},

{"type":"**RIGHT_FRONT_DOOR**","values":[

{"value":"425","interpretation":3,"type":"Fe","timestamp":1702629468,"position":1}]},

{"type":"**RIGHT_REAR_DOOR**","values":[
{"value":"213","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":1},
{"value":"211","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":2}]},
{"type":"**RIGHT_PILLAR**","values":[
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629459,"position":1}]},
{"type":"**RIGHT_REAR_FENDER**","values":[
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629455,"position":1},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629456,"position":2},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629457,"position":3}]}]},

{"placeId":"top","data":[
{"type":"**HOOD**","values":[
{"value":"107","interpretation":1,"type":"Fe","timestamp":1702629422,"position":1},
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629423,"position":2}]},
{"type":"**ROOF**","values":[
{"value":"217","interpretation":2,"type":"Fe + Zn","timestamp":1702629426,"position":1},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629427,"position":2},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629428,"position":3}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK**","values":[
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":1},
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":2}]}]}],

"dataInside":[
{"placeId":"left","data":[
{"type":"**LEFT_SIDE**","values":[
{"value":"213","interpretation":3,"type":"Fe + Zn","timestamp":1702629484,"position":1}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_SIDE**","values":[
{"value":"638","interpretation":5,"type":"Fe","timestamp":1702629495,"position":1}]}]},
{"placeId":"top","data":[
{"type":"**ENGINE_COMPARTMENT**","values":[
{"value":"105","interpretation":2,"type":"Fe","timestamp":1702629480,"position":1}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK_INSIDE**","values":[
{"value":"382","interpretation":4,"type":"Al","timestamp":1702629488,"position":1}]}]}],

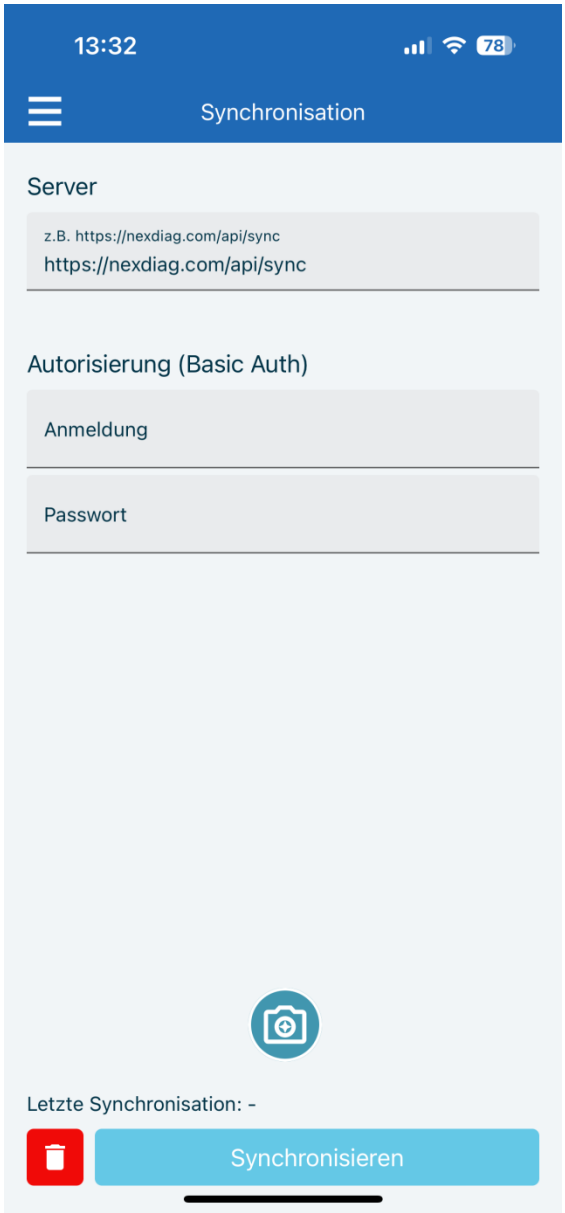
"tires":[
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left front","value1":"1","value2":"2"},
{"width":"150","profile":"60","diameter":"16","maker":"Barum","season":"Winter",
"section":"Right front","value1":"5","value2":"2"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left rear","value1":"1.2","value2":"3"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Right rear","value1":"2.2","value2":"6"}]}]}

API KOMMUNIKATION

Allgemeine Informationen

Die API ermöglicht die Kommunikation und Datenübertragung von der NexPTG-Anwendung zum Client-Server. Um Daten zu versenden, sollte serverseitig ein **RESTful Web Service** mit der **POST**-Methode implementiert werden, der es ermöglicht, Daten von der Anwendung an den Server zu übertragen, z.B. https://nexdiag.com/api/sync und verarbeitet es gemäß der zuvor definierten Logik. Die Daten werden im **application/json**-Format empfangen, das häufig zum Übertragen von Datenstrukturen zwischen Anwendungen verwendet wird.

Die API-Kommunikation kann zusätzlich abgesichert werden, indem auf dem Server die **Basic Authentication** hinzugefügt wird, d. h. der Zugriff auf Ressourcen durch das Senden von Authentifizierungsdaten (Benutzername und Passwort) im HTTP-Anfrageheader gesichert wird.



Wie sende ich Daten?

Um Daten von der NexPTG-Anwendung an den Server zu senden, rufen Sie die Registerkarte „**Synchronisation**“ auf und geben Sie dann die Serveradresse, den Benutzernamen und das Passwort ein (sofern die Standardauthentifizierung auf dem Server implementiert ist). Die Daten werden inkrementell gesendet, d. h. es werden nur die neuesten Daten gesendet, die seit der letzten Synchronisierung gespeichert wurden. Die Anwendung merkt sich die gespeicherten Adress- und Authentifizierungsdaten. Unter **Android** erfolgt die Synchronisierung jedes Mal automatisch, wenn ein Bericht oder eine Messhistorie gespeichert wird. Unter **iOS** kann die Synchronisierung nur manuell erfolgen.

Nachrichten während der Synchronisierung

200 – Synchronisierung war erfolgreich

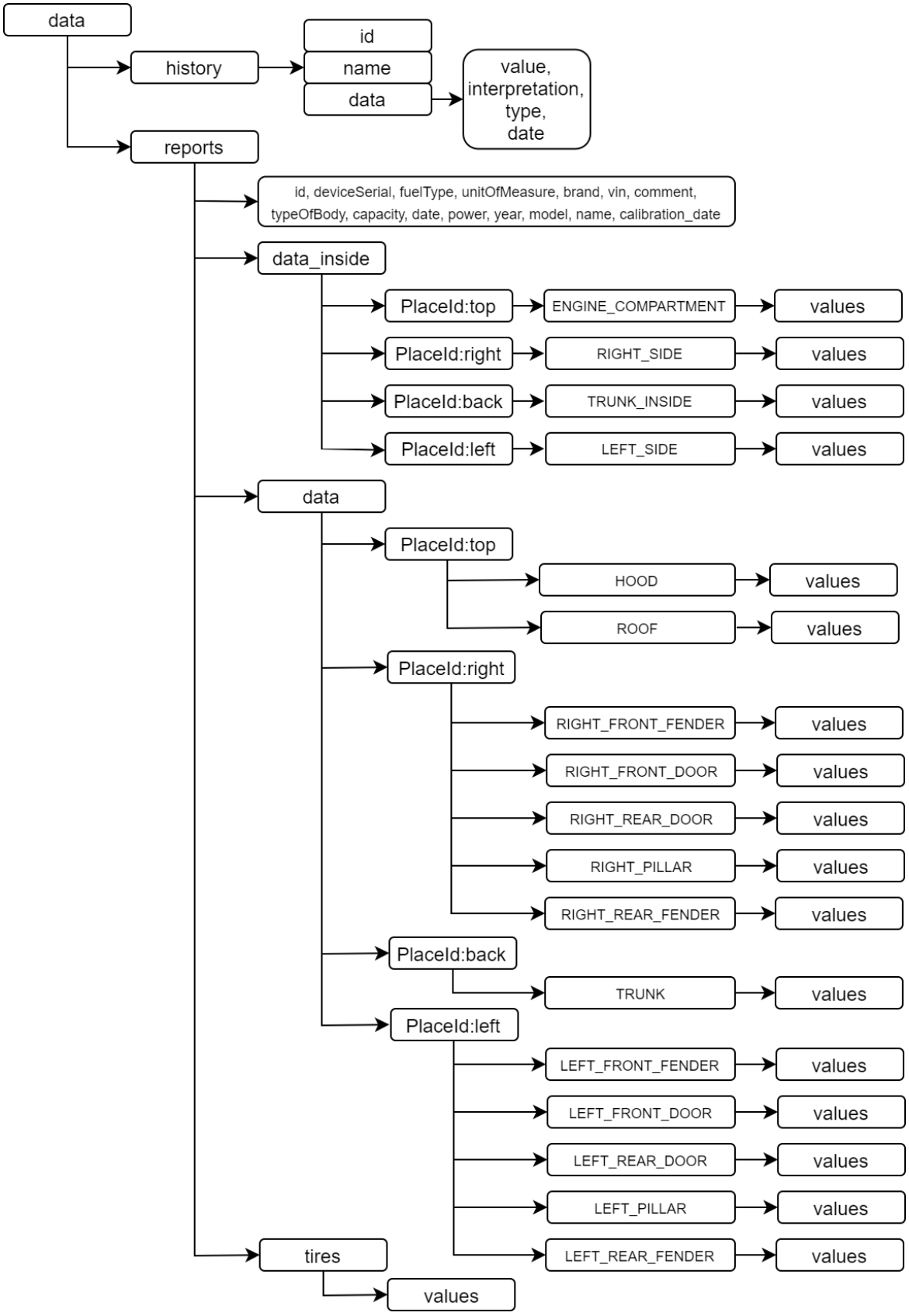
400 – Fehler

403 – Autorisierungsfehler

404 – API-Adresse ist ungültig

500-599 – Serverfehler

Struktur der gesendeten Daten



Welche Daten werden bei der Synchronisierung übertragen?

history – messverlauf (ID, Name, Messungen)

reports – im Bericht enthaltene Daten. Der Berichtstyp ist unterteilt in:

- allgemeine Daten wie id – Berichtsnummer, deviceSerial – Seriennummer des Geräts usw.
- data_inside – interne Messungen im Bericht
- data – externe Messungen im Bericht
- tires – informationen über die im Bericht enthaltenen Reifen

Beispielsynchronisation

{"data":
{"history":[
{"id":1,"name":"General","data":[
{"value":656,"interpretation":4,"type":"Zn","date":1702629359},
{"value":233,"interpretation":2,"type":"Al","date":1702629357},
{"value":105,"interpretation":1,"type":"Fe","date":1702629353},
{"value":456,"interpretation":3,"type":"Zn","date":1702629350}]}],

"reports":[
{"id":56,"name":"Report","date":1702629560,"calibrationDate":1701264763,"deviceSerialNumber":"18416 Professional", "model":"Mondeo","brand":"Ford","typeOfBody":"SEDAN", "capacity":"105", "power":"1999","vin":"","fuelType":"Diesel","year":"2010", "unitOfMeasure":"µm","extraFields":[],"comment":"Comment in report",

"data":[
{"placeId":"left","data":[
{"type":"**LEFT_FRONT_FENDER**","values":[
{"value":"375","interpretation":3,"type":"Al","timestamp":1702629432,"position":1}]},
{"type":"**LEFT_FRONT_DOOR**","values":[
{"value":"110","interpretation":1,"type":"Al","timestamp":1702629434,"position":1},
{"value":"108","interpretation":1,"type":"Al","timestamp":1702629435,"position":2}]},
{"type":"**LEFT_REAR_DOOR**","values":[
{"value":"96","interpretation":1,"type":"Fe + Zn","timestamp":1702629437,"position":1}]},
{"type":"**LEFT_PILLAR**","values":[
{"value":"427","interpretation":3,"type":"Fe","timestamp":1702629440,"position":1}]},
{"type":"**LEFT_REAR_FENDER**","values":[
{"value":"108","interpretation":1,"type":"Fe","timestamp":1702629443,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629444,"position":2}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_FRONT_FENDER**","values":[
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629472,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629473,"position":2}]},
{"type":"**RIGHT_FRONT_DOOR**","values":[
{"value":"425","interpretation":3,"type":"Fe","timestamp":1702629468,"position":1}]},

{"type":"**RIGHT_REAR_DOOR**","values":[
{"value":"213","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":1},
{"value":"211","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":2}]},
{"type":"**RIGHT_PILLAR**","values":[
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629459,"position":1}]},
{"type":"**RIGHT_REAR_FENDER**","values":[
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629455,"position":1},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629456,"position":2},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629457,"position":3}]}]},

{"placeId":"top","data":[
{"type":"**HOOD**","values":[
{"value":"107","interpretation":1,"type":"Fe","timestamp":1702629422,"position":1},
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629423,"position":2}]},
{"type":"**ROOF**","values":[
{"value":"217","interpretation":2,"type":"Fe + Zn","timestamp":1702629426,"position":1},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629427,"position":2},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629428,"position":3}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK**","values":[
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":1},
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":2}]}]}],

"dataInside":[
{"placeId":"left","data":[
{"type":"**LEFT_SIDE**","values":[
{"value":"213","interpretation":3,"type":"Fe + Zn","timestamp":1702629484,"position":1}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_SIDE**","values":[
{"value":"638","interpretation":5,"type":"Fe","timestamp":1702629495,"position":1}]}]},
{"placeId":"top","data":[
{"type":"**ENGINE_COMPARTMENT**","values":[
{"value":"105","interpretation":2,"type":"Fe","timestamp":1702629480,"position":1}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK_INSIDE**","values":[
{"value":"382","interpretation":4,"type":"Al","timestamp":1702629488,"position":1}]}]}],

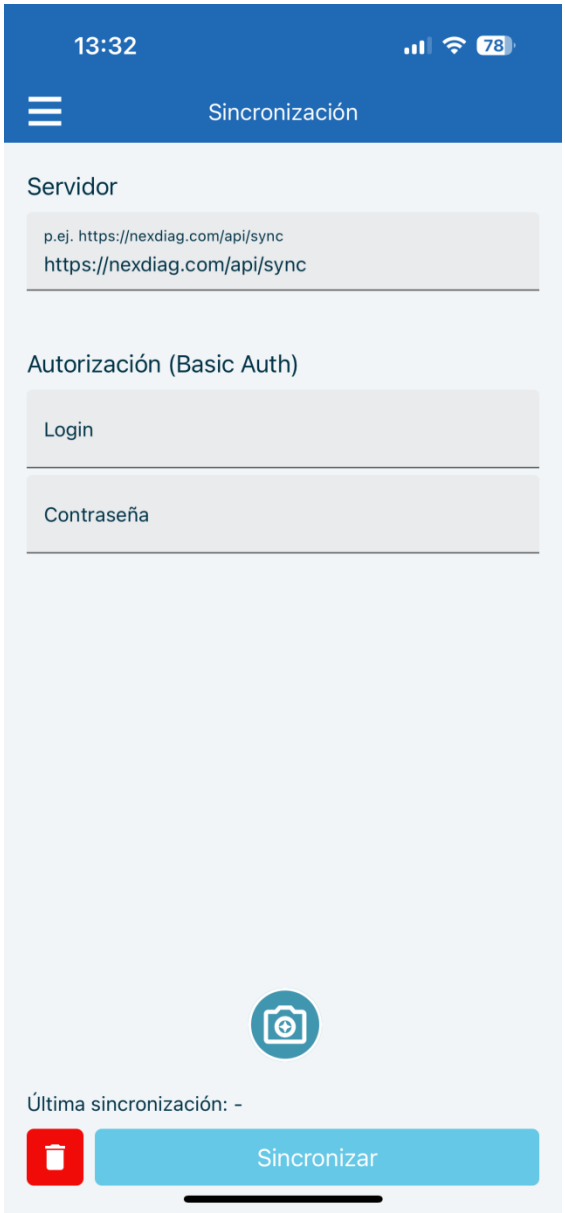
"tires":[
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left front","value1":"1","value2":"2"},
{"width":"150","profile":"60","diameter":"16","maker":"Barum","season":"Winter",
"section":"Right front","value1":"5","value2":"2"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left rear","value1":"1.2","value2":"3"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Right rear","value1":"2.2","value2":"6"}]}]}

COMUNICACIÓN API

Información general

La API permite la comunicación y la transferencia de datos desde la aplicación NexPTG al servidor del cliente. Para enviar datos se debe implementar en el lado del servidor un **Servicio Web RESTful** con el método **POS**T, que permitirá transferir datos desde la aplicación al servidor, p.e. https://nexdiag.com/api/sync y lo procesará según la lógica previamente definida. Los datos se recibirán en el formato **aplicación/json**, que se utiliza comúnmente para transferir estructuras de datos entre aplicaciones.

La comunicación API se puede proteger adicionalmente agregando **Basic Authentication** en el servidor, es decir, asegurando el acceso a los recursos enviando datos de autenticación (nombre de usuario y contraseña) en el encabezado de solicitud http.



¿Cómo enviar datos?

Para enviar datos desde la aplicación NexPTG al servidor, ingrese a la pestaña **Sincronización** y luego ingrese la dirección del servidor, el nombre de usuario y la contraseña (si la autenticación básica está implementada en el servidor). Los datos se envían de forma incremental, es decir, solo se envían los últimos datos guardados desde la última sincronización. La aplicación recuerda la dirección y los datos de autenticación una vez guardada. En **Android**, la sincronización se produce automáticamente cada vez que se guarda un informe o historial de mediciones. En **iOS**, la sincronización sólo se puede realizar manualmente.

Mensajes durante la sincronización

200 – La sincronización fue exitosa

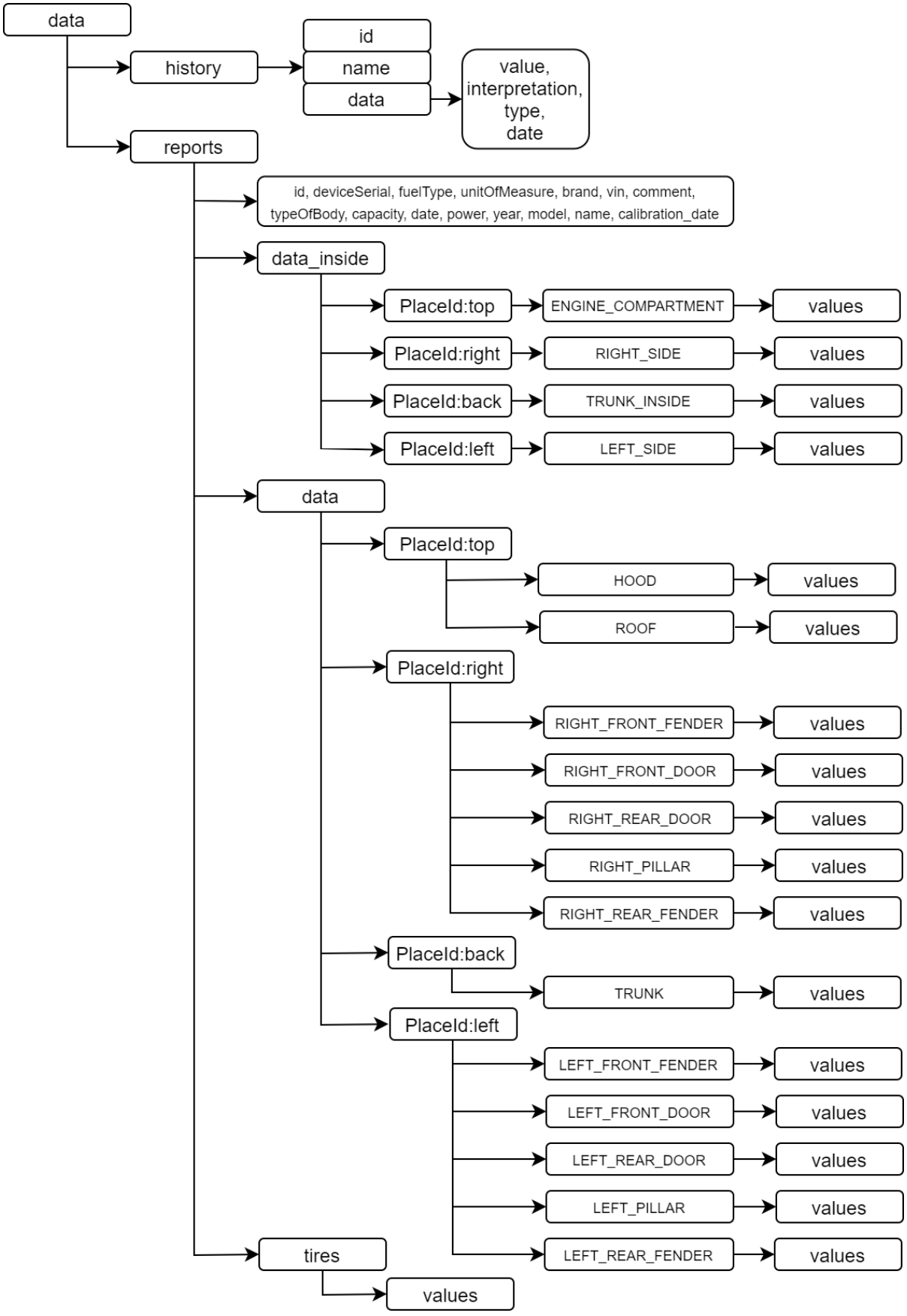
400 – Error

403 – Error de autorización

404: la dirección API no es válida

500-599 – Error del servidor

Estructura de los datos enviados



¿Qué datos se transfieren durante la sincronización?

history – historial de mediciones (id, nombre, mediciones)

reports – datos incluidos en el informe. El tipo de informes se divide en:

- datos generales como id – número de informe, etc.
- data_inside – mediciones internas en el informe
- data – mediciones externas en el informe
- tires – información sobre los neumáticos incluidos en el informe

Sincronización de muestra

{"data":
{"history":[
{"id":1,"name":"General","data":[
{"value":656,"interpretation":4,"type":"Zn","date":1702629359},
{"value":233,"interpretation":2,"type":"Al","date":1702629357},
{"value":105,"interpretation":1,"type":"Fe","date":1702629353},
{"value":456,"interpretation":3,"type":"Zn","date":1702629350}]}],

"reports":[
{"id":56,"name":"Report","date":1702629560,"calibrationDate":1701264763,"deviceSerialNumber":"18416 Professional", "model":"Mondeo","brand":"Ford","typeOfBody":"SEDAN", "capacity":"105", "power":"1999","vin":"","fuelType":"Diesel","year":"2010", "unitOfMeasure":"µm","extraFields":[],"comment":"Comment in report",

"data":[
{"placeId":"left","data":[
{"type":"**LEFT_FRONT_FENDER**","values":[
{"value":"375","interpretation":3,"type":"Al","timestamp":1702629432,"position":1}]},
{"type":"**LEFT_FRONT_DOOR**","values":[
{"value":"110","interpretation":1,"type":"Al","timestamp":1702629434,"position":1},
{"value":"108","interpretation":1,"type":"Al","timestamp":1702629435,"position":2}]},
{"type":"**LEFT_REAR_DOOR**","values":[
{"value":"96","interpretation":1,"type":"Fe + Zn","timestamp":1702629437,"position":1}]},
{"type":"**LEFT_PILLAR**","values":[
{"value":"427","interpretation":3,"type":"Fe","timestamp":1702629440,"position":1}]},
{"type":"**LEFT_REAR_FENDER**","values":[
{"value":"108","interpretation":1,"type":"Fe","timestamp":1702629443,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629444,"position":2}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_FRONT_FENDER**","values":[
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629472,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629473,"position":2}]},
{"type":"**RIGHT_FRONT_DOOR**","values":[
{"value":"425","interpretation":3,"type":"Fe","timestamp":1702629468,"position":1}]},

{"type":"**RIGHT_REAR_DOOR**","values":[
{"value":"213","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":1},
{"value":"211","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":2}]},
{"type":"**RIGHT_PILLAR**","values":[
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629459,"position":1}]},
{"type":"**RIGHT_REAR_FENDER**","values":[
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629455,"position":1},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629456,"position":2},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629457,"position":3}]}]},

{"placeId":"top","data":[
{"type":"**HOOD**","values":[
{"value":"107","interpretation":1,"type":"Fe","timestamp":1702629422,"position":1},
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629423,"position":2}]},
{"type":"**ROOF**","values":[
{"value":"217","interpretation":2,"type":"Fe + Zn","timestamp":1702629426,"position":1},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629427,"position":2},
{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629428,"position":3}]}]},
{"placeId":"back","data":[
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{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":2}]}]}],

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{"placeId":"left","data":[
{"type":"**LEFT_SIDE**","values":[
{"value":"213","interpretation":3,"type":"Fe + Zn","timestamp":1702629484,"position":1}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_SIDE**","values":[
{"value":"638","interpretation":5,"type":"Fe","timestamp":1702629495,"position":1}]}]},
{"placeId":"top","data":[
{"type":"**ENGINE_COMPARTMENT**","values":[
{"value":"105","interpretation":2,"type":"Fe","timestamp":1702629480,"position":1}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK_INSIDE**","values":[
{"value":"382","interpretation":4,"type":"Al","timestamp":1702629488,"position":1}]}]}],

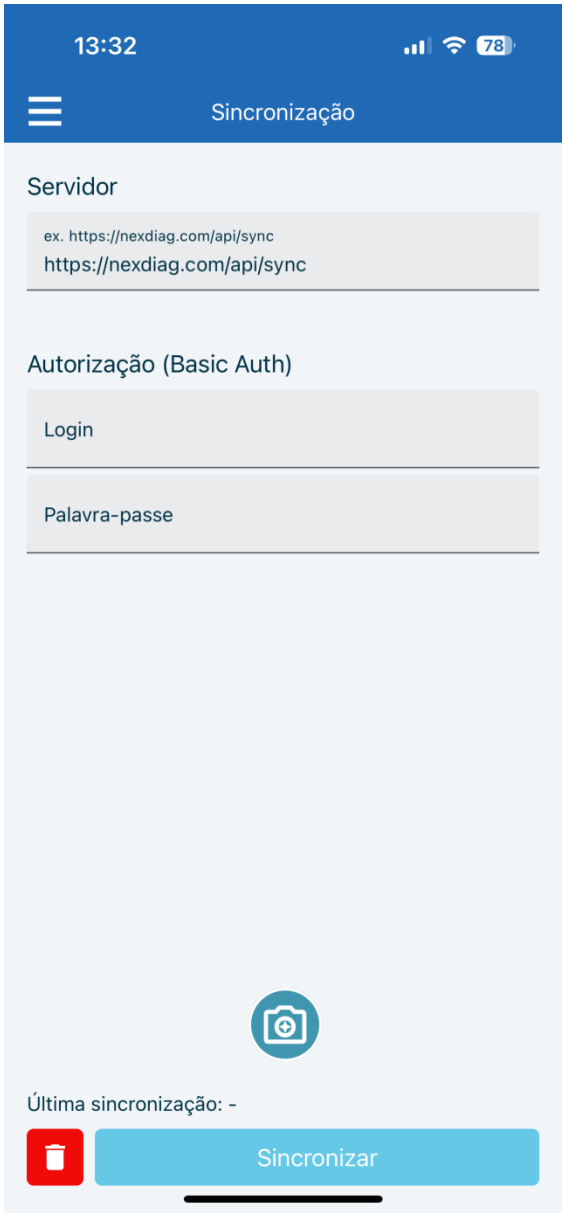
"tires":[
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left front","value1":"1","value2":"2"},
{"width":"150","profile":"60","diameter":"16","maker":"Barum","season":"Winter",
"section":"Right front","value1":"5","value2":"2"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left rear","value1":"1.2","value2":"3"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Right rear","value1":"2.2","value2":"6"}]}]}

COMUNICAÇÃO API

Informações gerais

A API permite a comunicação e transferência de dados da aplicação NexPTG para o servidor cliente. Para enviar dados, um **Web Service RESTful** com o método **POST** deverá ser implementado no lado do servidor, o que permitirá a transferência de dados da aplicação para o servidor, por exemplo. https://nexdiag.com/api/sync , e irá processá-lo de acordo com a lógica previamente definida. Os dados serão recebidos no formato **application/json**, comumente usado para transferir estrutura de dados entre aplicativos.

A comunicação API pode ser protegida adicionalmente adicionando **Basic Authentication** no servidor, ou seja, protegendo o acesso aos recursos enviando dados de autenticação (nome de usuário e senha) no cabeçalho da solicitação http.



Como enviar dados?

Para enviar dados da aplicação NexPTG para o servidor, entre na aba **Sincronização** e em seguida insira o endereço do servidor, nome de usuário e senha (caso a Autenticação Básica esteja implementada no servidor). Os dados são enviados de forma incremental, ou seja, apenas os dados mais recentes que foram salvos desde a última sincronização são enviados. O aplicativo lembra o endereço e os dados de autenticação depois de salvos. No Android, a sincronização ocorre automaticamente sempre que um relatório ou histórico de medições é salvo. No iOS, a sincronização só pode ser feita manualmente.

Mensagens durante a sincronização

200 – A sincronização foi bem-sucedida

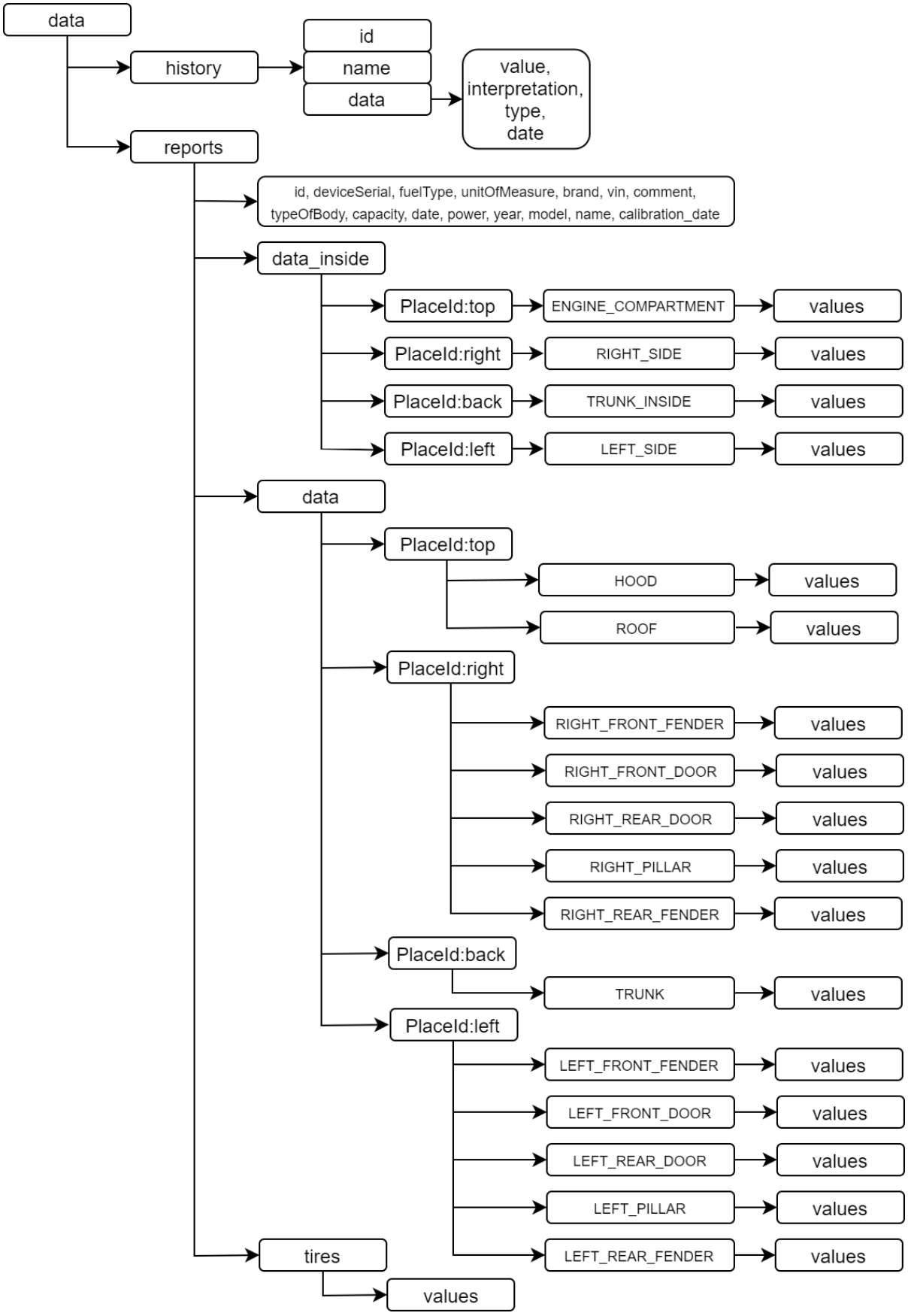
400 – Erro

403 – Erro de autorização

404 – O endereço da API é inválido

500-599 – Erro do servidor

Estrutura dos dados enviados



Quais dados são transferidos durante a sincronização?

history – histórico de medições (id, nome, medições)

reports – dados incluídos no relatório. O tipo de relatórios é dividido em:

- dados gerais como id – número do relatório, deviceSerial – número de série do dispositivo
- data_inside – medições internas no relatório
- data – medições externas no relatório
- tires – informações sobre pneus incluídas no relatório

Sincronização de amostra

{"data":
{"history":[
{"id":1,"name":"General","data":[
{"value":656,"interpretation":4,"type":"Zn","date":1702629359},
{"value":233,"interpretation":2,"type":"Al","date":1702629357},
{"value":105,"interpretation":1,"type":"Fe","date":1702629353},
{"value":456,"interpretation":3,"type":"Zn","date":1702629350}]}],

"reports":[
{"id":56,"name":"Report","date":1702629560,"calibrationDate":1701264763,"deviceSerialNumber":"18416 Professional", "model":"Mondeo","brand":"Ford","typeOfBody":"SEDAN", "capacity":"105", "power":"1999","vin":"","fuelType":"Diesel","year":"2010", "unitOfMeasure":"µm","extraFields":[],"comment":"Comment in report",

"data":[
{"placeId":"left","data":[
{"type":"**LEFT_FRONT_FENDER**","values":[
{"value":"375","interpretation":3,"type":"Al","timestamp":1702629432,"position":1}]},
{"type":"**LEFT_FRONT_DOOR**","values":[
{"value":"110","interpretation":1,"type":"Al","timestamp":1702629434,"position":1},
{"value":"108","interpretation":1,"type":"Al","timestamp":1702629435,"position":2}]},
{"type":"**LEFT_REAR_DOOR**","values":[
{"value":"96","interpretation":1,"type":"Fe + Zn","timestamp":1702629437,"position":1}]},
{"type":"**LEFT_PILLAR**","values":[
{"value":"427","interpretation":3,"type":"Fe","timestamp":1702629440,"position":1}]},
{"type":"**LEFT_REAR_FENDER**","values":[
{"value":"108","interpretation":1,"type":"Fe","timestamp":1702629443,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629444,"position":2}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_FRONT_FENDER**","values":[
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629472,"position":1},
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629473,"position":2}]},
{"type":"**RIGHT_FRONT_DOOR**","values":[
{"value":"425","interpretation":3,"type":"Fe","timestamp":1702629468,"position":1}]},

{"type":"**RIGHT_REAR_DOOR**","values":[
{"value":"213","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":1},
{"value":"211","interpretation":2,"type":"Fe + Zn","timestamp":1702629464,"position":2}]},
{"type":"**RIGHT_PILLAR**","values":[
{"value":"105","interpretation":1,"type":"Fe","timestamp":1702629459,"position":1}]},
{"type":"**RIGHT_REAR_FENDER**","values":[
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629455,"position":1},
{"value":"107","interpretation":1,"type":"Al","timestamp":1702629456,"position":2},
*{"value":"107","interpretation":1,"type":"Al","timestamp":1702629457,"position":3}]}]},

{"placeId":"top","data":[
{"type":"**HOOD**","values":[
{"value":"107","interpretation":1,"type":"Fe","timestamp":1702629422,"position":1},
{"value":"106","interpretation":1,"type":"Fe","timestamp":1702629423,"position":2}]},
{"type":"**ROOF**","values":[
{"value":"217","interpretation":2,"type":"Fe + Zn","timestamp":1702629426,"position":1},
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{"value":"216","interpretation":2,"type":"Fe + Zn","timestamp":1702629428,"position":3}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK**","values":[
{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":1},
*{"value":"686","interpretation":4,"type":"Fe + Zn","timestamp":1702629450,"position":2}]}]}],

"dataInside":[
{"placeId":"left","data":[
{"type":"**LEFT_SIDE**","values":[
{"value":"213","interpretation":3,"type":"Fe + Zn","timestamp":1702629484,"position":1}]}]},
{"placeId":"right","data":[
{"type":"**RIGHT_SIDE**","values":[
{"value":"638","interpretation":5,"type":"Fe","timestamp":1702629495,"position":1}]}]},
{"placeId":"top","data":[
{"type":"**ENGINE_COMPARTMENT**","values":[
{"value":"105","interpretation":2,"type":"Fe","timestamp":1702629480,"position":1}]}]},
{"placeId":"back","data":[
{"type":"**TRUNK_INSIDE**","values":[
{"value":"382","interpretation":4,"type":"Al","timestamp":1702629488,"position":1}]}]}],

"tires":[
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left front","value1":"1","value2":"2"},
{"width":"150","profile":"60","diameter":"16","maker":"Barum","season":"Winter",
"section":"Right front","value1":"5","value2":"2"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Left rear","value1":"1.2","value2":"3"},
{"width":"140","profile":"55","diameter":"18","maker":"Apollo","season":"Summer",
"section":"Right rear","value1":"2.2","value2":"6"}]}]}