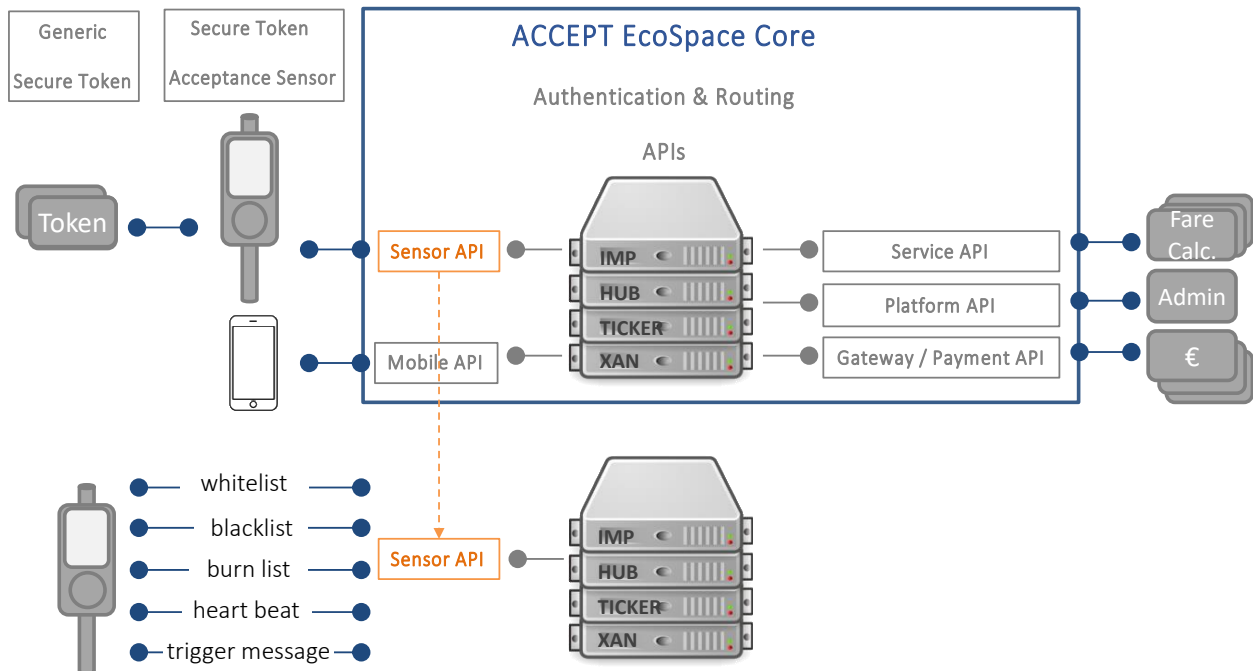


## Sensor API

The Sensor API is used to connect sensors, e.g. contactless readers (or NFC readers) to the EcoSpace Core. These sensors could also be iris recognition devices or fingerprint scanners.

The Sensor API supports message exchange via a REST interface currently supporting XML & JSON message structures. Due to the message size overhead of XML, JSON format is recommended.



### Message Overview

There are 5 post messages that a sensor can submit to the EcoSpace Core via the Sensor API:

#### *chIMP Messages*

1. Whitelist
2. Blacklist
3. Burnlist

#### *XAN Messages*

4. Heartbeat

#### *Hub Messages*

5. Trigger Message

### *chIMP Messages*

For EcoSpaces that need to support off-line or non-real-time use cases, the Sensors can store relevant portions of the IMP registry locally (in the chIMP). The Token IDs in a chIMP message are never transferred in the clear. They are salted and hashed and the local NFC Reader must run the Token ID it sees through the same process to match it to a card to in the locally stored a hashed list. These messages are:

- White List
- Black List
- Burn List

### *XAN Messages*

Sensors are asked to send heartbeats to the XAN to ensure that quality of service for operations in the field can be monitored and displayed in the Sysops Dashboard feeds. The Heartbeat response is also used to update Terminals.

- Heartbeat

### *Hub Message*

The main job of the sensor is to send Trigger messages when tapped.

- Trigger Message

## **Sensor API Web Page**

The Sensor API for the ACCEPT Test Environment also has a public API Web Page, to help developers with reference code examples and templates and web forms for submission of code samples to allow developers to test drive of their own code. While the page is public there are certain certificates and permissions required before developers can set up and test their own code.

### *Sensor API Web Page for Test Environment*

<https://oti-test-nlhub.westeurope.cloudapp.azure.com/Sensor/swagger/ui/index>

### *Message Formats*

XML or JSON

### *Message Transport*

HTTPS REST

Note: Right now, HTTPS certs are self-generated by the receiving web server.




Explore

## Sensor API V3

API for supporting terminalproviders

See more at <http://www.acceptinstitute.eu>

[Contact the developer](#)

### Ping

Show/Hide | List Operations | Expand Operations

### Sensors

Show/Hide | List Operations | Expand Operations

GET	/v3/Sensors/Whitelist/{serviceId}	Retrieve the whitelist
GET	/v3/Sensors/Blacklist/{serviceId}	Retrieve the blacklist
GET	/v3/Sensors/Actionlist	Retrieve the Actionlist
GET	/v3/Sensors/Lists/{serviceId}	
POST	/v3/Sensors/Heartbeat	Send a heartbeat message

### Token

Show/Hide | List Operations | Expand Operations

### Trigger

Show/Hide | List Operations | Expand Operations

[ BASE URL: /sensor , API VERSION: v3 ]

## Sensor Onboarding & Configuration

When a Sensor is introduced to an EcoSpace, multiple steps take place to attach it to the EcoSpace. Typical installation includes:

### *Pre-Registration*

Prior to installation the Sensor should be pre-registered for the EcoSpace Production or Test Environment it is intended to operate in.

- Sensor PKI Certificate is shared with the EcoSpace.
- An ACCEPT PKI Certificate is shared for integration in the Sensor for Off-line use cases.
- Service Hosting Selection – Refers to which service(s) it will host; directly related to its ability to create the appropriate Trigger Message for that particular Service.
- Payment Method Acceptance Capabilities – Which Payment Method.
- Sensor Token Capabilities - Such as Which tokens it supports.
- Sensor Operation Modes - if it will operate online, offline or partial.
- Location Information – GPS, CellID.
- Upon preregistration a Sensor ID is issued.

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Note: Pre-registration is a manual process, please contact ACCEPT for pre-registration of test and pilot sensors (terminals).

### *Activation*

Once a Sensor is ready for testing or placement it can be activated by attaching it to the EcoSpace Environment.

Upon Placement, the Sensor, which has been pre-configured to send heartbeats to the EcoSpace XAN, will receive a challenge consisting of a short code for multifactor activation of the Sensor on the EcoSpace network. This requires that the installation technician or the merchant in question uses the Sensor Installation Mobile App.

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Documents (pdf.-files) Table of Content:

1. Aggregate List V3
2. Message Signing Sensor API V3
3. Retrieve Actionlist V3
4. Retrieve Blacklist V3
5. Retrieve Whitelist V3
6. Send Heartbeat V3
7. Trigger Commit V3
8. Trigger Request V3
9. Trigger Rollback V3
10. Retrieve ServiceList V3
11. Sensor Create Account V3
12. Sensor SubscriptionChange V3