# OPERATING INSTRUCTIONS FOR THE OMAPOSTI PRO API

Implementation guide for Posti transport orders for parcels, freight, and letters.

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#### **VERSION HISTORY**

Document version	Schema	Date	Comments	
0	1.0	28.3.2024	First document version created	

# 1. GENERAL

OmaPosti Pro API is a new Posti order channel for letter, parcel, and freight products. It has a similar messaging format as the current SmartShip API, when sending new shipment orders via integration.

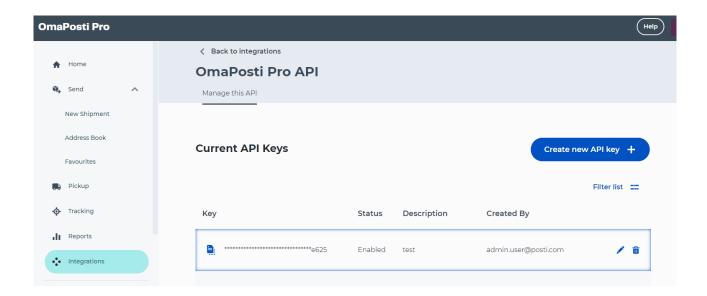
OmaPosti Pro API saves the information directly to Posti's shipment register and returns address labels for the sent shipments to the sending system in PDF format.

The shipment information from other IT systems (usually an operative system, such as order processing, ERP, eCommerce solution) needed for printing address labels is transmitted to OmaPosti Pro API as a JSON file. The detailed data content and structure of the file is described in this document. The information is sent in the application through the REST WebService interface.

# 2. AUTHENTICATION

The OmaPosti Pro API production requests are authenticated by API-key sent in the request's Authorization header. The API keys are generated and managed by the customer's main user in the OmaPosti Pro application's "Integration" menu, <a href="https://pro.posti.fi">https://pro.posti.fi</a>.





In OmaPosti Pro API the API-key is passed (as copied from the OmaPosti Pro) in the Authorization header (example: "Authorization: a12bc34d-ef56-78a9-b123-cd45efab6789").

The testing environment is available per separate request to Posti's onboarding support team when the customer or the integration partner is ready to test their solution.

**Please notice**, that if you are migrating from SmartShip API, the authentication method has been changed. In SmartShip API the authentication method is a Basic auth with username/password passed in the Authorization header as base64 encoded string ("Authorization: Basic aaaabbb...").



# 3. SENDING REQUEST MESSAGE

# Production OmaPosti Pro API request URL:

https://gateway.posti.fi/shippingapi/api/v1/shipping/order

### 3.1. PRODUCTION ENVIRONMENT CURL EXAMPLE

Verify that the JSON message contains correct production contract information in the senderPartners section as described in section 4.2.3. This information is also available in the OmaPosti Pro account, under "User settings" → "My organizations" (select the correct organization) → Check the "Logistics Service Contracts" number under "Customer numbers & contracts" section."

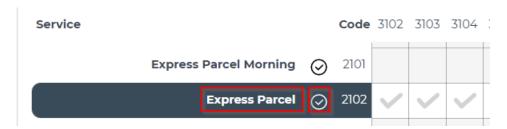
curl https://gateway.posti.fi/shippingapi/api/v1/shipping/order ^

- -H "Authorization: < API-key from OmaPosti Pro>" ^
- -H "Content-Type: application/json" ^
- -d @example.json

# 3.2. JSON EXAMPLES FROM POSTI'S SERVICE MATRIX

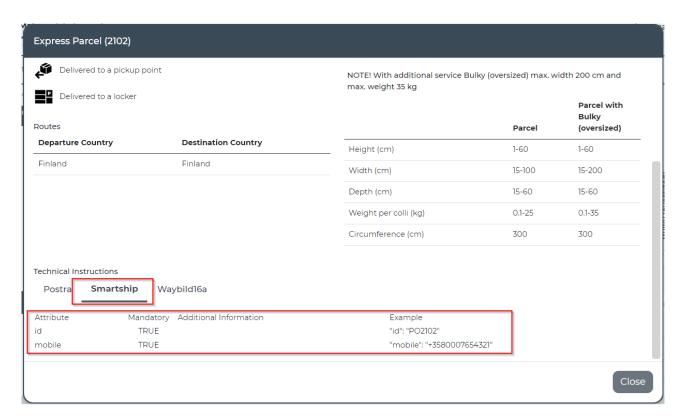
The JSON request structure and required fields can be built with the help from Posti's service matrix page <a href="https://www.posti.fi/en/for-businesses/service-channels/service-matrix">https://www.posti.fi/en/for-businesses/service-channels/service-matrix</a>. The suitable service can be found by filtering the shipment size, route, and the needed additional services. <a href="Polester">Please notice</a>, that some services and additional service can require separate logistics contract with Posti. As OmaPosti Pro API is compatible with SmartShip, the same examples and instructions can be applied to OmaPosti Pro API as well.

After finding suitable service from the list, select the service by clicking the round selection icon and then clicking the service name.

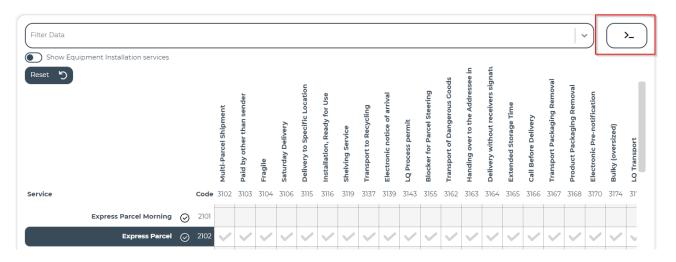


The required fields are the same as documented in the SmartShip section.





The example JSON can be found by clicking the "Show sample messages and labels" button.



And then choosing the SmartShip tab for the full JSON content. The optional fields can be shown and the sample values can be hidden by the controls.



```
SmartShip
                 Label
                                 Postra
X
     ) Show optional fields
        Show sample values
               "pdfConfig": {
  "target1Media": "laser-a5",
  "target2Media": "laser-a4"
                      "packageCode": "PKT"
                 ],
                   receiver": {
                    "name": "Ricky Receiver",
"mobile": "+3580007654321",
                     "address1": "Keskuskatu 3",
"zipcode": "00104",
  16
  17
                      "city": "Helsinki",
  18
   19
                   "name": "Sandy Sender",
"address1": "Keskuskatu 3",
"zipcode": "00100",
                    "city": "Helsinki",
```

The JSON can be copied and then the content is modified based on the actual shipment data by also following the instructions below sections.

# 4. SENDING SHIPMENT INFORMATION

With the shipment order functionality, it is possible to print transport documents directly in PDF format. The PDF format is provided through the interface either as a URL or a Base64-coded record. PDF files created through the interface are available for retrieval for one hour and can be retrieved several times, where necessary.

The shipment order request message consists of three main elements: pdfConfig, shipment, and parcels.

# 4.1. PDFCONFIG ELEMENT



PDF documents are created based on the data of the pdfConfig element. PDF files created through the interface are available for retrieval for one hour and can be retrieved several times, where necessary.

By default, PDF documents are returned to users as a URL through the interface. The URL of created PDF documents is found in the *href* field in the pdf object in the pdfs array in the return message. Optionally the PDF documents can be returned as encoded in base64. To use this option include a query parameter named returnFile with the value set to true:

https://gateway.posti.fi/shippingapi/api/v1/shipping/order?returnFile=true

**Please notice**, that the OmaPosti Pro API also supports sending the PDF settings in a "printConfig" element instead of "pdfConfig" as an alternative. If "printConfig" is used, then the response will have the PDF links in the "prints" array instead of "pdfs" array. Also, the alignment of the printout is currently not supported by OmaPosti Pro API. The fields *target1XOffset* and *target1YOffset* are only included for a possible future support.

```
···· "pdfConfig": {
         *** "target1X0ffset": 0,
         ··· "target1Y0ffset": 0,
         ···"target1Media": "thermo-225",
         "target2X0ffset": 0,
         "target2Y0ffset": 0,
         "target2Media": "laser-a4",
        ····"target3X0ffset": 0,
        ----"target3Y0ffset": 0,
10
     ··· target3Media": null,
11
     ··· "target4XOffset": 0,
     *** "target4YOffset": 0,
13
     ····"target4Media": null
14
15
```

Available target1Media → target4Media parameters:

- laser-a5 (Single A5 label on A4 paper)
- laser-2a5 (Two A5 labels on A4 paper)
- laser-a4 (Normal A4 used for waybills, customs declaration documents etc.)
- **thermo-se** (107 x 251 mm thermo STE label)
- **thermo-225** (107 x 225 mm thermo label)

#### 4.2. SHIPMENT ELEMENT

The shipment element describes party information, the contract information to be used, the service and supplementary service information and customs declaration information, where necessary. Obligatory elements are the sender, the receiver, the senderPartners, and the service.



```
7
         "shipment": {
             "sender": -{
 9
                "name": "Posti Oy",
                "address1": "Postintaival 7",
11
                "zipcode": "00100",
12
                "city": "HELSINKI",
                "country": "FI",
13
                "phone": "+358 200 77000",
14
                "email": "consumerservice@posti.com"
15
16
17
             "senderPartners": [{
                "id": "POSTI",
18
                 "custNo": "123456"
19
20
             }],
21
             "receiver": {
                 "name": "Firma Oy",
22
                 "address1": "Palmuntie 57",
23
                 "zipcode": "20100",
                "city": "TURKU",
25
26
                "country": "FI",
                 "phone": "021234567",
27
                 "sms": "0400 123456",
28
                 "email": "info@firma.fi"
29
30
             "orderNo": "Pikkupaketti 001",
31
             "senderReference": "A reference",
32
33
             "service": {
                 "id": . "P02461"
34
35
             7.
```

#### 4.2.1. PARTY INFORMATION

The Sender and the Receiver element contain identical fields, because it is similar party information in view of the system. As for freight, a separate pick-up address (dispatch), delivery address (delivery) and the payer's party information (freightPayer) can be entered as party information for freight. The payer's party information is obligatory when "Paid by other than sender" has been selected as the supplementary service.

```
21
             "receiver": {
22
                 "name": Firma Oy",
                 "address1": "Palmuntie 57",
23
24
                 "zipcode": "20100",
                 "city": "TURKU",
25
26
                 "country": "FI",
27
                 "phone": "021234567",
                 "sms": "0400 123456",
28
                 "email": "info@firma.fi"
29
```

Fields essential for Posti's shipments:

- **name** (string) *Obligatory*
- address1 (string, max 35 characters) Obligatory



- address2 (string, max 35 characters)
- **zipcode** (string) *Obligatory*
- **city** (string, max 50 characters) *Obligatory*
- **state** (string)
- **country** (string) *Obligatory*
- **phone** (string)
- **e-mail** (string) *Used as the parameter for supplementary services, such as an electronic notice of arrival.*
- **mobile** (string) *Used as the parameter for supplementary services, such as an electronic notice of arrival.*

Please notice, that the quickld field which is available in the SmartShip is not supported in the OmaPosti Pro API, meaning that the party information are not connected to the sender/contact information in the OmaPosti Pro.

#### 4.2.2. SELECTED PICKUP POINT

The information for the pickup point selected by the receiver is entered in the **agent** party element below the Shipment element. Posti recommends that the quickld field be used for transferring the information of the selected pickup point through the interface. The PUPcode of the Pickup point register is entered in the Quickld field.

**Please notice**, the Pickup point register information is available using Posti Location API, link to the instructions is in this document's Location API section.

```
37 | .... | agent": {
38 | .... | .... | quickId": "207803200"
39 | .... | ,
```

• quickld (string)

# 4.2.3. CONTRACT INFORMATION (SENDERPARTNERS)

The contract information to be used is entered in the senderPartners element. This element must be used if the sender is using several pieces of contract information and quick search values are not in use.

The "POSTI" value is used as the logistics contract ID for OmaPosti Pro API's parcel and letter products. The logistics contract number is entered in the custNo field.



The "ITELLALOG" value is used as the freight ID for freight products. The freight contract number is entered in the custNo field.

- id (string) POSTI or ITELLALOG
- **custNo** (string) *Logistics or freight contract ID*

#### 4.2.4. SERVICES AND SUPPLEMENTARY SERVICES

Services and supplementary services are entered in the service element. The service selected for the shipment is entered in the id field. The service codes and attributes of the services and supplementary services available in OmaPosti Pro API are found in the Posti service matrix. The service list is the same as for the SmartShip API.

```
····"service": {
36
     ····"id": "P02103",
37
     ---- addons": - [
38
39
      ····"id": · "NOT",
40
         ····"text3": "0401234567",
41
     "text4": "test@example.com"
42
     . . . . |- . . . . }
43
     - - - - |- - ]
44
45
     ....},
```

The selected supplementary services and their attributes are entered in the addons element. The addons element is in tabular form, so it can be repeated, where necessary.

**Please notice**, some supplementary service attributes, such as the mobile phone number required by an electronic notice of arrival, can be obtained from the receiver's mobile field. Some supplementary service attributes, such as information on dangerous goods and customs declaration information, require an element of their own.

# 4.2.5. ORDERING A PICKUP

OmaPosti Pro API can order a separate pickup for the shipment. The pickup ordering information is entered in the service element. When making a pickup order, the pickup date and the pickup timeframe



pickupTimeFrom - pickupTimeTo must be entered in the system. The minimum timeframe must be two hours.

- **pickupBooking** (boolean)
- **pickupDate** (string) *YYYY-MM-DD*
- **pickupTimeFrom** (string) *HH:MM:ss*
- **pickupTimeTo** (string) *HH:MM:ss*
- **pickupText1** (string) *Pickup instructions, Obligatory*
- **pickupMisc** (string) *Pickup reference*

Infocode can be used for additional information for invoicing.

• **infoCode** (string, max 15 characters) *The info code is not shown in the item ID in Posti shipment* 

# 4.2.6. CUSTOMS DECLARATION INFORMATION

With OmaPosti Pro API, it is possible to produce all documentation required for shipment customs declaration (CN22, CN23, Pro forma) in connection with printing shipment transport documents. The information needed for generating customs declaration documentation is entered in a specific customsDeclaration element in the Shipment element. Include either CN22 or CN23 in the printSet depending on the shipment value, the message cannot have both customs documents for one shipment. Use the CN22 for shipments with a maximum value of 300 SDR (approx. €350). If the value of the shipment exceeds 300 SDR, use the CN23 list and with parcel shipments also add the proforma invoice information.

The importExportType value must be one of the following: DOCUMENTS, GIFT, MERCHANDISE, OTHER, RETURN, or SAMPLE.



```
··"shipment": {
16
    ····"customsDeclaration": {
17
     ····"invoiceType": "STANDARD",
18
    ----"invoiceNo": "123456",
19
    ····"importExportType": "DOCUMENTS",
20
21
     ····"printSet": ["CN23POSTI", "PROFORMAPOSTI"],
    ····"currencyCode": "EUR",
22
     ····"lines": [{
23
24
    ···· "contents": "Books",
    ···· "statNo": "40005000",
25
    ···· "copies": 1,
26
    ····"netWeight": 1,
27
     ···-"value": 400,
28
    ····"sourceCountryCode": "FI",
29
    ····"valuesPerItem": false
30
    31
    ....},
32
```

Attribute	Description	CN22	CN23	Pro forma
printSet (string)	Customs declaration document type	CN22POSTI	CN23POSTI	PROFORMAPOSTI
invoice type (string)	Document type			STANDARD
invoiceNo (string)	Invoice number		X	X
currencyCode (string)	Currency code	X	X	X
importExportType (string)	Export / import type	X	X	X
generalNote1 (string)	Comments			
generalNote2 (string)	Comments			
generalNote3 (string)	Comments			
generalNote4 (string)	Comments			
statNo (string)	Goods code	X	X	X
subStatNo1 (string)	Additional goods codes			
copies (integer)	Quantity			X
value (number)	Customs value	Х	X	X
contents (string)	Contents	Х	X	X
netWeight (number)	Net weight	Х	X	
sourceCountryCode (string)	Source country	X	X	X

# 4.2.7. ADDITIONAL SHIPMENT INFORMATION AND REFERENCES

Additional shipment information and reference information, such as the sender reference and supplementary information are part of the shipment element. The sender's reference is field with 17 characters.



- **senderReference** (string, max 35 characters)
- **freeText1** (string, max 30 characters) *Other information / transport instructions*
- **freeText2** (string, max 30 characters) *Other information / transport instructions*
- **freeText3** (string, max 30 characters) *Other information / transport instructions*
- freeText4 (string, max 30 characters) Other information / transport instructions

# 4.2.8. SMARTSHIP FEATURES NOT SUPPORTED

Please notice, that there are some SmartShip API features that are not supported in OmaPosti Pro API. These include the predefined information for shipments ("Printing favorites") and using address book contacts with just QuickID value instead of full sender or receiver information in the message.

Also following shipment fields are not supported:

- orderNo
- receiverReference

## 4.3. PARCELS ELEMENT

Package shipment information is reported using the parcels element. The parcels element also contains the data attributes for dangerous goods. The parcels element is in tabular form, so it can be repeated if there are dangerous goods in several different packages, for example.

OmaPosti Pro API allows the possibility to enter package information for individual items or packages using the valuePerParcel (boolean) parameter. If the valuePerParcel is "true", weight information, for example, has been entered for each package i.e. copies value. If the valuePerParcel is "false", the weight information is for the whole shipment, so the weight information for one package is indicated as weight/number of packages.



```
parcels": [{
18
    ····"copies": 1,
19
    |----|-- "weight": 20,
20
    ···· "contents": "Stuff",
21
    ····"valuePerParcel": true,
22
    ···· dangerousGoods": {
23
24
    ···· "unCode": 1234",
    ····"hazardCode": "1.1",
25
    ····"packageCode": "I",
26
    ····"description": "Dangerous stuff",
27
28
    ····"adrClass": "1",
29
    ···-"netWeight": "12",
    ····"trCode": "E"
    |----|--}-----
31
32
```

Fields essential for Posti's shipments:

- **copies** (integer) *Number of packages, Obligatory*
- weight (number) Weight, Obligatory for freight and letter services
- volume (number) Volume, Obligatory for the freight service
- packageCode (string) Package type, Obligatory
- length (number) Length
- width (number) Width
- height (number) Height
- contents (string) Contents

#### 4.3.1. DANGEROUS GOODS

Dangerous goods are indicated specific to package in the dangerousGoods element below the Parcels element. Dangerous goods can be indicated specific to package.

```
----"dangerousGoods": {
23
24
    ···· "unCode": · "1234",
    ····"hazardCode": "1.1",
25
    ····"packageCode": "I",
26
    ····"description": "Dangerous stuff",
27
    ...."adrClass": "1",
    ····"netWeight": "12",
29
    ····"trCode": - "E"
30
31
    32
```

Sending dangerous goods shipment also requires that the following information is included in the service.addons section for "DNG" (Dangerous Goods) supplementary service.



```
····"service": {
     ···· addons": [{
56
57
     .... "documentType": "ROAD",
     ····"id": · "DNG",
58
    ----"declarant": "Sender name",
60
     ····"text1": "Handling information 1",
     ···· "text2": "Handling information 2",
61
     ···· "text3": "Handling information 3",
62
     ····<mark>"text4": "Handling information 4"</mark>
63
64
    |----}],
```

- declarant (string) Goods holder, Obligatory in the Service. Addons for DNG
- unCode (string) UN number, Obligatory
- hazardCode (string) Secondary hazard class
- packageCode (string) Package group
- packageType (string) Package type
- description (string) Official transport name, Obligatory
- technicalDescr (string) Technical name
- adrClass (string) Main hazard class, Obligatory
- mpCode (string) Dangerous to the environment
- **note** (string) *Note*
- **netWeight** (number) *Net weight, Obligatory*
- **netVolume** (number) *Net volume, Obligatory*
- **trCode** (string) *Tunnel restriction code*
- quantity (integer) Quantity

# 5. RETURN MESSAGE

The OmaPosti Pro API return message contains information sent to the interface. Packages created by OmaPosti Pro API, and their item IDs (parcels), and links to printouts (pdfs).



```
[
          "href": "https://gateway.posti.fi/shippingapi/api/v1/shipments/654321",
"id": "654321",
          "status": "PRINTED",
          "shipmentNo": "202403281649270015149646",
"orderNo": "Postipaketti 001",
"reference": "Sender reference",
"serviceId": "PO2103",
"parcelCount": 1,
          "sndName": "Test Sender",
          "sndZipcode": "00100"
"sndCity": "HELSINKI"
          "sndCountry":
          "rcvName": "Receiver Name",
"rcvZipcode": "20100",
          "rcvCity": "TURKU",
          "rcvCountry": "FI"
          "created": "2024-03-28T18:49:26+02:00", "changed": "2024-03-28T18:49:26+02:00",
          "shipDate": "2024-03-28T18:49:26+02:00",
          "returnShipment": false,
"normalShipment": true,
          "consolidated": false.
           "parcels": [
                     "parcelNo": "JJFI65432198905519766"
           "pdfs": [
                     "href": "https://gateway.posti.fi/shippingapi/api/v1/shipments/654321/pdfs/16ad75c9-8e4a-4693-8dcd-ff2463112c45", "id": "16ad75c9-8e4a-4693-8dcd-ff2463112c45",
                     "description": "Label",
                     "media": "thermo-225",
                     "pdf_type": "ADDRESSLABEL"
           "previousPdfs": [
                 https://gateway.posti.fi/shippingapi/api/v1/shipments/654321/pdfs/04951f6c-44e3-4f22-9654-c21c23319f90",
               "https://gateway.posti.fi/shippingapi/api/v1/shipments/654321/pdfs/la402cc6-c6f7-49aa-9c1f-cdeb136b85fc
```

#### 5.1. INFORMATION SENT TO THE INTERFACE

The shipments request's return message returns the information of the shipment's parameters to the interface, and information on when the system accepted the order, created item IDs for it and generated printouts.

#### 5.2. PACKAGES CREATED BY THE INTERFACE

The parcels element includes the item IDs of the packages in the shipment.

# 5.3. PRINTOUTS

Address labels and other transport documents, such as customs declaration documents, created by OmaPosti Pro API are found in the return message's pdfs element. The type of printout is shown in the Description field.

The Href field contains a link to the printout. **Please notice**, opening the printout link requires authentication using the same API key by means of which the shipment was created.

# 6. PICKUP POINT SEARCH

Pickup points search can be implemented via Posti Location API Service.



# 6.1. LOCATION API FOR PICKUP POINTS

Posti Pickup points can be searched from Location API. The old version found in <a href="http://locationservice.posti.com/">http://locationservice.posti.com/</a> is also available, but it is recommended to use the new Location API v3. Instructions how to use the Location API v3 can be found here:

https://developer.posti.fi/devportal/apis/0cb54ae8-8a0b-4049-88fe-a6b62bab00fc/overview

The pupCode of the return message is used as the value of the quickld as explained in the Section 4.2.2.

