

API Developer Guidelines

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DPD Web Connect

Important developer guidelines

DPD Web Connect is an api service provided by DPD Deutschland GmbH (referred to below as „DPD“). The service is available via the internet and can primarily be used by customers of DPD Deutschland GmbH. Credentials are needed to access the service. Just like any other application provided via the internet, it is very important to

protect it. In order to do so, certain key rules must be followed. The following guidelines explain those important rules when using the DPD Web Connect service and give a quick overview. Failure to follow these guidelines may cause an application ban. These guidelines do not replace the existing terms of use.

General information

Each application must be able to differentiate between prod and stage environment

- The stage environment must be used for development and testing purpose only.
- The production environment must only be used for production purposes.

Each application implementing the DPD Web Connect service must be able to switch between those two environments. The environments are distinguished by their base URL:

Stage:

[https://public-ws-stage.dpd.com/...](https://public-ws-stage.dpd.com/) development and testing

Prod:

[https://public-ws.dpd.com/...](https://public-ws.dpd.com/) production

Stage and prod environments use different api credentials

Hence a different username password combination is in use.

Different availabilities for REST and SOAP

	REST	SOAP
Login service	☒	☒
Shipment service	☐	☒
ParcelShopFinder Service	☒	☒

The shipment service is not available via the REST interface.

General information

Different endpoints for REST and SOAP

Depending on the interface, a different endpoint URL must be applied:

REST .../restservices/...

SOAP .../services/...

An example of a SOAP endpoint would be:

https://public-ws-stage.dpd.com/services/ExampleService/V1_2/

The corresponding WSDL would be:

https://public-ws-stage.dpd.com/services/ExampleService/V1_2/?wsdl

E.g. REST would be:

https://public-ws-stage.dpd.com/restservices/ExampleService/V1_2/method

To get all available endpoints, the latest version as well as specifications, please visit our development portal.

<https://esolutions.dpd.com/entwickler/dpdwebservices.aspx>

The website provides up-to-date documentation, code examples as well as a sandbox for development purpose. Please register as a developer to get access to all detailed information.

There is no fixed lifetime for any service endpoint

DPD does not have a fixed interval or a specific lifetime for any of the services provided by DPD Web Connect. However, due to technical changes, new product developments, bug fixing as well as enhanced performance it is possible that DPD will release a new service endpoint version. DPD reserves the right to phase-out older service versions. The end of life of each service will be announced individually. Adapting to a new service endpoint version will be mandatory and can cause additional changes and development for a user. A typical phase-out takes 9 months between the announcement and the service termination.





Login service

Generating only one authentication token per day

To protect each account and password, an authentication token must be generated via the login service. This token is used in all following api calls. Each token is valid for one business day CET / CEST and must be cached.

- Calling the login service more than 10 times per user account (DelisID) a day is prohibited.
- Calling the login service in combination with each shipment service or ParcelShopFinder Service is specifically prohibited.

Exception:

If the authentication has expired every DPD Web Connect service will provide a corresponding errorCode:

LOGIN_5 The authtoken is invalid

LOGIN_6 Your session expired

If these errorCodes are received by any of the DPD Web Connect services, it is mandatory to make a login service call and cache a new authentication token.

The process of calling the login service may be automated

Every token will be terminated at around 3 am*. A good time to call the login service and generate a new authentication token is 3:01 am* or any time after 3:01 am*. The next login service call may happen 24 hours later.

Shipment service

All shipment service api calls must be done in a sequential manner

Just one api request at a time is permitted. Only when the service has responded to the initial api call can a new api call be sent.

Sending multiple shipment service calls at the same time is prohibited.



Using more than one IP-address, e.g. a load balancing cluster, must also ensure no api calls are being sent simultaneously.

The shipment service api provides no function to create shipments within a bulk processing.

Failure to do so can cause an application ban.

The limit for each account is 60 shipment service calls per minute

Generating one shipping label takes on average about 1 second per label. Working in a sequential manner therefore gives a limit of 60 shipping labels per minute or 3,600 per hour.

Exceeding the limit can cause an application ban.

It is possible to use several workstations simultaneously for the label creation process

In this case each workstation must send its associated shipment service api calls in a sequential manner.

Furthermore, all workstations together must comply the total limit of 60 shipment service calls per minute.



Shipment service

Correct address labeling is key for a successful delivery

Only the character set “iso8859-1” may be used for the transmission of address information. The shipment service provides the following address fields which are being printed on the shipping label:

Damage not recognizable on the outside has to be reported in writing to DPD within 7 days after delivery.			
Consignee		Sender	
name1		name1	
name2		name2	
contact		street houseNo	
street houseNo		DE-63741 city	
Phone		DE-00163 Aschaffenburg	
GB-SE19RA city		Phone +49 (0) 60 21 4 43 94-0	

Field description:

- name1
- name2 (optional)
- contact (optional)
- street
- houseNo
- phone (optional)
- country
- zipCode
- city

Example B2B address:

Muster Company

Wailandstraße
1
01234789
DE
63741
Aschaffenburg

Example B2C address:

Max Mustermann

Wailandstraße
1
01234789
DE
63741
Aschaffenburg





ParcelShopFinder Service

During the checkout an up-to-date list of available DPD Pickup parcelshops and DPD Pickup stations must be requested

This service is mandatory for shipments which are being shipped directly to a DPD Pickup parcelshop or a DPD Pickup station. The service is designed for e-commerce businesses and must be implemented into the checkout process.

Each api call must at least contain the following details:

```
...
<findParcelShops>
<country>..</country>
<zipCode>.....</zipCode>
<city>.....</city>
<street>.....</street>
<houseNo>..</houseNo>
<limit>10</limit>
<availabilityDate>YYYY-MM-DD</availabilityDate>
<hideClosed>true</hideClosed>
<searchCountry>..</searchCountry>
<services>
<service>
<code>100</code>
<available>true</available>
</service>
</services>
</findParcelShops>
...
```

- address
- limit = 10
- availabilityDate
- hideClosed = true
- searchCountry
- service code 100 = true

Filter options are available for the output of DPD Pickup parcelshops and DPD Pickup stations within Germany

DPD Pickup parcelshops only:

```
...
<findParcelShops>
<country>..</country>
<zipCode>.....</zipCode>
<city>.....</city>
<street>.....</street>
<houseNo>..</houseNo>
<limit>10</limit>
<availabilityDate>YYYY-MM-DD</availabilityDate>
<hideClosed>true</hideClosed>
<searchCountry>..</searchCountry>
<services>
<service>
<code>100</code>
<available>true</available>
</service>
<service>
<code>901</code>
<available>false</available>
</service>
</findParcelShops>
...
```

- address
- limit = 10
- availabilityDate
- hideClosed = true
- searchCountry
- service code 100 = true
- service code 901 = false

ParcelShopFinder Service

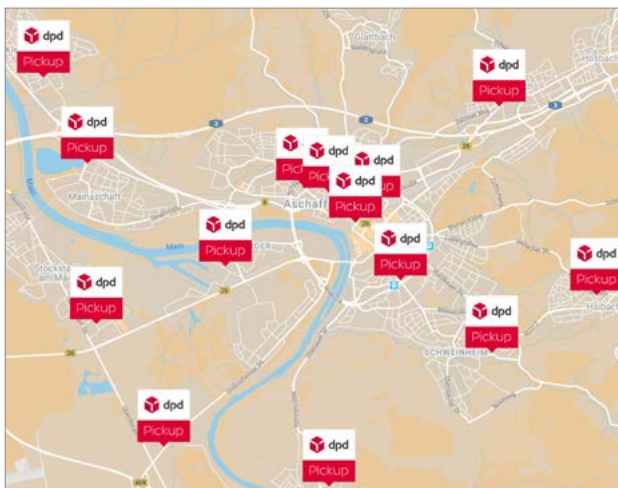
DPD Pickup stations only:

```
...
<findParcelShops>
  <country>..</country>
  <zipCode>.....</zipCode>
  <city>.....</city>
  <street>.....</street>
  <houseNo>..</houseNo>
  <limit>10</limit>
  <availabilityDate>YYYY-MM-DD</availabilityDate>
  <hideClosed>true</hideClosed>
  <searchCountry>..</searchCountry>
  <services>
    <service>
      <code>901</code>
      <available>true</available>
    </service>
  </findParcelShops>
...
```

- address
- limit = 10
- availabilityDate
- hideClosed = true
- searchCountry
- service code 901 = true

Every response will provide multiple DPD Pickup parcelshops or stations nearby. Each parcelshop / station provides a unique ID, the so called pudo id. Also, the shop address as well as geographical coordinates (latitude and longitude) are provided.

The coordinates can be used for an additional maps service integration. A maps service integration must take place independently.



It is important to store both unique IDs including the full address with each client order

The pudo id, parcelshop id and address which has been stored with each order must later be used to create the corresponding DPD shipping label. You must save the DPD parcelshop data which has been accessed only for the length of time required for the processing of the order and not connect such data with the data of other shipments.

As a precondition for the use of the DPD Web Connect you must not create any automated enquiries placed via programs, scripts, robots or similar tools or cooperate in anything aimed at extracting or collecting large volumes of data.

API call limit

The maximum possible api call limit for each service is

Service / Transaction	per second	per minute	per hour	per day
LoginService	-	-	-	max. 10 per Account
ShipmentService	1	60	3.600	-
ParcelShopFinder Service	1,6	100	6.000	-

These limits must be followed, failing to do so can cause an immediate ban from the system.

Additional information



Current specifications, endpoints, URLs can be found within our development portal

<https://esolutions.dpd.com/entwickler/dpdwebservices.aspx>

The website provides up-to-date documentation, code examples as well as a sandbox for development purposes. Please register as a developer to get access to all detailed information.



Contacting the DPD Customer Interface Technology Team for further information

A team of specialists will assist your api Integration to ensure an easy, flawless and quick start to your project.

Contact us at cit@dpd.de or call us at: +49 (0) 6026 9762 6204



Each development using the DPD Web Connect service must be validated and approved by DPD

This validation is mandatory to get started with the DPD Web Connect service. The correct handling, the implemented services as well as products must be tested and validated prior any access to the production environment.

Hazardous Shipping

The implementation of the Hazardous Shipping & DPD Distribution chapter is only required if hazardous shipments will be shipped with DPD.

Sending hazardous shipments with DPD requires a special agreement

The shipping of hazardous goods is subject to the GGVS/ADR hazardous goods regulations. Please get in touch with your DPD contact person for information regarding the shipping options provided by the DPD system for hazardous goods.

Implementation of the hazardous substance file for querying the dangerous goods parameters

For the parameter query of the allowed hazardous goods during the parcel label creation process it is necessary to integrate the DPD hazardous file into your shipping solution. The hazardous substance file can be downloaded via the DPD Distribution Service.

Overview of the ShipmentService/Hazardous Substance file field mapping:

ShipmentService	HAZSUBSTANCE	Additional information
identificationUnNo	UNNR	
identificationClass	KLASSE	
classificationCode	KCODE	
packingGroup	VGRUPPE	
description	BEZ	
subsidiaryRisk	NEBGEF	
tunnelRestrictionCode	TBC	
netWeight	NEM (Boolean j/n)	netto weight of the explosive mass of this substance
factor	FAKTOR	
notOtherwiseSpecified	NAG (Boolean j/n)	A not otherwise specified text which is mandatory for some substances.

The specification of the individual hazardous goods fields in the ShipmentService Request depends on the respective dangerous goods substance.

The ShipmentService only provides a shipping label as well as an additional hazardous goods label.

The generation of the ADR transport document must be done from your system.

DPD Distribution Services

General information

Mandatory update checks on a daily basis



At least one update check per day must be performed. The process shall be automated and can be scheduled to certain times during the day, to suit your setup the best way possible. A good practice would be, to run a scheduled task (cron job) during nighttime or early in the morning.

It is also possible to increase the frequency, for example hourly update checks are permitted. It is not recommended to increase the frequency higher than on an hourly basis. A maximum of 24 checks per day is recommended.

Please ensure your compliance towards the maximum download limit. See chapter download restriction for more details.

How does it work?

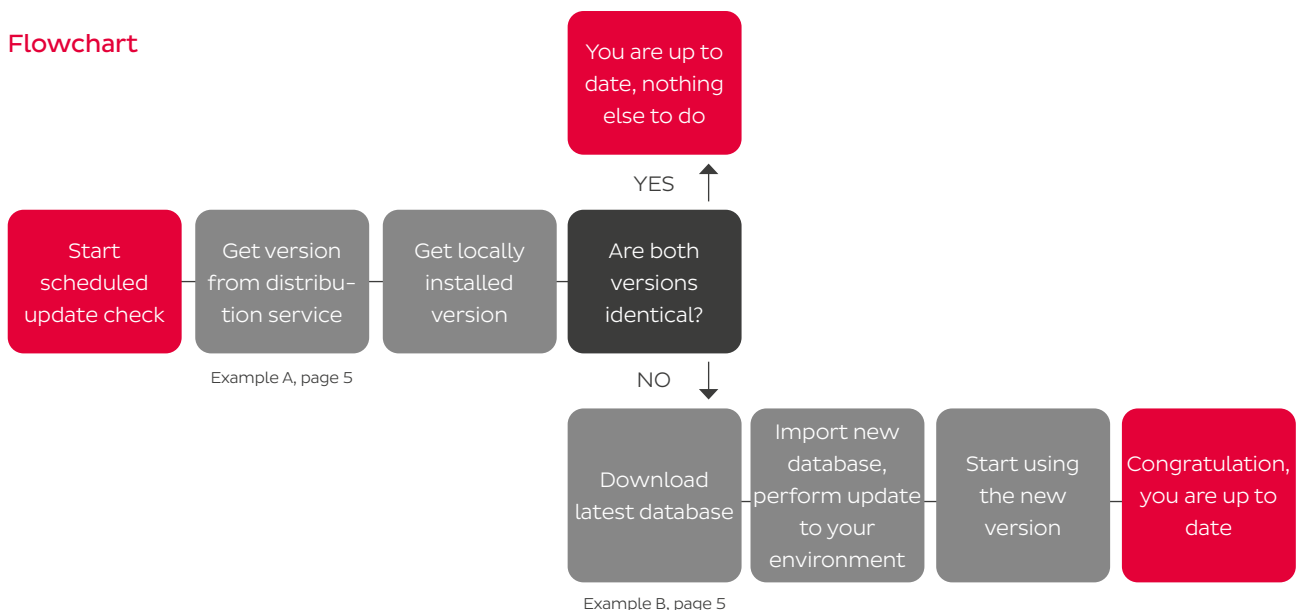
When calling the distribution service, it will always tell you, the latest available and valid version to be used in your production environment. You compare the online available version with your locally installed version to find out, whether an update is necessary or not.

- If both, the online version as well as your locally installed version are identical, there is nothing else to do. You are running the latest version available. No update is required at that point.
- If the online version, compared to your locally installed version is not identical, you shall perform an immediate database update to run the latest version possible.

What data does this service provide?

Currently the distribution service provides the hazardous substance database for DPD Germany, which is required for hazardous goods shipments

Flowchart



Technical information

RESTful URLs

Method:

GET

Endpoint: <https://esolutions.dpd.com/partnerloesungen>

Resources:

Hazardous substance: </hazdistributionservice.aspx>

Possible parameter: `?version=<response_version>`

Example A: `...dpd.com/partnerloesungen/hazdistributionservice.aspx`

Example B: `...dpd.com/partnerloesungen/hazdistributionservice.aspx?version=<response_version>`

Example A is used to retrieve the latest version in every scheduled update check. Follow the flowchart on page 4. Example B is used to download the actual database zip file.

Example response

```
{
  "version": "22030704"
}
```

Code snippet

```
#!/usr/bin/python
import requests
```

```
## Get latest version from dpd distribution service
```

```
url = 'https://esolutions.dpd.com/partnerloesungen/hazdistributionservice.aspx'
```

```
response_version = requests.get(url).json()['version']
```

```
## Get installed version from your local database. In this example we will use a dummy value
```

```
local_version = '22030704'
```

```
## Version validation check
```

```
if local_version == response_version:
```

```
    print('Congratulation, you are up to date. You are running the following version: '+local_version)
```

```
else:
```

```
    ## Your locally installed version is not up to date. Proceed with a download and database update
```

```
    new_database = requests.get(url+'?version='+response_version)
```

```
    open('new_database.zip', 'wb').write(new_database.content)
```

```
    print('The following database version has been downloaded: '+response_version)
```

```
    ## Proceed with the update, extract zip file, import new database, start using the new version
```



Restrictions and exceptions

Download restriction



To avoid unnecessary network traffic, the database downloads (example B, page 5) are restricted to a maximum of 10 downloads per hour. Should you happen to exceed this download limit, an automated ban will be applied for a duration of 24 hours. In this case the service will respond with the http status code: 429 - Too Many Requests

In addition to the http status code, the following error message will be sent:
Dieser Fehler wird vom benutzerdefinierten Fehlermodul nicht erkannt.

The download limit does not apply to the basic update checks (example A, page 5). Update checks are unlimited, however we recommend a maximum of 24 scheduled update checks per day.

In case of a ban, both the download (example B) as well as the update check (example A) will be banned for a duration of 24 hours.

Downtime

In the very unlikely moment that this distribution service is unavailable, you can proceed with the locally installed database version for at least one day. Simply retry your scheduled update check the next day or within the next hour, depending on your individual frequency of update checks. Follow chapter: mandatory update checks on a daily basis for more information on the frequency.

