



COLLECTING SOLUTION

SEPA Direct Debit REST API Web Implementation Guide

Document version 5.2

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1. HISTORY OF THE DOCUMENT

Version	Author	Date	Comment
5.2	Lyra Collect	02/06/2021	Initial version

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2. PRESENTATION OF THE SEPA WEB SERVICE

This document presents the SEPA Web Service allowing to:

- **Import one or several SDD mandates** that already exist, i.e. the buyer has already signed a mandate on paper or in another format.

Requires for the “Checkbox signature” option to be present in the shop.

- **View the details of a mandate** (debited account, name of the debtor).
- **Download the SDD mandate details** in PDF format.
- **Update** an SDD mandate.
- **Delete** an SDD mandate.

This Web Service was developed according to the **REST** protocol.

In order to secure the exchange, this Web Service is encrypted according to the **HTTPS** protocol.

2.1. Prerequisites

- Have a shop with an SDD (SEPA Direct Debit) contract.
- Have the “Checkbox” signature mode.

3. USING THE WEB SERVICE

Each request is composed of the following elements:

- a requested URL (or "endpoint")
- a method
- headers
- the details (or "body")

The endpoint

The endpoint (root-endpoint) of the API is: <https://secure.lyra.com/sdd>.

Several resources, each associated with a different path, are provided:

Action	Method	URI
Import an existing mandate	POST	/mandates
Import several existing mandates	POST	/multimandates
View mandate details	GET	/mandates/:id
Download a mandate	GET	/mandates/:id
Update a mandate	PUT	/mandates/:id
Delete a mandate	DELETE	/mandates/:id

(:id) in the path indicates a variable. You must replace this variable by a real value when you send your request. In our case, you must replace :id by the ID of the mandate that you want to use.

The method

Each resource is accessible via a specific method. This method translates the action that you want to perform (see table below).

- `GET` This request is used to obtain a resource via the server.
- `POST` This request is used to create a new resource.
- `PUT` This request is used to update a resource.
- `DELETE` This request is used to delete a resource.

The headers

The HTTP headers are key-value pairs separated by " : ".

They are used for transmitting authentication details and information about the contents of the request.

The headers used in this API are described in the chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7.

The details (or "body")

The details (also referred to as "body" or "message") contains the information that you want to pass to the server. It is used only in the `POST` and `PUT` requests.

The details are transmitted, both in requests and responses, in JSON (Javascript Object Notation) format. In this format, each property and value is framed by double quotes:

```
{
  "property1" : "value1",
  "property2" : "value2"
}
```

```
}
```

Test the web service with cURL

This part implies that you have already *installed cURL*.

In order to use cURL, enter `curl` followed by the endpoint that you would like to interrogate.

Example with a call to our root-endpoint:

```
curl https://secure.lyra.com/sdd
```

Once you validate, you will obtain the response below:

```
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">
<html><head>
<title>404 Not Found</title>
</head><body>
<h1>Not Found</h1>
<p>The requested URL /sdd was not found on this server.</p>
<p>Additionally, a 404 Not Found
error was encountered while trying to use an ErrorDocument to handle the request.</p>
</body></html>
```

To obtain the list of mandates registered for your shop, change the line of the previous order specifying the “ `/mandates` ” endpoint:

```
curl https://secure.lyra.com/sdd/mandates
```

You will obtain the response below:

```
{
  "name" : "ERROR",
  "message" : "Service error",
  "details" : "RESTEASY001545: No resource method found for GET, return 405 with Allow header"
}
```

You get this response as you are not authenticated.

Now it is time to discover how to authenticate using HTTP headers.

The steps of building a header are:

1. Use the **Basic Authentication** method.
2. Specify the used method in the **Authorization** header: **Basic** followed by the Base64 representation of the **Site_id** and **Certificate** values separated by the ":" character.
3. Encode the obtained result in Base64.
4. Add the chain to "Basic".

Note:

Make sure to use a space character after Basic.

Sending headers with cURL

In order to add headers to your request, use the `-H` or `--header` option.

Example:

To specify the content type:

```
curl -H "Content-type:application/json" https://secure.lyra.com/sdd
```

In order to see the headers sent in your request and in the response, use the `-v` option.

```
curl -H "Content-type:application/json" https://secure.lyra.com/sdd
```


5. UNDERSTANDING THE HTTP STATUS CODES

errorCode	Description	Example
200	Action successfully completed	
400	Input data error	<ul style="list-style-type: none">• Locale field populated in lowercase• Locale field not supported (e.g.: Russian)• Mandatory field missing• Invalid IBAN
404	ID error	<ul style="list-style-type: none">• ID unknown• ID known but it is not an SDD payment method identifier (e.g.: ID of a visa card)
500	Failure	API server technical error

Table 2: Http statuses

6. IMPORTING AN EXISTING MANDATE

In order to import an existing mandate:

1. Specify the desired action: <https://secure.lyra.com/sdd/mandates>
2. Build your HTTP header (see chapter *Identifying yourself when exchanging with the payment gateway* on page 7).
3. Add the fields **iban**, **last_name**, **first_name**, **email**, **payment_type** and **locale** required for importing the mandate.

Field	Format	Description	Required	Example
iban	string	IBAN for International Bank Account Number: Debtor's bank account identifier	✓	"iban":"FR7630002005701234567890158"
last_name	string	Debtor's last name	✓	"last_name":"Smith"
first_name	string	Debtor's first name	✓	"first_name":"John"
email	string	Debtor's e-mail address	✓	"email":firstname.lastname@example.com"
payment_type	string <ul style="list-style-type: none"> • RECURR • ONEOFF 	Type of mandate: <ul style="list-style-type: none"> • Recurring The signed mandate applies to a series of direct debits. • One-off The signed mandate applies to a single direct debit. 	✓	"payment_type":"RECURR" or "payment_type":"ONEOFF"
locale	string <ul style="list-style-type: none"> • FR for French • DE for German • EN for English • ES for Spanish • IT for Italian • NL for Dutch • PL for Polish • PT for Portuguese • SV for Swedish 	Language of mandate generation	✓	"locale":"FR"

4. Add the **address** object to transmit the debtor address details. Some banks check whether this information is present before accepting a direct debit request. The address is required if the client has a bank account in the following departments, territories or countries: Switzerland, Monaco, San Marino, Mayotte, St. Pierre and Miquelon, Guernsey, Jersey, Isle of Man.

Attribute of the address object	Format	Description	Example
city	string	City	Labège
country	string	Country code in compliance with the ISO 3166 alpha-2 standard	FR

Attribute of the address object	Format	Description	Example
district	string	District	Labège-Innopole
state	string	State / Region	Occitanie
street	string	Postal address	Rue de l'Innovation
street_number	string	Street number	109
street2	string	Address line 2	Bat 1
zip	string	Zip code	31670

5. Add the optional fields **bic**, **title**, **callback_url**, **send_mails** and **fetch_address**, if necessary.

Field name	Format	Description	Example
bic	string	BIC for Bank Identifier Code: International identifier of the debtor's bank	"bic": "CRLYFRPP"
title	string	Debtor's title	"title": "Mr"
callback_url	string	URL	https://.../
send_mails	boolean	Default value: False If the field is set to True , the Lyra Collect PDF will send the mandate registration e-mails to the buyer and to the merchant once a mandate is created or updated.	
fetch_address	boolean	Allows to indicate whether the address object is sent in return after the WS response. Default value: false .	

Example of a cURL request:

```
$ curl 'https://.../mandates' -H
Authorization:Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng== -H
Content-Type:application/json' -H
'Accept: application/json' --data
'{"bic":"iban":"FR7630002005701234567890158","title":"Mr","last_name":"Smith","first_name":"John",
"email":"jsmith@ymail.com","payment_type":"RECURR","locale":"FR","address":
{"street_number":"109",
"street":"rue de l'Innovation","street2":"Bat 1","district":"Labège-Innopole","zip":"31670",
"city":"Labège","country":"FR","state":"Occitanie"},"fetch_address": true}' -i
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:38:47 GMT
Content-Type:application/json
Connection:close
Transfer-Encoding:chunked

{
  "identifiant":"DE98ZZZ09999999999-20140827onGTun",
  "rum":"DE98ZZZ09999999999-20140827onGTun",
  "id":"12345678-DE98ZZZ09999999999-20140827onGTun",
  "title":"Mr",
  "email":"jsmith@ymail.com",
  "first_name":"John",
  "last_name":"Smith",
  "address":{
    "street_number":"109",
    "street":"rue de l'Innovation",
    "street2":"Bat 1",
    "district":"Labège-Innopole",
    "zip":"31670",
    "city":"Labège",
    "country":"France",
    "state":"Occitanie"
  },
  "site":"12345678",
  "created_at":1409135927000,
  "updated_at":null,
```

```
"fetch_address":true  
}
```

7. IMPORTING SEVERAL EXISTING MANDATES AT ONCE

It is possible to import several mandates for several stores at once, provided that you have:

- the same debtor
- the same IBAN

As opposed to importing a single mandate, the data is:

- a new access point: POST <https://secure.lyra.com/sdd/multimandates>
- a complementary parameter **sites**: [Shop ID]

The response will contain:

- a mandate per shop
- a JSON table per shop

In order to import several mandates:

1. Specify the desired action on the first line: <https://secure.lyra.com/sdd/multimandates>'
2. Build your HTTP header (see chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7).
3. Add the fields **iban**, **last_name**, **first_name**, **email**, **payment_type**, **locale** and **sites**, required for importing mandates.

Field	Format	Description	Required	Example
iban	string	IBAN for International Bank Account Number: Debtor's bank account identifier	✓	"iban":"FR7630002005701234567890158"
last_name	string	Debtor's last name	✓	"last_name":"Smith"
first_name	string	Debtor's first name	✓	"first_name":"John"
email	string	Debtor's e-mail address	✓	"email":firstname.lastname@example.com
payment_type	string <ul style="list-style-type: none">• RECURR• ONEOFF	Type of mandate: <ul style="list-style-type: none">• Recurring The signed mandate applies to a series of direct debits.• One-off The signed mandate applies to a single direct debit.	✓	"payment_type":"RECURR" or "payment_type":"ONEOFF"
locale	string <ul style="list-style-type: none">• FR for French• DE for German• EN for English• ES for Spanish• IT for Italian	Language of mandate generation	✓	"locale":"FR"

Field	Format	Description	Required	Example
	<ul style="list-style-type: none"> NL for Dutch PL for Polish PT for Portuguese SV for Swedish 			
sites	n8	Shop ID(s)	✓	"sites":["11111111", "22222222"]

Table 3: Required fields

4. Add the **address** object to transmit the debtor address details. Some banks check whether this information is present before accepting a direct debit request. The address is required if the client has a bank account in the following departments, territories or countries: Switzerland, Monaco, San Marino, Mayotte, St. Pierre and Miquelon, Guernsey, Jersey, Isle of Man.

Attribute of the address object	Format	Description	Example
city	string	City	Labège
country	string	Country code in compliance with the ISO 3166 alpha-2 standard	FR
district	string	District	Labège-Innopole
state	string	State / Region	Occitanie
street	string	Postal address	Rue de l'Innovation
street_number	string	Street number	109
street2	string	Address line 2	Bat 1
zip	string	Zip code	31670

5. Add the optional fields **bic**, **title**, **callback_url**, **send_mails** and **fetch_address**, if necessary.

Field name	Format	Description	Example
bic	string	BIC for Bank Identifier Code: International identifier of the debtor's bank	"bic":"CRLYFRPP"
title	string	Debtor's title	"title":"Mr"
callback_url	string	URL	https://.../
send_mails	boolean	Default value: False If the field is set to True , the Lyra Collect PDF will send the mandate registration e-mails to the buyer and to the merchant once a mandate is created or updated.	
fetch_address	boolean	Allows to indicate whether the address object is sent in return after the WS response. Default value: false .	

Example of a cURL request:

```
$ curl 'https://.../multimandates' -H
'Authorization: Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng==' -H
Content-Type:application/json' -H
'Accept: application/json'
--data
{"iban":"FR7630002005701234567890158","title":"Mr","last_name":"Smith","first_name":"John",
"email":"jsmith@gmail.com","payment_type":"RECURR","locale":"FR","address":
{"street_number":"109",
"street":"rue de l'Innovation","street2":"Bat 1","district":"Labège-Innopole","zip":"31670",
"city":"Labège","country":"FR","state":"Occitanie"},"fetch_address":false,
"sites":["11111111","22222222","33333333"]} -i
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:41:42 GMT
Content-Type:application/json
Connection: close
Transfer-Encoding:chunked

[
  {
    "bic":"CRLYFRPP",
    "iban":"FR7630002005701234567890158",
    "title":"Mr",
    "email":"jsmith@ymail.com",
    "locale":"FR",
    "identifier":"FR08ZZZ482829-20140827vzP6s8",
    "rum":"FR08ZZZ482829-20140827vzP6s8",
    "id":"11111111-FR08ZZZ482829-20140827vzP6s8",
    "site":"11111111",
    "first_name":"John",
    "last_name":"Smith",
    "payment_type":"RECURR",
    "callback_url":null,
    "created_at":1409136103000,
    "updated_at":null,
    "fetch_adress":"false"
  },
  {
    "bic":"CRLYFRPP",
    "iban":"FR7630002005701234567890158",
    "title":"Mr",
    "email":"jsmith@ymail.com",
    "locale":"FR",
    "identifier":"FR78ZZZ472548-20140827TotVyn",
    "rum":"FR78ZZZ472548-20140827TotVyn",
    "id":"22222222-FR78ZZZ472548-20140827TotVyn",
    "site":"22222222",
    "first_name":"John",
    "last_name":"Smith",
    "payment_type":"RECURR",
    "callback_url":null,
    "created_at":1409136105000,
    "updated_at":null,
    "fetch_adress":"false"
  },
  {
    "bic":"CRLYFRPP",
    "iban":"FR7630002005701234567890158",
    "title":"Mr",
    "email":"jsmith@ymail.com",
    "locale":"FR",
    "identifier":"FR78ZZZ472548-20140827ilisfW",
    "rum":"FR78ZZZ472548-20140827ilisfW",
    "id":"33333333-FR78ZZZ472548-20140827ilisfW",
    "site":"33333333",
    "first_name":"John",
    "last_name":"Smith",
    "payment_type":"RECURR",
    "callback_url":null,
    "created_at":1409136108000,
    "updated_at":null,
    "fetch_adress":"false"
  }
]
```

Note

If an error occurs during a mandate import, then all mandates will show an error.

8. VIEWING MANDATE DETAILS

In order to view the mandate details:

1. Specify the desired action on the first line: `https://secure.lyra.com/sdd/mandates/[id]`

Note:

[id] allows to identify the exact mandate that you want to view.

2. Build your http header (see chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7).

Example of a cURL request:

```
$ curl 'https://.../mandates/12345678-DE98ZZZ09999999999-20140827onGTun' -H
'Authorization:Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng==' -H
Content-Type: application/json' -H
'Accept: application/json' -i
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:44:52 GMT
Content-Type: application/json
Connection: close
Transfer-Encoding: chunked

{
  "title": "Mr",
  "email": "jsmith@ymail.com",
  "identifier": "DE98ZZZ09999999999-20140827onGTun",
  "rum": "DE98ZZZ09999999999-20140827onGTun",
  "id": "12345678-DE98ZZZ09999999999-20140827onGTun",
  "site": "12345678",
  "first_name": "John",
  "last_name": "Smith",
  "created_at": 1409135927000,
  "updated_at": null
}
```


9. DOWNLOADING A MANDATE IN PDF FORMAT

In order to download a mandate in PDF format:

1. Specify the desired action on the first line: `https://secure.lyra.com/sdd/mandates/[id]`

Note:

[id] allows to identify the exact mandate that you want to download.

2. Build your http header (see chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7).

Example of a cURL request:

```
$ curl'https://.../mandates/12345678-DE98ZZZ09999999999-20140827onGTun' -H
'Authorization:Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng==' -H
Content-Type:application/json' -H
'Accept: application/octet-stream' -i
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:45:45 GMT
Content-Type:application/octet-stream
Content-Length:2109
Connection: close

+ PDF contents...
```

10. UPDATING A MANDATE

The fields that can be subject to change are:

- e-mail
- IBAN

Note:

Even if the mandate update does not concern these two fields, they still must be present in the request.

In order to update a mandate:

1. Specify the desired action on the first line: `https://secure.lyra.com/sdd/mandates/[id]`

Note: [id] allows to identify the exact mandate that you want to update.

2. Build your http header (see chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7).
3. Add the **email** and **iban** fields required for updating mandate details.

Field name	Format	Description	Required	Example
iban	string	IBAN for International Bank Account Number: Debtor's bank account identifier	✓	"iban": "FR7630002005701234567890158"
email	string	Debtor's e-mail address	✓	"email": "firstname.lastname@example.com"

Table 4: Required fields

Example of a cURL request:

```
$ curl -k -X PUT -H
"Content-type:application/json" -H
"Authorization:Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng=="
" https://.../mandates/12345678-67127d4f3c9e4f3c8f52ceaabd4ba11f --data
'{"email":"new@email.com","iban":"FR76NOUVELIBAN"}'
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:38:47 GMT
Content-Type:application/json
Connection: close
Transfer-Encoding:chunked

{
  "title":"Mr",
  "email":"new@email.com",
  "identifier":"67127d4f3c9e4f3c8f52ceaabd4ba11f",
  "rum":"67127d4f3c9e4f3c8f52ceaabd4ba11f",
  "id":"12345678-67127d4f3c9e4f3c8f52ceaabd4ba11f",
  "site":"12345678",
  "first_name":"John",
  "last_name":"Smith",
  "created_at":1409135927000,
  "updated_at":null
}
```

11. DELETING A MANDATE

Merchants using the payment gateway only for signing their SEPA mandates should be able to delete the mandates after 3 years of inactivity.

In order to delete a mandate:

1. Specify the desired action on the first line: `https://secure.lyra.com/sdd/mandates/[id]`

Note: `[id]` allows to identify the exact mandate that you wish to remove.

2. Build your http header (see chapter [Identifying yourself when exchanging with the payment gateway](#) on page 7).

Example of a cURL request:

```
$ curl -X DELETE
'https://.../mandates/12345678-DE98ZZZ099999999999-20140827onGTun' -H
'Authorization:Basic MTIzNDU2Nzg6MTIzNDU2Nzg5MDEyMzQ1Ng==' -H
'Content-Type: application/json' -H
'Accept:application/json' -i
```

Response:

```
HTTP/1.1 200 OK
Date: Wed, 27 Aug 2014 10:44:52 GMT
Content-Type:application/json
Connection: close
Transfer-Encoding:chunked
```