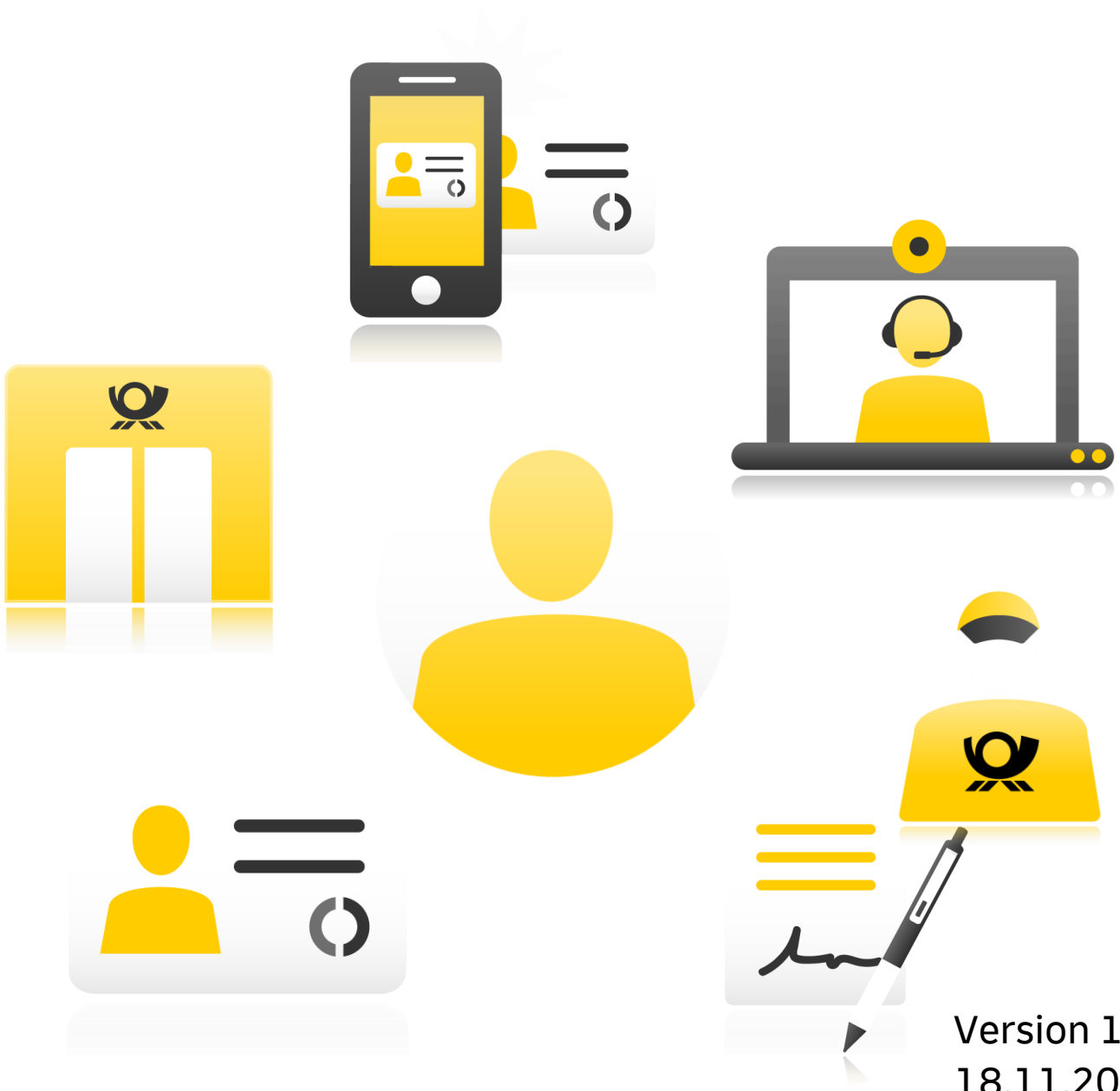




SCR-Ident Delivery API – Result

Standard Connect & Result (SCR) API



Version 1.2
18.11.2022

SCR Delivery API Guide Result

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Changelog

Date	Change
18.11.2022	Added clarifications concerning UTF-8 encoding of result JSON.
26.08.2022	Added new substatus 25, 26, and 27 and substatusreasons 336, 337, and 338. Renamed substatus 21, 22, and 24 and substatusreasons 331, 333, and 334. Reallocated substatusreason 333 from substatus 22 to 25 and substatusreason 334 from substatus 22 to 26.
04.08.2022	Added information Webhook with "custom1" field
22.02.2022	Sub Status Reason 335 added New webhook source IP address 156.137.9.65
14.09.2021	Maximum number of cases for archive request added
30.07.2021	Minor Changes
15.07.2021	Changes in Substatus and SubstatusReason wording
07.07.2021	Description für Availability Check added
01.07.2021	Minor Changes
22.04.2021	Minor Changes
25.03.2021	Identstatus, Substatus and SubstatusReason added
01.03.2021	Update Identification Status Delivery
25.02.2021	Field "custom1" added
15.12.2020	Created

1. Overview

Clients can access the results of their identification cases through the Standard Connect & Results REST API (SCR-Ident).

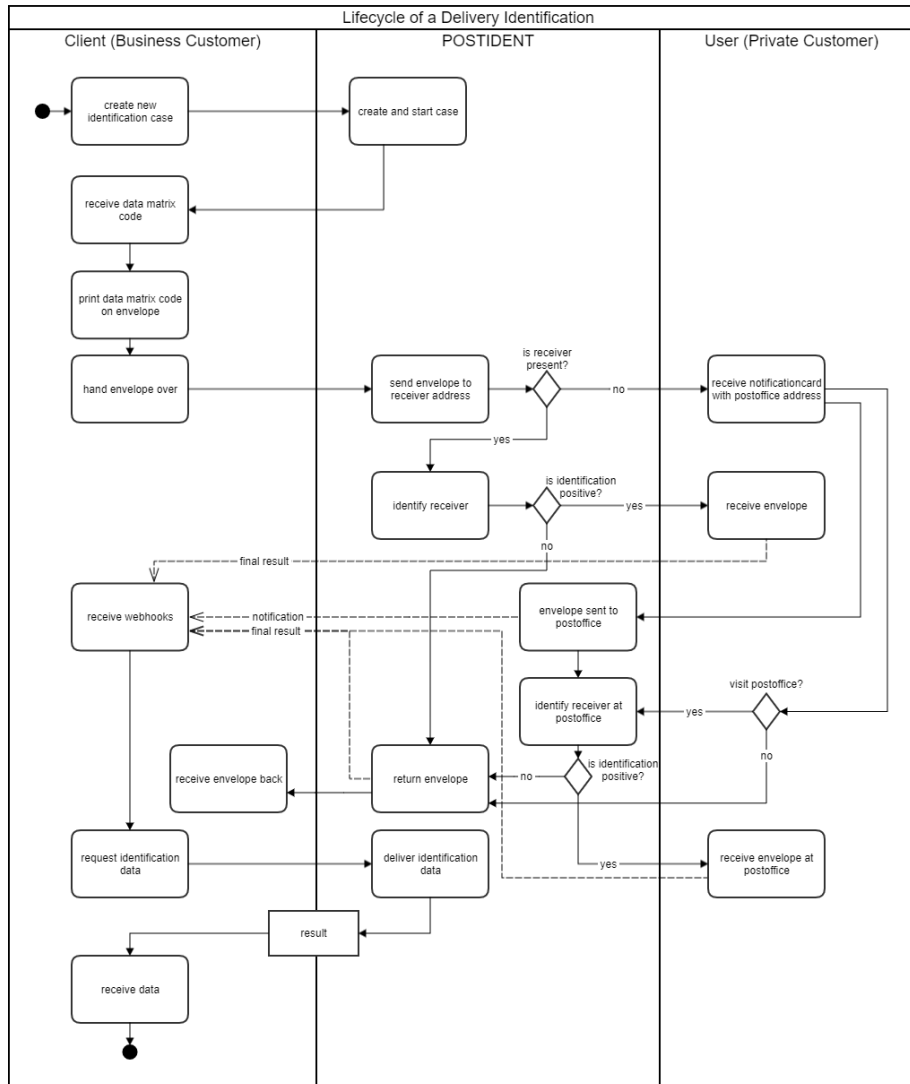
Definitions

English	German	Description
client	Geschäftskunde, Auftraggeber	Business customer which is the principal for the identification process
clientId	Client ID	Identifier for a client to get access to a POSTIDENT interface or API Format: alphanumeric, eight characters
user	ZiP, Endkunde	Private customer who wants to be identified
case	Vorgang	Container for an identification process; may contain one or more identifications of a user
identification	Identifikation	Identification attempt using a POSTIDENT identification method
Identification method	POSTIDENT Verfahren	Method being used for a POSTIDENT identification <ul style="list-style-type: none"> • POSTIDENT via delivery

2. Lifecycle of an Identification

Overview

Lifecycle of a Delivery Identification



Push-Notifications via Webhook

You can receive a push notification each time a notification status or final result is achieved.

The webhook feature must be activated for your account.

Status of delivery case

The workflow for the delivery case includes several case and identification status.

Case Status	Identification Status	Status Type	Webhook ¹⁾
new			
in progress	started	notification	x
in progress	dmc provided		

in progress	packaging announced		
in progress	incomplete		
in progress	delivery started		
in progress	rerouted to postoffice	notification	x
closed	success	final	x
closed	declined	final	x

1) Must be activated for your account (= clientId); activation of single status types is possible (e.g. only final)

3. Identification Classes

POSTIDENT Delivery supports only one identification class.

- **Delivery standard**
Identification via delivery

The class limits the scope of the result data. Please see section [ResultData](#) for details.

4. Result Status

An identification runs through several states. A state may consist of up to three attributes:

- **Identification Status**
Describes the high level status
- **Substatus**
Gives more details about the status
- **Substatus Reason**
Describes the reason for status and substatus

Identification Status Delivery

This table provides an overview about all states of an identification.

Identification Status	Status Type	Description	Sub Status	Sub Status Reason
started	-	Identification created and started.	-	-
dmc provided	-	Datamatrixcode provided.	-	-
packaging announced	-	Packaging announced.	-	-
incomplete	-	Problem in packaging occurred.	<ul style="list-style-type: none"> • 23 Handling problem in packaging 	<ul style="list-style-type: none"> • 320 Physical shipment not included in job • 321 Single sequence error in order of job • 322 Sequence error in entire order of job • 323 Data matrix code not readable • 324 Other handling error
delivery started	-	Delivery of shipment has started.	-	-
rerouted to postoffice	notification	Recipient not present, forwarded to post office.	-	-
success	final	Delivery completed successfully. The case is closed and can not be restarted.	-	-

declined	final	Delivery not completed successfully. The case is closed and can not be restarted. Shipment is returned to sender.	<ul style="list-style-type: none"> • 12 Operation valid time frame exceeded (case ID) 	-
			<ul style="list-style-type: none"> • 16 Identification with abnormalities 	<ul style="list-style-type: none"> • 325 First name does not match provided data • 326 Last name does not match provided data • 327 Birthdate does not match provided data • 328 Invalid identification document • 335 Identity check negative, other reason
			<ul style="list-style-type: none"> • 20 Unrecoverable other problem 	<ul style="list-style-type: none"> • 329 Internal data incomplete
			<ul style="list-style-type: none"> • 21 Recipient problem: Shipment not picked up at post office 	<ul style="list-style-type: none"> • 330 Shipment not picked up at post office within seven days
			<ul style="list-style-type: none"> • 22 Production of shipment not possible 	<ul style="list-style-type: none"> • 331 Production not possible: Shipment damaged • 332 Unrecoverable problem in packaging
			<ul style="list-style-type: none"> • 24 Recipient problem: Delivery of shipment refused 	<ul style="list-style-type: none"> • 337 Delivery of shipment refused by recipient
			<ul style="list-style-type: none"> • 25 Problem with digital provisioning (data quality) 	<ul style="list-style-type: none"> • 333 Case declined due to insufficient recipient data in digital provisioning by business customer
			<ul style="list-style-type: none"> • 26 Delivery of shipment not possible 	<ul style="list-style-type: none"> • 334 Unrecoverable problem in delivery of shipment • 338 Delivery not possible: Shipment damaged
			<ul style="list-style-type: none"> • 27 Problem with physical provisioning 	<ul style="list-style-type: none"> • 336 Physical shipment not included in job, waiting period expired

5. Webhook

When this feature is activated for your account, you can receive a push notification each time when a notification or final result is achieved. It is configurable for which of these events the webhook should be triggered.

For this purpose the POSTIDENT system sends a POST request (from IPs 165.72.200.13, 199.40.127.49 or 156.137.9.65) to the webHookURL parameter provided by your initial call to start the case (see SFTP Delivery API Guide Start).

Please note, that the webHookURL must not contain GET parameters (e.g. <https://foo.bar.com/postident/callback?ref=123>), since the REST standard prohibits the mixing of GET and POST parameters. If desired, HTTP Basic Authentication can be configured for your client id. Self-signed TLS certificates are not supported.

The POST request contains application/json with the case ID, the Reference ID (only if configured and without a null value) and the Custom1 field (only if configured and without a null value)

```
{
  "caseId": "<caseId>",
  "referenceId": "<referenceId>",
  "custom1": "<custom1>"
}
```

You can use this notification to automatically trigger a GET request with the REST API to retrieve the current result of this case ID.

The POSTIDENT system expects http-status code 200 within 3,5 seconds, otherwise the POSTIDENT system retries up to 3 times, if retry is configured.

- The first retry is executed immediately after the first one
- The second retry 900 Seconds after the first retry
- The last retry is initiated 3600 Seconds after the second retry

Note

If you want to use this feature, your domain has to be added to the whitelist in our communications infrastructure. This typically takes 7 working days. You can vary the url after the domain as you like.

6. REST API

Overview

With the REST API you can

- retrieve a single case by case ID (e.g. when triggered by a webhook notification)
- retrieve a list of available cases for a client ID, filtered by status and time interval (e.g. current results of the last 24 hours)
- mark cases as archived

Preconditions

During setup you should have received

- clientId
- username and password for the REST API (required for authentication)
- data password for the payload encryption

Details

Protocol

HTTPS is used to ensure that all parameters are encrypted.

Host

Environment	URL
integration	on demand
production	postident.deutschepost.de

Path

/api/scr/{version}/{clientId}/cases/delivery

The URI contains the following elements:

Element	Description	Example
version	Use "v1"	v1
clientid	Provided by Deutsche Post. Uniquely identifying your access to the API. Format: alphanumeric, uppercase (case sensitive).	1234ABCD

Example:

```
GET /api/scr/v1/1234ABCD/cases/delivery
```

Authentication

HTTPS and Basic Auth (RFC 2617) are used for the authentication. Username and password must be transmitted in the HTTP header according to Basic Auth.

Header

Field	Mandatory	Content
Content-Type	Yes	application/json
Authorization	Yes	Basic <encoded username and pw>

Outgoing Encryption

Asymmetrical encryption can be used for the result data in the response body. The result data will be encrypted with a public key provided by you. The key is an additional parameter in the HTTP header of the GET requests. The cipher is transmitted in JWE format. You can decrypt the received data with your private key.

Preconditions

- During setup you should have received data password (required for keyHash) as the pre-shared-secret for the encryption.
- You have to create a RSA key pair, consisting of a public and a private key
 - a key size of 3 kbit is recommended (minimum 2 kbit)

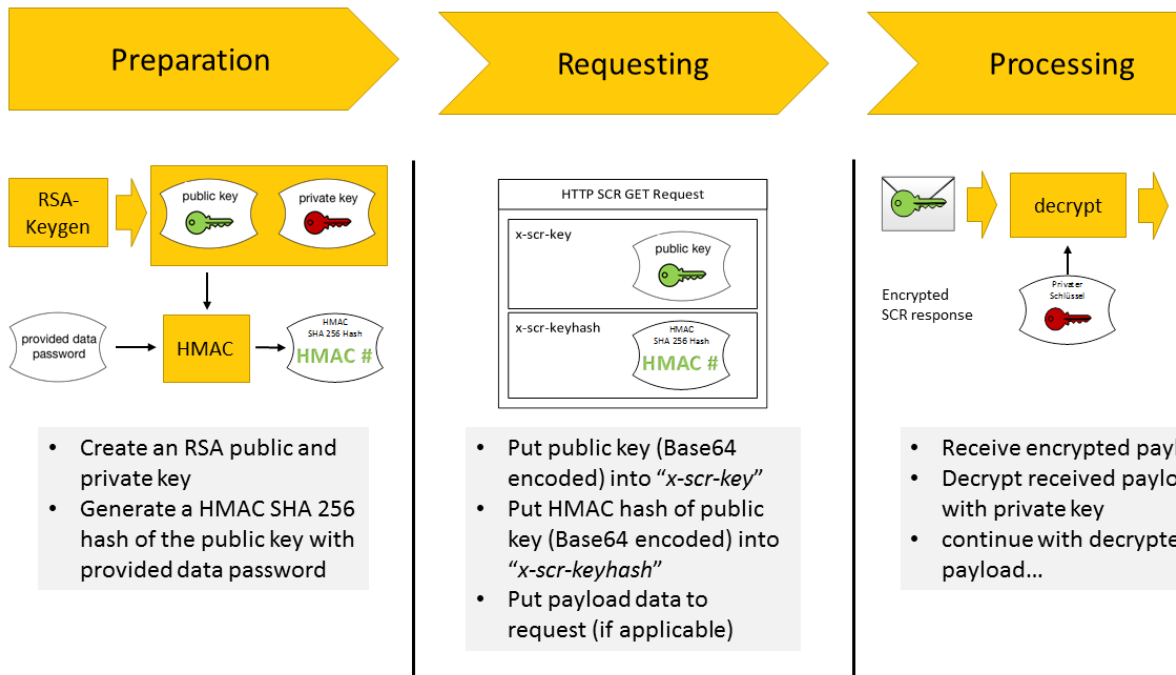
General Flow

The asymmetrical encryption works as follows:

- The public key must be passed in HTTP header field "x-scr-key"
- Postident system encrypts the response with given public key
- The encrypted response can only be decrypted with customer's hidden private key

In addition, the public key shall be encoded via HMAC-Hash in combination with provided data password and passed in http header field "x-scr-keyhash", in order to suspend Man-In-The-Middle attacks.

The following figure shows the public key encryption process:



Encryption Settings using header

HTTP-Header

The public key in http field "x-scr-key" and its HMAC-Hash in field "x-scr-keyhash" are optional. Furthermore, the encryption algorithm and encryption can be chosen by using the optional http header fields "x-scr-alg" and "x-scr-enc". If you are using this option, it is up to you to ensure all requirements of security in accordance with [RFC 7516](#).

Element	Mandatory	Description	Example
x-scr-key	no	Contains the public key for content encryption with a size of 2048, 3072 or 4096 Bits. The value must be a base64 encoded string of the key encoded according to the ASN.1 type SubjectPublicKeyInfo which is defined in the X.509 standard (see RFC 5280). Note: <ul style="list-style-type: none"> • 3072 bit RSA public key is recommended. • The support of 2048-bit keys will be discontinued at the end of 2022. 	MIIBIjANBgkqhkiG9(...) PopeO2Z6TrwIDAQAAB For full length see "Sample Curl Request" in SCR-Ident API Guide 3 Encryption
x-scr-keyhash	required if x-scr-key is provided	Contains the Base64 encoded HMAC-Hash (HmacSHA256) of the public key. Use your POSTIDENT DataPassword to calculate the x-scr-hash.	YAcCWwCyEyE6Fg0wuCgip3AjoK2mU /rU/UGuTW506p0= Used DataPassword: EAHqr_9NvCw2BuI23\$a.0vR5S
x-scr-alg	no	Algorithm for result encryption: <ul style="list-style-type: none"> • RSA-OAEP-256 (RSAES using Optimal Asymmetric Encryption Padding (OAEP) - RFC 3447 (recommended)) 	RSA-OAEP-256
x-scr-enc	no	Specify an AES encryption method for symmetric payload encryption. <ul style="list-style-type: none"> • A256CBC-HS512 (AES_256_CBC_HMAC_SHA_512 authenticated encryption using a 512 bit key (default value, recommended)). 	A256CBC-HS512

See [SCR-Ident API Guide 3 Encryption](#) for detailed Information about Result Encryption.

Retrieve a single case

Retrieve identification data for a single case

Paths:

- GET/{clientId}/cases/delivery/{caseId}/

Sample Request and Response

Request to retrieve a single case by case ID:

```
GET /api/scr/v1/1234ABCD/cases/delivery/KRZ1A8M4UBZZ
Host: postident.deutschepost.de
Authorization: Basic R0s0Mi5TQlI6cEpzZW43NWh3biF0
```

Example Result Success

```
{
  "caseId": "KRZ1A8M4UBZZ",
  "identificationTime": "2021-03-05T10:02:03+02:00",
  "caseStatus": {
    "status": "closed",
    "archived": false,
    "modified": "2021-03-05T10:02:03+02:00"
  },
  "orderData": {
    "customData": {
      "custom1": "reference1"
    }
  },
  "identification": {
    "identificationMethod": "delivery",
    "identificationStatus": {
      "status": "success",
      "modified": "2021-03-05T10:02:03+02:00"
    }
  },
  "additionalDataDelivery": {
    "postOfficeStreetAddress": "Poststr.50",
    "postOfficeCity": "26897 Esterwegen"
  }
}
```

```

Example Result Declined

{
  "caseId": "MGY0AKXFJDEM",
  "caseStatus": {
    "status": "closed",
    "modified": "2021-07-04T18:00:23+02:00",
    "archived": false
  },
  "orderData": {
    "customData": {
      "custom1": "Eigene Referenz"
    }
  },
  "identification": {
    "identificationMethod": "delivery",
    "identificationStatus": {
      "status": "declined",
      "subStatus": {
        "code": 12,
        "description": "Operation valid time frame exceeded (case ID)"
      },
      "modified": "2021-07-04T18:00:23+02:00"
    }
  }
}

```

Retrieve a list of cases

List operation to get identification data

Paths:

- GET/{clientId}/cases/delivery

Optional filter parameters:

Parameter	Value	Default	Description	Example
new	true false	false	Delivers all cases with status new.	?new=true
inProgress	true false	false	Delivers all cases with status in progress.	?inProgress=true
closed	true false	true	Delivers all cases with status closed.	?closed=false
archived	true false	false	Includes all cases marked as archived	?archived=true
createdFrom	date	null	Delivers all cases created from given date. ISO 8601 shall be used as date format.	?createdFrom=2016-12-26T00:00:00+02:00
createdUntil	date	null	Delivers all cases created until given date. ISO 8601 shall be used as date format.	?createdUntil=2016-12-28T00:00:00+02:00
closedFrom	date	null	Delivers all cases closed from given date. ISO 8601 shall be used as date format.	?closedFrom=2016-12-26T00:00:00+02:00
closedUntil	date	null	Delivers all cases closed until given date. ISO 8601 shall be used as date format.	?closedUntil=2016-12-28T00:00:00+02:00

Note

If at least one date parameter should be passed, the complete URL must be encoded.

For example:

```
URLEncoder.encode(" https://postident.deutschepost.de/api/scr/v1/XCLIENTIDX/cases/delivery?closedFrom=2017-06-25T13:30:01+02:00&closedUntil=2017-06-25T13:40:01+02:00 ", "UTF-8" )
```

The result of the command above is as followed:

```
https%3A%2F%2Fpostident.deutschepost.de%2Fapi%2Fscr%2Fv1%2FXCLIENTIDX%2Fcases%2Fdelivery%3FclosedFrom%3D2017-06-25T13%3A30%3A01%2B02%3A00%26closedUntil%3D2017-06-25T13%3A40%3A01%2B02%3A00
```

The list operation will return a maximum number of 10,000 cases per request.

The response contains http-ResponseHeader "X-PARTIAL-DELIVERY" = "true", whether there are additional cases available. In order to retrieve the missing cases, already received cases should be archived to get the next cases by using GET request with archived=false (see Archiving cases).

Sample Request

Request to retrieve all cases closed between 2016-12-27 00:00:00 and 2016-12-28 00:00:00 (sample request is not url encoded for better readability).

```
GET /api/scr/v1/1234ABCD/cases/delivery/?closedFrom=2016-12-27T00:00:00+02:00&closedUntil=2016-12-28T00:00:00+02:00 HTTP/1.1
Host: postident.deutschepost.de
Authorization: Basic R0s0Mi5TQ1I6cEpzZW43NWh3biF0
```

```

Example Result List

[
  {
    "caseId": "KRZ1A8M4UBZZ",
    "identificationTime": "2021-03-05T10:02:03+02:00",
    "caseStatus": {
      "status": "closed",
      "archived": false,
      "modified": "2021-03-05T10:02:03+02:00"
    },
    "orderData": {
      "customData": {
        "custom1": "referencel"
      }
    },
    "identification": {
      "identificationMethod": "delivery",
      "identificationStatus": {
        "status": "success",
        "modified": "2021-03-05T10:02:03+02:00"
      },
      "additionalDataDelivery": {
        "postOfficeStreetAddress": "Poststr.50",
        "postOfficeCity": "26897 Esterwegen"
      }
    }
  },
  {
    "caseId": "MGY0AKXFJDEM",
    "caseStatus": {
      "status": "closed",
      "modified": "2021-07-04T18:00:23+02:00",
      "archived": false
    },
    "orderData": {
      "customData": {
        "custom1": "Eigene Referenz"
      }
    },
    "identification": {
      "identificationMethod": "delivery",
      "identificationStatus": {
        "status": "declined",
        "subStatus": {
          "code": 12,
          "description": "Operation valid time frame exceeded (case
ID)"
        }
      },
      "modified": "2021-07-04T18:00:23+02:00"
    }
  }
]

```

Errors

HTTP status codes in the response for error situations:

HTTP Status Code	Message	Possible Cause
------------------	---------	----------------

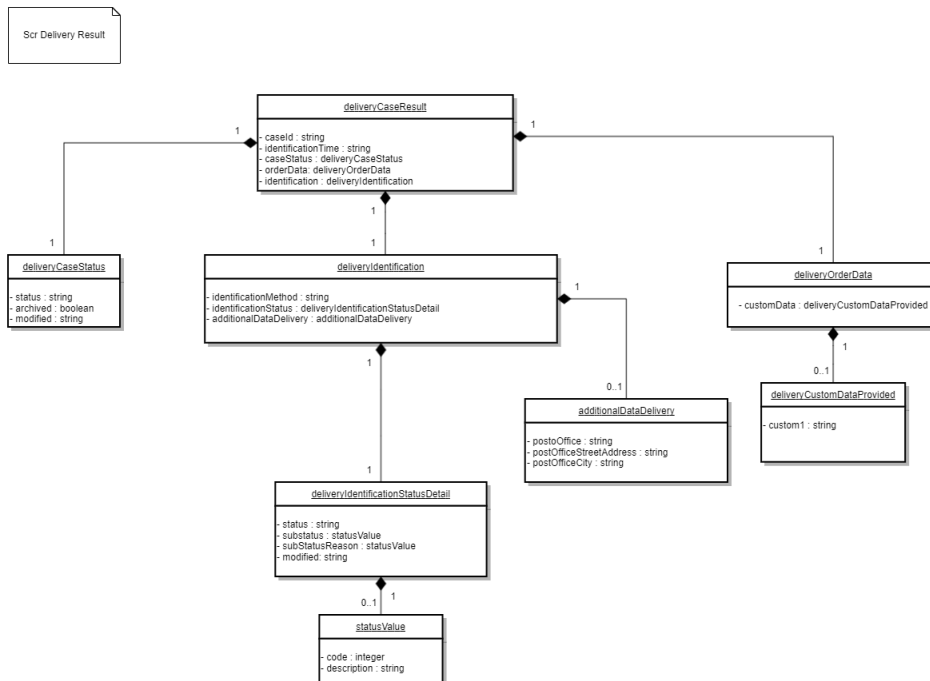
401	Unauthorized	Wrong or missing authorization key, e.g. - Wrong or missing username or password - Client ID not found or not configured for usage of Standard Connect API
404	Not found	Case with caselid not found

7. Result Data

The result is returned as UTF-8 encoded JSON.

Overview

POSTIDENT returns the following result data:



Please be aware that it is possible that new fields will be added to the data model in the future. Make sure that your implementation can handle unknown fields in the result data.

Newly added fields will not lead to a new version of the SCR-Ident API.

deliveryCaseResult

The result data of the case with its identification. CaseResult consists of the caselid and the following properties:

Parameter	Max. Length	Description	Example
caselid	12	Unique id of the POSTIDENT system for a case, while case is in POSTIDENT system. May be reused after case is deleted in POSTIDENT system.	123456789ABC
identificationTime	25	ISO 8601 format, accuracy in seconds, the offset to Zulu time ±hh:mm at the end	2021-03-05T10:02:03+02:00
caseStatus	-	object of type deliverycaseStatus	

orderData	-	object of type deliveryOrderData	
deliveryIdentification	-	object of type deliveryIdentification	

deliveryCaseStatus

Parameter	Max. Length	Description	Example
status	255	'new' 'in progress' 'closed'	closed
archived	5	true false	true
modified	25	ISO 8601 format, accuracy in seconds, the offset to Zulu time ±hh:mm at the end	2021-03-05T10:02:03+02:00

deliveryOrderData

Parameter	Max. Length	Description	Example
customData	-	object of type deliveryCustomDataProvided	

deliveryCustomDataProvided

Parameter	Max. Length	Description	Example
custom1	100	Custom text field in order to pass your own identifiers, labels etc.	

deliveryIdentification

Parameter	Max. Length	Description	Mandatory	Example
identificationMethod	35	'delivery'	yes	delivery
identificationStatus	-	object of type deliveryIdentificationStatusDetail	yes	
additionalDataDelivery	-	object of type additionalDataDelivery	no	

deliveryIdentificationStatusDetail

Parameter	Max. Length	Description	Example
status	100	'started' 'incomplete' 'dmc provided' 'packaging announced' 'delivery started' 'rerouted to postoffice' 'review pending' 'declined' 'success'	declined
subStatus	code: 10 description: 255	Containing "code" and "description" to specify the substatus. Only set to some status values; see chapter "4. Result Data"	"code": 16, "description": "Identification with abnormalities"
subStatusReason	code: 10 description: 255	Additional information containing "code" and "description"; see chapter "4. Result Data"	"code": 325, "description": "First name does not match provided data"
modified	25	ISO 8601 format, accuracy in seconds, the offset to Zulu time ±hh:mm at the end	2021-03-05T10:02:03+02:00

additionalDataDelivery

Parameter	Max. Length	Description	Example
postOfficeStreetAddress	100	Streetaddress of postal retail outlet	Musterstr. 1
postOfficeCity	100	Postal code and city of postal retail outlet	12345 Musterstadt

AdditionalDataDelivery ist only filled if envelope was delivered to receiver in post office. There can be cases, where only the city is filled, because further information is not available.

Archiving cases

In order to reduce the length of the result list of GET cases, it is possible to archive cases by using the archive resource. This affects only closed cases. Cases with other status will be ignored. Already archived cases stay archived.

The maximum number of cases for one request is 10000. If the maximum number is exceeded, a bad request is sent.



Note

Regardless of the archived flag, all cases will be deleted physically from PI System after a time limit. The time limit is configured with your account (= clientId) and can be a maximum of 90 days.

Path

- PATCH /api/scr/{version}/{clientId}/cases/archive

Body

It is possible to archive a list of cases at the same time. Therefore the body expects a list of caseIds separated by comma.

```
[ "CaseID 1", "CaseID 2", ..., "CaseID n" ]
```

Sample Request and Response

Request to mark a single case as archived:

```
PATCH /api/scr/v1/1234ABCD/cases/delivery/archive HTTP/1.1
Host: postident.deutschepost.de
Authorization: Basic R0s0Mi5TQ1I6cEpszZW43NWh3biF0
Content-Type: application/json
["KRZ1A8M4UBZZ"]
```

The response of the PI System contains a list of status objects, one for each updated case. For more information about the data contained, please see [CaseStatus](#).

```
[
  {
    "caseId": "KRZ1A8M4UBZZ",
    "caseStatus": {
      "status": "closed",
      "archived": true,
      "modified": "2021-01-11T15:30:00+01:00"
    }
  }
]
```

8. Availability Check of POSTIDENT System

SCR provides a particular 'alive' resource to check the availability of the POSTIDENT system. Protocol, security and header for the alive resource are the same as above. The alive resource can be accessed under the same authentication, which is used for the SCR service, or with a dedicated alive service account. The dedicated account can only access the alive resource. Access to case data is denied, so it can be used by monitoring systems that run in another environment.

Path

Check the current availability of the POSTIDENT system by using the following URI:

`/api/scr/{version}/{clientId}/alive`

The URI contains the following elements:

Element	Description	Example
version	Use „v1“	v1
clientId	Provided by Deutsche Post. Uniquely identifying your access to the API. Format: alphanumeric, uppercase (case sensitive).	1234ABCD

Example:

`GET /api/scr/v1/1234ABCD/alive`

Response

If available, SCR will respond with the following JSON object:

```
{
  "status": "OK"
}
```

The JSON object contains only one field:


Parameter	Mandatory	Max. Length	Description	Example
status	no	3	Delivers the result of the alive check. Two values are possible: <ul style="list-style-type: none"> • OK • NOK 	OK

There are three scenarios which are possible in this context:

1. The system is available and running fine
2. The first stage is running fine, but at least one component of the system is not available
3. The whole system is not available

SCR alive service will response differently in all above mentioned cases:

1. The system delivers an "OK"
2. The system delivers a "NOK"
3. The system delivers a HTTP error

 **Note**

Please do not call this service more than 2 times per minute.

Errors

Http Status Code	Message	Possible Cause
401	Unauthorized	Wrong or missing authorization key, e.g. - Wrong or missing username or password - clientId not found or not configured for usage of Standard Connect API

500	Internal server error	If the system has an internal issue, status code 500 will be delivered together with an error message.
-----	-----------------------	--

9. Swagger Documentation

You will find further information on https://ident.itz-rostock.de:7777/scr_delivery_doc/scr_delivery_v1.0.0.yaml.

To get access, please contact our service team.