External Card Issuing API Integration Manual

ALIVE Platform

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Revision History

Date	Version	Author	Description of Changes
3. 8. 2020	0.8	Lukas Kabicek	Initial release.
4. 8. 2020	0.8.1	Lukas Kabicek	Added authentication service and endpoint details.
31. 8. 2020	0.8.2	Lukas Kabicek	Changed cardholder roles data model specification, address type enum values and cardholder's photo upload endpoint details.
1. 9. 2020	0.9	Lukas Kabicek	Minor amendments of wording.
27. 10. 2020	1.0	Lukas Kabicek	Added parameter *expires_in* into the response body of the authentication endpoint. Added list of general numeric error codes.
7. 12. 2020	1.1	Lukas Kabicek	Added institution related parameters to the *POST /cardholders.set* endpoint definition for *AGENT* card issuer type. Validation of an *external_id* attribute in the *[MODEL] Cardholder* was changed to be unique per card issuer.
12. 9. 2022	1.2	Lukas Kabicek	• Added parameters *institution_id* and *institution_name* to the cardholder's data model and related API endpoint response samples. • Multiple workflow descriptions were updated. • An option to update card custom fields when calling *POST /cards.issuePlastic* endpoint was added. • The *[ENUM] Gender* was updated – value *OTHER* is now available. • Typo and wording corrections were done across the document. • A new visual identity of GTS ALIVE was applied.

Introduction

This document describes API for external card issuers in the information system ALIVE Platform. The API is intended for card issuers who issue cards by themselves (digital or plastic including plastic card printing) and would like to communicate with the National Card Database (NCDB) in an automated way. The API allows to manage cardholders, report issued cards or request card issuance (difference is in the card number stock management, see below) as well as manage card validity, status and other related parameters.

Important Introductory Data

Before starting the API integration please ask your ISIC account manager for the specification of your card issuer type and card issuing mode. The available options are described below and will be mentioned several times in the whole document.

Card Issuer Type

Value	Description
INSTITUTION	An (academic) institution issuing card only for its students, teachers, and employees. All issued cards will have displayed or printed the same (academic) institution name which has been agreed with the ISIC account manager at the beginning of the cooperation. The (academic) institution guarantee eligibility to get the card for all its cardholders.
AGENT	A company issuing cards for students, teachers, and employees of multiple different (academic) institutions based on successful eligibility check. The name of the (academic) institution displayed or printed on a card can be filled freely by the agent or taken from the NCDB if the (academic) institution profile is present here (parameter *institution_id*).

Card Issuing Mode

Value	Description
REPORT	Card issuer orders card numbers from local ISIC authority. Assigned card numbers are sent to card issuer who manages their stock on his side and assign card numbers to individual issued cards. Card issuer reports data about issued cards including assigned card numbers to NCDB. Card issuer prints plastic cards from his system (if they are issued).
REQUEST	Card issuer orders card numbers from local ISIC authority. Assigned card numbers **are not** sent to card issuer. Card number stock is managed on local ISIC authority side by NCDB, not on card issuer's side. Card issuer requests card issuance from NCDB by sending card data excluding card number which is assigned by NCDB and returned to the card issuer in an API response. Card issuer prints plastic cards from his system (if they are issued).

API Specification

Authentication

- All API **endpoints are secured** so the client must be successfully authenticated to be able to call them.

- Client authentication is secured by **Bearer Token** which must be sent in the header of each API request as **Authorization: Bearer xxx** (xxx substituted by the token). The API is **not session based**.
- To obtain valid token the client is requested to call *authentication service endpoint* using unique *authentication credentials* provided by his ISIC account manager.
- The **validity of the token** is very short (token validity is a part of the authentication endpoint response) thus we recommend to ask for a new token before every set of the API requests.
- Data transfers are encrypted using **SSL certificate** of domain validation (DV) authentication level.

Content Type

- Most of the requests and responses use **JSON** data format (**application/json** content-type). Clients should also include request header parameter **Accept: application/json** to receive correct response data format.
- **Images** are **uploaded** using **multipart/form-data** encoding type. Besides a path to the image stored in the local device (as permanent or temporary file) the request must contain also *cardholder_id* attribute to identify the cardholder to whom the image is being uploaded. Base64 encoded images are not supported. A direct image data format is also not supported.
- **Images** are **downloaded** as **general binary data** (octet-stream) with appropriate MIME Content-Type header. Base64 encoded images are not supported.

Charset

- All requests should be sent with **UTF-8** charset specified in the header.

Parameter and Attribute Validations

- The API validates query parameters and attributes of created or modified objects.
- Any errors are in the body of HTTP 422 response (see object model "Errors").
- The error messages are only in English language.
- The API uses logical operator AND between query parameters.
- Date data type attributes are expected and returned in format "yyyy-MM-dd".
- Datetime data type attributes uses ISO 8601 extended format.
  - In API requests, date and time values are expected in local timezone with specification of the offset from UTC (e.g. for UTC+5 timezone the format should be "2020-08-03T14:35:26+05:00" meaning you would like to get data for specified day and time with time shift of 5 hours ahead of UTC).
  - In API responses, date and time values are always in UTC.

Listings Pagination

- The API supports "limit" and "offset" parameters in data listings to reduce data traffic for individual requests.
- The "limit" parameter is mandatory, its maximal value is not restricted.
- The "offset" parameter is zero-based index of the first returned record.

Responses Handling

- Clients are requested to ignore all unknown attributes in API responses to preserve compatibility in the future.
- The order of parameters in JSON responses is not significant and may change over time. Clients are requested to not rely on it.

Data Model

General Object Models

API Responses

API responses contain from HTTP code and response body with pre-defined structure as described below. In case of error the human readable error messages should be used only for debugging purposes and are not meant to be displayed to the end users.

NOTE: A list of error codes and messages will be provided in one of the future versions of this API integration manual.

[MODEL] API Response

Attribute Name	Data Type	Description
message	String	Human readable API request result (provided only in English).
data	Array	Nested array of objects based on API endpoint relation (e.g. *[MODEL] Card*).
code	Integer	In case of error this attribute contains numeric error code.
errors	Array	Optional nested array of objects representing individual validation or error messages (see *[MODEL] Errors*).

[MODEL] Errors

Attribute Name	Data Type	Description
property_name	String	Optional name of the attribute which the error message is related to.
message	String	Human readable error message (provided only in English).
code	String	Internal alphabet error code.

General Numeric Error Codes

Code Range	Description
1001	Invalid data.

1002	Given JWT token is malformed and does not contain required attributes.
1003	Given media type is not supported.
2001	Invalid credentials.
2002	Authentication required.
3001	Entity not found.

Sample Response Body – Success

```
 1 {
 2     "message": "OK",
 3     "data": [
 4         {
 5             "card_id": 12345
 6         },
 7         {
 8             "card_id": 127455
 9         }
10     ]
11 }
```

Sample Response Body – Error

```
1 {
2   "message": "Cardholder not found.",
3   "data": [],
4   "code": 3001
5 }
```

OR

```
 1 {
 2     "message": "Invalid data.",
 3     "data": [],
 4     "code": 1001,
 5     "errors": [
 6         {
 7             "property_name": "access_key_id",
 8             "message": "This value should not be blank.",
 9             "code": "IS_BLANK_ERROR"
10         },
11         {
12             "property_name": "secret_access_key",
13             "message": "This value should not be blank.",
14             "code": "IS_BLANK_ERROR"
15         }
16     ]
17 }
```

Data Object Models

Cardholders

[MODEL] Cardholder

Attribute Name	Data Type	Validations	Description
cardholder_id	Integer	-	Unique, primary cardholder's identifier.
external_id	String	Unique per card issuer	Cardholder's identifier from the third-party's system.
institution_id	Integer	NCDB's institution database	ID of the institution where the cardholder studies/teaches/works as stored in NCDB's institution database.
institution_name	String	Free	Institution name where the cardholder studies/teaches/works.
academic_degree_before_name	String	Free	Cardholder's pre-nominal academic degrees.
first_name	String	Free	Cardholder's first name.
last_name	String	Free	Cardholder's last name.
academic_degree_after_name	String	Free	Cardholder's post-nominal academic degrees.
date_of_birth	Date	Not in future	Cardholder's date of birth.
birth_number	String	Valid national format	Cardholder's birth number.
gender	String	Enum	Cardholder's gender.
email	String	Unique per card issuer	Cardholder's e-mail address.
phone_number	String	Regex [0-9, (,), +, -]	Cardholder's phone number.
language	String	Enum	Preferred communication language, 2 letter language code.
personal_id	String	Free	Free cardholder's identifier (student ID, membership ID, personal ID).
class_name	String	Free	Name of the school class.
grade	Integer	Values 1-9	Study grade.
roles	Object	-	Nested object (see [MODEL] Role).
student_status	String	Enum	If student, cardholder's student status.
addresses	Array	-	Nested array of objects (see [MODEL] Address).
legal_representatives *	Array	-	Nested array of objects (see [MODEL] Legal Representative).
custom_fields **	Array	-	Nested array of objects (see [MODEL] Custom Field).

* At least one Legal Representative's data must be specified in case the cardholder is younger than an age

required by local law (in European Union countries it's usually 15 or 16 years). Ask your ISIC account manager for the age specified in your country.

** Custom fields may be set as mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account.

[MODEL] Role

Roles which are not included in the request are considered as the client doesn't know such information.

NOTE: Crossed out values will be supported in the future API development phases.

Attribute Name	Data Type	Validations	Description
~~employee~~	~~Boolean~~	~~-~~	~~Recent employee of the institution which creates a cardholder.~~
graduate	Boolean	-	Successfully graduated person.
student	Boolean	-	Active student with all student privileges granted by local law.
~~teacher~~	~~Boolean~~	~~-~~	~~Active teacher.~~

[MODEL] Address

Attribute Name	Data Type	Validations	Description
type	String	Enum	Address type.
address_line_1	String	Free	First address line, usually street and house number.
address_line_2	String	Free	Second address line.
city	String	Free	City.
district	String	Enum	State/Province/County.
postal_code	String	Free	Postal (ZIP) code.
country	String	Enum	ISO 3166-1 alpha-3 country code (3 letter). (*https://www.iso.org/iso-3166-country-codes.html*)

[MODEL] Legal Representative

NOTE: Crossed out values will be supported in the future API development phases.

Attribute Name	Data Type	Validations	Description
type	String	Enum	Legal Representative's relationship with the cardholder.
~~academic_degree_before_name~~	~~String~~	~~Free~~	~~Legal Representative's pre-nominal academic degree.~~
first_name	String	Free	Legal Representative's first name.

last_name	String	Free	Legal Representative's last name.
~~academic_degree_after_name~~	~~String~~	~~Free~~	~~Legal Representative's post-nominal academic degree.~~
~~date_of_birth~~	~~Date~~	~~Not in future~~	~~Legal Representative's date of birth.~~
birth_number	String	Valid national format	Legal Representative's birth number.
~~gender~~	~~String~~	~~Enum~~	~~Legal Representative's gender.~~
email	String	Free	Legal Representative's e-mail address.
phone_number	String	Regex [0-9, (,), +, -]	Legal Representative's phone number.
~~language~~	~~String~~	~~Enum~~	~~Preferred communication language, 2 letter language code.~~
~~addresses~~	~~Array~~	~~–~~	~~Nested array of objects (see [MODEL] Address).~~

[MODEL] Custom Field

Custom fields are created and assigned to individual card issuers by ISIC account managers based on the mutual agreement. Their setup range related to this API is key, mandatory/optional, and min. and max. allowed length of the string.

Attribute Name	Data Type	Validations	Description
name	String	Assigned field	Custom field key.
value	String	Field settings	Custom field value.

Cards

[MODEL] Card

Attribute Name	Data Type	Validations	Description
card_id	Integer	-	Unique, primary card identifier.
cardholder_id	Integer	-	Unique, primary cardholder's identifier.
number	String	Assigned card number ranges	Card number.
type	String	Enum	Card type.
form	String	Enum	Card form.
status	String	Enum	Card status.
valid_from	Date	Available card validity cycles	Card validity start.
valid_to	Date	Available card validity cycles	Card validity end.

valid_to_plastic	Date	Available card validity cycles	Plastic card validity end (may be the same or shorter than the digital card validity end).
design	String	Assigned card designs	Card design part number.
design_plastic	String	Assigned card designs	Plastic card design part number.
institution_id	Integer	NCDB's institution database	ID of the institution where the cardholder studies/teaches/works as stored in NCDB's institution database.
institution_name_line_1	String	Free	First line of the institution name where the cardholder studies/teaches/works as stated on a card.
institution_name_line_2	String	Free	Second line of the institution name where the cardholder studies/teaches/works as stated on a card.
smart_technologies	Array	-	Nested array of objects (see [MODEL] Smart Technology).
custom_fields	Array	-	Nested array of objects (see [MODEL] Custom Field).

[MODEL] Smart Technology

Attribute Name	Data Type	Validations	Description
type	String	Enum	Smart technology type.
value	String	Unique per type across the country	Smart technology value (RFID's UID, values stored in magnetic stripe etc.).

[MODEL] Custom Field

Custom fields are created and assigned to individual card issuers by ISIC account managers based on the mutual agreement. Their setup range related to this API is key, mandatory/optional, and min. and max. allowed length of the string.

Attribute Name	Data Type	Validations	Description
name	String	Assigned to card issuer	Custom field key.
value	String	Field setup	Custom field value.

Enums

Cardholders

[ENUM] Gender

Value	Description
FEMALE	Female.
MALE	Male.

OTHER	Other.

[ENUM] Language

Preferred language for communication with a cardholder.

Value	Description
ar	Arabic.
bg	Bulgarian.
ca	Catalan.
cs	Czech.
da	Danish.
de	German.
el	Greek.
en	English.
es	Spanish.
et	Estonian.
fi	Finnish.
fr	French.
hu	Hungarian.
id	Indonesian.
it	Italian.
ja	Japanese.
ko	Korean.
lb	Luxembourgish.
lt	Lithuanian.
lv	Latvian.
mk	Macedonian.
nl	Dutch.
no	Norwegian.
pl	Polish.

pt	Portuguese.
ro	Romanian.
ru	Russian.
sk	Slovak.
sl	Slovenian.
sr	Serbian.
sv	Swedish.
th	Thai.
tr	Turkish.
uk	Ukrainian.
vi	Vietnamese.
zh	Chinese.

[ENUM] Student Status

Value	Description
FULL_TIME	Full time student.
PART_TIME	Part time student.

[ENUM] Address Type

NOTE: Crossed out values will be supported in the future API development phases.

Value	Description
~~BILLING~~	~~Billing address (for invoicing purposes).~~
~~DELIVERY~~	~~Delivery address (where the cardholder lives, where to send a mail).~~
REGISTERED	Registered address (as stated on cardholder's ID card).

[ENUM] District (State/Province/County)

Dependent on a country where the card issuer's profile is created. For the list of available values ask your ISIC account manager.

[ENUM] Country

ISO 3166-1 alpha-3 country codes (*https://www.iso.org/iso-3166-country-codes.html*).

[ENUM] Legal Representative Type

Value	Description
MOTHER	Mother.
FATHER	Father.
SISTER	Sister.
BROTHER	Brother.
GRANDMOTHER	Grandmother.
GRANDFATHER	Grandfather.
AUNT	Aunt.
UNCLE	Uncle.
GUARDIAN	Guardian.
STEPMOTHER	Stepmother.
STEPFATHER	Stepfather.
FOSTER_MOTHER	Foster-mother.
FOSTER_FATHER	Foster-father.
GOVERNESS	Governess.
OTHER	Other.

Cards

[ENUM] Card Type

Value	Description
ISIC	ISIC card (for full-time students).
ISIC_SCHOLAR	ISIC SCHOLAR card (in the Czech Republic it is also known as ISIC Školák).
ITIC	ITIC card (for teachers).
IYTC	IYTC card (for youth people).
ALIVE	ALIVE card (for members of sport associations and other companies, issued only in the Czech Republic).

ALIVE_STUDENT	ALIVE Student card (for part-time students, issued only in the Czech Republic).
ALIVE_STAFF	ALIVE Staff card (for non-teaching staff of schools, issued only in the Czech Republic).
ALIVE_ALUMNI	ALIVE Alumni card (for university graduates, issued only in the Czech Republic).

[ENUM] Form

Value	Description
DIGITAL	Digital card.
DIGITAL_PLASTIC	Digital and plastic card.

[ENUM] Status

Value	Description
ACTIVE	Active card (does not inform about card validity period!).
CANCELLED	Cancelled card (e.g., damaged, lost, stolen).
RETURNED	Returned card (its number will be used for new cardholder).

[ENUM] Smart Technology Type

NOTE: Crossed out values will be supported in the future API development phases.

Value	Description
~~CONTACT_CHIP~~	~~Contact chip.~~
~~CONTACTLESS_BLUETOOTH_NFC~~	~~Digital key used by mobile phone's NFC or Bluetooth.~~
CONTACTLESS_EM_MARINE	Contactless RFID EM-Marine chip.
CONTACTLESS_MIFARE	Contactless RFID Mifare chip (including DESFire subtypes).
~~MAGNETIC_STRIPE~~	~~Magnetic stripe.~~

Resources

Authentication

The authentication service is accessible without any credentials. In the request body the client must sent unique pair of *authentication credentials* provided by his ISIC account manager.

POST /authentication.authenticate

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
access_key_id	String	Yes	Unique API access key identifier (username equivalent).
secret_access_key	String	Yes	Unique API secret access key identifier (password equivalent).

Response

In the response the client may find an attribute *expires_in* informing about the token's validity (in seconds).

- HTTP 200 – OK + Bearer Token

Sample Request Body

```
1 {
2     "access_key_id": "externalIssuers.api.test",
3     "secret_access_key": "LHKwwZ4f-FNW4qa"
4 }
```

Sample Response Body

```
1
2 {
3     "message": "OK",
4     "data": {
5             "token": "<Bearer Token>",
6             "expires_in": 300
7         }
8 }
9
```

Cardholders

POST /cardholders.set

Create or update cardholder. For update you must include *cardholder_id* parameter in the request body. Cardholder updates are not differential. Within every request the client must send all cardholder's data. **Data missing in the request will be considered as for removal and will be deleted with no way to recover.**

(Academic) Institution – Request Body Parameters

If client's *card issuer type is "INSTITUTION"*, request body parameters are listed below.

NOTE: Crossed out values will be supported in the future API development phases.

Parameter Name	Data Type	Mandatory	Note
cardholder_id	Integer	depends ->	Applicable only in case of the cardholder's update, then mandatory. Anonymized cardholders cannot be updated.
external_id	String	No	
academic_degree_before_name	String	No	
first_name	String	Yes	
last_name	String	Yes	
academic_degree_after_name	String	No	
date_of_birth	Date	Yes	Date cannot be in future. Format "yyyy-MM-dd".
birth_number	String	No	
gender	String	No	
email	String	Yes	Valid e-mail address format. E-mail must be unique per all cardholders within the card issuer. All cards of a single person should be linked to the same cardholder identified by the *cardholder_id*.
phone_number	String	No	
language	String	No	
personal_id	String	No	
class_name	String	No	
grade	Integer	depends ->	Mandatory in case of ISIC SCHOLAR card order by a school involved in the ISIC for Schools project in the Czech Republic.
roles	Object	No	
~~employee~~	~~Boolean~~	~~No~~	
graduate	Boolean	No	
student	Boolean	No	
~~teacher~~	~~Boolean~~	~~No~~	
student_status	String	No	
addresses	Array	No	Addresses are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	
address_line_1	String	Yes	
address_line_2	String	No	
city	String	Yes	
district	String	No	

postal_code	String	Yes	
country	String	Yes	
legal_representatives	Array	depends ->	At least one Legal Representative's data must be specified in case the cardholder is younger than an age required by local law (in European Union countries it is usually 15 or 16 years). Ask your ISIC account manager for the age applicable for your country. If mandatory, it must contain all its parameters marked below as mandatory.
type	String	Yes	Relationship of the legal representative to the cardholder. Always mandatory. See *[ENUM] Legal Representative Type* for the list of available values.
academic_degree_before_name	String	No	
first_name	String	Yes	
last_name	String	Yes	
academic_degree_after_name	String	No	
date_of_birth	Date	No	Must be older than an age required by local law (see above). Date cannot be in future. Format "yyyy-MM-dd".
birth_number	String	No	
gender	String	No	
email	String	Yes	Valid e-mail address format. E-mail does not have to be unique.
phone_number	String	No	
language	String	No	
addresses	Array	No	Address is not mandatory but if sent, it must contain all its parameters marked below as mandatory. Individual parameters all the same as for the main cardholder's address listed above.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

(Academic) Institution – Response

- HTTP 200 – OK + *[MODEL] Cardholder*

(Academic) Institution – Sample Request Body

```
1 {
2     "external_id": "ST44211",
3     "academic_degree_before_name": "Mgr.",
4     "first_name": "Petr",
5     "last_name": "Janík",
```

```
 6          "academic_degree_after_name": "CSc.",
 7          "date_of_birth": "1994-04-15",
 8          "birth_number": "940415/0123",
 9          "gender": "MALE",
10          "email": "petr.janik@test.cz",
11          "phone_number": "+420123456789",
12          "language": "en",
13          "personal_id": "4844V2",
14          "class_name": "7.B",
15          "grade": 7,
16          "roles": {
17              "student": true,
18              "graduate": false
19          },
20          "student_status": "FULL_TIME",
21          "addresses": [
22              {
23                  "type": "REGISTERED",
24                  "address_line_1": "Husova 1204/2a",
25                  "address_line_2": "V Tower, 2. patro",
26                  "city": "Praha 6",
27                  "district": "Hlavní město Praha",
28                  "postal_code": "16000",
29                  "country": "CZE"
30              }
31          ],
32          "legal_representatives": [
33              {
34                  "type": "MOTHER",
35                  "first_name": "Jana",
36                  "last_name": "Janíková",
37                  "birth_number": "725109/0123",
38                  "email": "jana.janikova@test.cz",
39                  "phone_number": "+420123456789"
40              }
41          ],
42          "custom_fields": [
43              {
44                  "name": "membership_code",
45                  "value": "7110EQ4"
46              }
47          ]
48 }
```

(Academic) Institution – Sample Response Body

```
 1 {
 2      "message": "OK",
 3      "data": [
 4          {
 5              "cardholder_id": 1694452,
 6              "external_id": "ST44211",
 7              "institution_id": 29707,
 8              "academic_degree_before_name": "Mgr.",
 9              "first_name": "Petr",
```

```
10                "last_name": "Janík",
11                "academic_degree_after_name": "CSc.",
12                "date_of_birth": "1994-04-15",
13                "birth_number": "940415/0123",
14                "gender": "MALE",
15                "email": "petr.janik@test.cz",
16                "phone_number": "+420123456789",
17                "language": "en",
18                "personal_id": "4844V2",
19                "class_name": "7.B",
20                "grade": 7,
21                "roles": {
22                    "student": true,
23                    "graduate": false
24                },
25                "student_status": "FULL_TIME",
26                "addresses": [
27                    {
28                        "type": "REGISTERED",
29                        "address_line_1": "Husova 1204/2a",
30                        "address_line_2": "V Tower, 2. patro",
31                        "city": "Praha 6",
32                        "district": "Hlavní město Praha",
33                        "postal_code": "16000",
34                        "country": "CZE"
35                    }
36                ],
37                "legal_representatives": [
38                    {
39                        "type": "MOTHER",
40                        "first_name": "Jana",
41                        "last_name": "Janíková",
42                        "birth_number": "725109/0123",
43                        "email": "jana.janikova@test.cz",
44                        "phone_number": "+420123456789"
45                    }
46                ],
47                "custom_fields": [
48                    {
49                        "name": "membership_code",
50                        "value": "7110EQ4"
51                    }
52                ]
53            }
54        ]
55 }
```

Agent – Request Body Parameters

If client's *card issuer type is "AGENT"*, request body parameters are listed below.

NOTE: Crossed out values will be supported in the future API development phases.

Parameter Name	Data Type	Mandatory	Note

cardholder_id	Integer	depends ->	Applicable only in case of the cardholder's update, then mandatory. Anonymized cardholders cannot be updated.
external_id	String	No	
academic_degree_before_name	String	No	
first_name	String	Yes	
last_name	String	Yes	
academic_degree_after_name	String	No	
date_of_birth	Date	Yes	Date cannot be in future. Format "yyyy-MM-dd".
birth_number	String	No	
gender	String	No	
email	String	Yes	Valid e-mail address format. E-mail must be unique per all cardholders within the card issuer. All cards of a single person should be linked to the same cardholder identified by the *cardholder_id*.
phone_number	String	No	
language	String	No	
personal_id	String	No	
class_name	String	No	
grade	Integer	depends ->	Mandatory in case of ISIC SCHOLAR card order by a school involved in the ISIC for Schools project in the Czech Republic.
roles	Object	No	
~~employee~~	~~Boolean~~	~~No~~	
graduate	Boolean	No	
student	Boolean	No	
~~teacher~~	~~Boolean~~	~~No~~	
student_status	String	No	
addresses	Array	No	Addresses are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	
address_line_1	String	Yes	
address_line_2	String	No	
city	String	Yes	
district	String	No	
postal_code	String	Yes	

country	String	Yes	
institution_id	Integer	depends ->	Mandatory is either *institution_id* or *institution_name*. For a list of applicable institution IDs please ask your ISIC account manager.
institution_name	String	depends ->	
legal_representatives	Array	depends ->	At least one Legal Representative's data must be specified in case the cardholder is younger than an age required by local law (in European Union countries it is usually 15 or 16 years). Ask your ISIC account manager for the age applicable for your country. If mandatory, it must contain all its parameters marked below as mandatory.
type	String	Yes	Relationship of the legal representative to the cardholder. Always mandatory. See *[ENUM] Legal Representative Type* for the list of available values.
~~academic_degree_before_name~~	~~String~~	~~No~~	
first_name	String	Yes	
last_name	String	Yes	
~~academic_degree_after_name~~	~~String~~	~~No~~	
~~date_of_birth~~	~~Date~~	~~No~~	~~Must be older than an age required by local law (see above). Date cannot be in future. Format "yyyy-MM-dd".~~
birth_number	String	No	
~~gender~~	~~String~~	~~No~~	
email	String	Yes	Valid e-mail address format. E-mail does not have to be unique.
phone_number	String	No	
~~language~~	~~String~~	~~No~~	
~~addresses~~	~~Array~~	~~No~~	~~Address is not mandatory but if sent, it must contain all its parameters marked below as mandatory. Individual parameters all the same as for the main cardholder's address listed above.~~
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

Agent – Response

- HTTP 200 – OK + *[MODEL] Cardholder*

Agent – Sample Request Body

```
1 {
2     "external_id": "ST44211",
3     "academic_degree_before_name": "Mgr.",
```

```json
     4       "first_name": "Petr",
     5       "last_name": "Janík",
     6       "academic_degree_after_name": "CSc.",
     7       "date_of_birth": "1994-04-15",
     8       "birth_number": "940415/0123",
     9       "gender": "MALE",
    10       "email": "petr.janik@test.cz",
    11       "phone_number": "+420123456789",
    12       "language": "en",
    13       "personal_id": "4844V2",
    14       "class_name": "7.B",
    15       "grade": 7,
    16       "roles": {
    17           "student": true,
    18           "graduate": false
    19       },
    20       "student_status": "FULL_TIME",
    21       "addresses": [
    22           {
    23               "type": "REGISTERED",
    24               "address_line_1": "Husova 1204/2a",
    25               "address_line_2": "V Tower, 2. patro",
    26               "city": "Praha 6",
    27               "district": "Hlavní město Praha",
    28               "postal_code": "16000",
    29               "country": "CZE"
    30           }
    31       ],
    32       "institution_name": "University of Dublin",
    33       "legal_representatives": [
    34           {
    35               "type": "MOTHER",
    36               "first_name": "Jana",
    37               "last_name": "Janíková",
    38               "birth_number": "725109/0123",
    39               "email": "jana.janikova@test.cz",
    40               "phone_number": "+420123456789"
    41           }
    42       ],
    43       "custom_fields": [
    44           {
    45               "name": "membership_code",
    46               "value": "7110EQ4"
    47           }
    48       ]
    49 }
```

Agent – Sample Response Body

```json
     1 {
     2       "message": "OK",
     3       "data": [
     4           {
     5               "cardholder_id": 1694452,
     6               "external_id": "ST44211",
```

```json
  7                     "academic_degree_before_name": "Mgr.",
  8                     "first_name": "Petr",
  9                     "last_name": "Janík",
 10                     "academic_degree_after_name": "CSc.",
 11                     "date_of_birth": "1994-04-15",
 12                     "birth_number": "940415/0123",
 13                     "gender": "MALE",
 14                     "email": "petr.janik@test.cz",
 15                     "phone_number": "+420123456789",
 16                     "language": "en",
 17                     "personal_id": "4844V2",
 18                     "class_name": "7.B",
 19                     "grade": 7,
 20                     "roles": {
 21                         "student": true,
 22                         "graduate": false
 23                     },
 24                     "student_status": "FULL_TIME",
 25                     "addresses": [
 26                         {
 27                             "type": "REGISTERED",
 28                             "address_line_1": "Husova 1204/2a",
 29                             "address_line_2": "V Tower, 2. patro",
 30                             "city": "Praha 6",
 31                             "district": "Hlavní město Praha",
 32                             "postal_code": "16000",
 33                             "country": "CZE"
 34                         }
 35                     ],
 36                     "institution_name": "University of Dublin",
 37                     "legal_representatives": [
 38                         {
 39                             "type": "MOTHER",
 40                             "first_name": "Jana",
 41                             "last_name": "Janíková",
 42                             "birth_number": "725109/0123",
 43                             "email": "jana.janikova@test.cz",
 44                             "phone_number": "+420123456789"
 45                         }
 46                     ],
 47                     "custom_fields": [
 48                         {
 49                             "name": "membership_code",
 50                             "value": "7110EQ4"
 51                         }
 52                     ]
 53                 }
 54         ]
 55 }
```

POST /cardholders.setPhoto

Upload cardholder's photo. When a photo is already present the next request will overwrite it. **The previous photo will not be available to recover.**

Validations

- JPG, JPEG or PNG file with RGB color space. PNG images with transparent background are transferred to an image with white background.
- Minimal image resolution is limited to 450 x 540 pixels (recommended at 300 DPI).
- Maximal image file size is limited to 3 MB.

Recommendations

- For best photo quality displayed/printed on a card the recommended image aspect ratio is 5:6.
- Photo should be in color containing a whole head of the cardholder. No sunglasses, no head covers.
- Photo background should be neutral (one color or soft color gradient).

Request Body

Request must be sent as **multipart/form-data** encoding type.

Parameter Name	Data Type	Mandatory	Note
cardholder_id	Integer	Yes	
photo	File	Yes	Address to the photo file in the client's folder structure.

Response

- HTTP 200 – OK

Sample Response Body

```
1 {
2     "message": "OK",
3     "data": []
4 }
```

POST /cardholders.anonymize

Request anonymization of the cardholder identified by *cardholder_id* sent in the request body. The API will accept or reject the request. In case of the acceptance the cardholder's data (including data of his/her cards) will be anonymized within next 48 hours.

Validations

- Cardholder does not own any valid card (see *valid_to* property on the *[MODEL] Card*).
- Cardholder has not been anonymized yet.

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note

cardholder_id	Integer	Yes	

Response

- HTTP 200 – OK

Sample Request Body

```
1 {
2     "cardholder_id": 123
3 }
```

Sample Response Body

```
1 {
2     "message": "OK",
3     "data": []
4 }
```

GET /cardholders.list

Get data of cardholders filtered based on specified query parameters. Returned data are sorted by date of last modification in descending order (newest record first).

Query Parameters

All query parameteres of string data type are case-insensitive.

Parameter Name	Data Type	Mandatory	Description
external_id	String	No	Cardholder's external identifier.
first_name	String	No	Cardholder's first name.
last_name	String	No	Cardholder's last name.
date_of_birth	Date	No	Cardholder's date of birth.
email	String	No	Cardholder's e-mail address.
phone_number	String	No	Cardholder's phone number.
modified_from	Datetime	No	Return records created or modified after specified date and time (for option of incremental updates on the API client's side).
offset	Integer	No	Result paging offset (zero based index of the first returned item).
limit	Integer	Yes	Result page size (how many items to return).

Response

- HTTP 200 – OK + collection of *[MODEL] Cardholder*

GET /cardholders.get

Get data of the cardholder specified in the query parameter.

Query Parameters

Parameter Name	Data Type	Mandatory	Description
cardholder_id	Integer	Yes	Unique cardholder's identifier.

Response

- HTTP 200 – OK + *[MODEL] Cardholder*

GET /cardholders.getPhoto

Get photo of the cardholder specified in the query parameter.

Query Parameters

Parameter Name	Data Type	Mandatory	Description
cardholder_id	Integer	Yes	Unique cardholder's identifier.

Response

- HTTP 200 – OK + cardholder's photo as direct PNG or JPG image file data (octet-stream) with appropriate content-type header (*image/png* or *image/jpg*).

Cards

POST /cards.report

Report a card issued to a cardholder identified by *cardholder_id*. Card number must be assigned by the client and sent in the API request. The endpoint is accessible only for card issuers working in *card issuing mode "REPORT"*.

(Academic) Institution – Request Body Parameters

If client's *card issuer type is "INSTITUTION"*, request body parameters are listed below.

Parameter Name	Data Type	Mandatory	Note

cardholder_id	Integer	Yes	Unique identifier of the cardholder to whom the card was issued.
type	String	Yes	Allowed values are based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of card types allowed for your account. See *[ENUM] Card Type* for the list of available values.
number	String	Yes	Card number must match to some of the card ranges you have assigned in NCDB based on your card number orders and must be free to use.
form	String	Yes	See *[ENUM] Form* for the list of available values.
valid_from	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
valid_to	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

(Academic) Institution – Response

- HTTP 200 – OK + *[MODEL] Card*

(Academic) Institution – Sample Request Body

```
1  {
2      "cardholder_id": 14,
3      "type": "ISIC",
4      "number": "S420123456789A",
5      "form": "DIGITAL",
6      "valid_from": "2019-09-01",
7      "valid_to": "2020-12-31",
8      "smart_technologies": [
9          {
10             "type": "CONTACTLESS_MIFARE",
11             "value": "A14E5D5F"
12         },
13         {
14             "type": "CONTACTLESS_EM_MARINE",
15             "value": "8100A7BC5D"
16         }
17     ],
18     "custom_fields": [
19         {
20             "name": "esc_number",
```

```
21                "value": "abc123"
22            }
23        ]
24 }
```

(Academic) Institution – Sample Response Body

```
 1 {
 2     "message": "OK",
 3     "data": [
 4         {
 5             "card_id": 35502,
 6             "cardholder_id": 14,
 7             "type": "ISIC",
 8             "number": "S420123456789A",
 9             "form": "DIGITAL",
10             "status": "ACTIVE",
11             "design": "SA-420-026",
12             "valid_from": "2019-09-01",
13             "valid_to": "2020-12-31",
14             "institution_id": 4655,
15             "institution_name_line_1": "VŠ aplikované informatiky,",
16             "institution_name_line_2": "Kolín",
17             "smart_technologies": [
18                 {
19                     "type": "CONTACTLESS_MIFARE",
20                     "value": "A14E5D5F"
21                 },
22                 {
23                     "type": "CONTACTLESS_EM_MARINE",
24                     "value": "8100A7BC5D"
25                 }
26             ],
27             "custom_fields": [
28                 {
29                     "name": "esc_number",
30                     "value": "abc123"
31                 }
32             ]
33         }
34     ]
35 }
```

Agent – Request Body Parameters

If client's *card issuer type is "AGENT"*, request body parameters are listed below.

Parameter Name	Data Type	Mandatory	Note
cardholder_id	Integer	Yes	Unique identifier of the cardholder to whom the card was issued.
type	String	Yes	Allowed values are based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of card types

			allowed for your account. See *[ENUM] Card Type* for the list of available values.
number	String	Yes	Card number must match to some of the card ranges you have assigned in NCDB based on your card number orders and must be free to use.
form	String	Yes	See *[ENUM] Form* for the list of available values.
valid_from	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
valid_to	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
institution_id	Integer	depends ->	Mandatory is either *institution_id* or at least one of the parameters *institution_name_line_1* and *institution_name_line_2*. For the list of applicable institution IDs please ask your ISIC account manager. In case the card type is not so-called institution bound (e.g. IYTC card), none of these three attributes should be sent.
institution_name_line_1	String	depends ->	
institution_name_line_2	String	depends ->	
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

Agent – Response

- HTTP 200 – OK + *[MODEL] Card*

Agent – Sample Request Body

```
1  {
2      "cardholder_id": 445562,
3      "number": "H420123456789A",
4      "type": "ISIC_SCHOLAR",
5      "form": "DIGITAL",
6      "valid_from": "2019-09-01",
7      "valid_to": "2020-12-31",
8      "smart_technologies": [
9          {
10             "type": "CONTACTLESS_MIFARE",
11             "value": "A14E5D5F"
12         },
13         {
14             "type": "CONTACTLESS_EM_MARINE",
15             "value": "8100A7BC5D"
16         }
17     ],
```

```
18        "institution_name_line_1": "Základní škola Kladrubská,",
19        "institution_name_line_2": "Praha 10",
20        "custom_fields": [
21            {
22                "name": "esc_number",
23                "value": "abc123"
24            }
25        ]
26 }
```

Agent – Sample Response Body

```
1 {
2      "message": "OK",
3      "data": [
4          {
5              "card_id": 4233658,
6              "cardholder_id": 445562,
7              "number": "H420123456789A",
8              "type": "ISIC_SCHOLAR",
9              "form": "DIGITAL",
10             "status": "ACTIVE",
11             "valid_from": "2019-09-01",
12             "valid_to": "2020-12-31",
13             "design": "HA-420-145",
14             "smart_technologies": [
15                 {
16                     "type": "CONTACTLESS_MIFARE",
17                     "value": "A14E5D5F"
18                 },
19                 {
20                     "type": "CONTACTLESS_EM_MARINE",
21                     "value": "8100A7BC5D"
22                 }
23             ],
24             "institution_name_line_1": "Základní škola Kladrubská,",
25             "institution_name_line_2": "Praha 10",
26             "custom_fields": [
27                 {
28                     "name": "esc_number",
29                     "value": "abc123"
30                 }
31             ]
32         }
33     ]
34 }
```

POST /cards.request

Request to issue a card to a cardholder identified by *cardholder_id*. Card number is assigned by the NCDB and returned in the API response. **Plastic card printing process is not covered by the NCDB.** The endpoint is accessible only for card issuers working in *card issuing mode "REQUEST"*.

(Academic) Institution – Request Body Parameters

If client's *card issuer type is "INSTITUTION"*, request body parameters are listed below.

Parameter Name	Data Type	Mandatory	Note
cardholder_id	Integer	Yes	Unique identifier of the cardholder to whom the card should be issued.
type	String	Yes	Allowed values are based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of card types allowed for your account. See *[ENUM] Card Type* for the list of available values.
form	String	Yes	See *[ENUM] Form* for the list of available values.
design	String	No	Requested card design must be enabled for the card issuer. If not specified, a default card issuer's card design for the card type will be used.
valid_from	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
valid_to	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

(Academic) Institution – Response

- HTTP 200 – OK + *[MODEL] Card*

(Academic) Institution – Sample Request Body

```
1  {
2          "cardholder_id": 14,
3          "type": "ISIC",
4          "form": "DIGITAL",
5          "valid_from": "2019-09-01",
6          "valid_to": "2020-12-31",
7          "design": "SA-420-071",
8          "smart_technologies": [
9                  {
10                         "type": "CONTACTLESS_MIFARE",
11                         "value": "A14E5D5F"
12                 },
13                 {
```

```
14                          "type": "CONTACTLESS_EM_MARINE",
15                          "value": "8100A7BC5D"
16                  }
17          ],
18          "custom_fields": [
19                  {
20                          "name": "esc_number",
21                          "value": "abc123"
22                  }
23          ]
24 }
```

(Academic) Institution – Sample Response Body

```
 1 {
 2    "message": "OK",
 3    "data": [
 4      {
 5        "card_id": 5524,
 6        "cardholder_id": 14,
 7        "number": "S420123456789A",
 8        "type": "ISIC",
 9        "form": "DIGITAL",
10        "status": "ACTIVE",
11        "valid_from": "2019-09-01",
12        "valid_to": "2020-12-31",
13        "design": "SA-420-071",
14        "smart_technologies": [
15          {
16            "type": "CONTACTLESS_MIFARE",
17            "value": "A14E5D5F"
18          },
19          {
20            "type": "CONTACTLESS_EM_MARINE",
21            "value": "8100A7BC5D"
22          }
23        ],
24        "institution_id": 19896,
25        "institution_name_line_1": "VŠ aplikované informatiky,",
26        "institution_name_line_2": "Kladno",
27        "custom_fields": [
28          {
29            "name": "esc_number",
30            "value": "abc123"
31          }
32        ]
33      }
34    ]
35 }
```

Agent – Request Body Parameters

If client's *card issuer type is "AGENT"*, request body parameters are listed below.

Parameter Name	Data Type	Mandatory	Note
cardholder_id	Integer	Yes	Unique identifier of the cardholder to whom the card should be issued.
type	String	Yes	Allowed values are based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of card types allowed for your account. See *[ENUM] Card Type* for the list of available values.
form	String	Yes	See *[ENUM] Form* for the list of available values.
design	String	No	Requested card design must be enabled for the card issuer. If not specified, a default card issuer's card design for the card type will be used.
valid_from	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
valid_to	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".
institution_id	Integer	depends ->	Mandatory is either *institution_id* or at least one of the parameters *institution_name_line_1* and *institution_name_line_2*. For the list of applicable institution IDs please ask your ISIC account manager. In case the card type is not so-called institution bound (e.g., IYTC card), none of these three attributes should be sent.
institution_name_line_1	String	depends ->	
institution_name_line_2	String	depends ->	
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

Agent – Response

- HTTP 200 – OK + *[MODEL] Card*

Agent – Sample Request Body

```
1  {
2          "cardholder_id": 445562,
3          "type": "ISIC_SCHOLAR",
4          "form": "DIGITAL",
5          "valid_from": "2019-09-01",
6          "valid_to": "2020-12-31",
7          "design": "HA-420-145",
8          "smart_technologies": [
9                  {
10                         "type": "CONTACTLESS_MIFARE",
11                         "value": "A14E5D5F"
12                 },
```

```json
13                     {
14                          "type": "CONTACTLESS_EM_MARINE",
15                          "value": "8100A7BC5D"
16                     }
17         ],
18         "institution_id": 2567,
19         "institution_name_line_1": "Základní škola Kladrubská,",
20         "institution_name_line_2": "Praha 10",
21         "custom_fields": [
22               {
23                     "name": "personal_id",
24                     "value": "abc123"
25               }
26         ]
27 }
```

Agent – Sample Response Body

```json
1 {
2    "message": "OK",
3    "data": [
4      {
5        "card_id": 1,
6        "cardholder_id": 445562,
7        "number": "H420123456789A",
8        "type": "ISIC_SCHOLAR",
9        "form": "DIGITAL",
10       "status": "ACTIVE",
11       "valid_from": "2019-09-01",
12       "valid_to": "2020-12-31",
13       "design": "HA-420-145",
14       "smart_technologies": [
15         {
16           "type": "CONTACTLESS_MIFARE",
17           "value": "A14E5D5F"
18         },
19         {
20           "type": "CONTACTLESS_EM_MARINE",
21           "value": "8100A7BC5D"
22         }
23       ],
24       "institution_id": 2567,
25       "institution_name_line_1": "Základní škola Kladrubská,",
26       "institution_name_line_2": "Praha 10",
27       "custom_fields": [
28         {
29           "name": "personal_id",
30           "value": "abc123"
31         }
32       ]
33     }
34   ]
35 }
```

POST /cards.update

For update of card smart technology and custom fields data. Card updates are not differential. Within every request the client must send all smart technology and custom fields data as with newly issued card. **Data missing in the request will be considered as for removal and will be deleted with no way to recover.**

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
card_id	Integer	Yes	Cancelled, returned, and anonymized cards cannot be updated.
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

Response

- HTTP 200 – OK + *[MODEL] Card*

Sample Request Body

```
1  {
2      "card_id": 4233658,
3      "smart_technologies": [
4          {
5              "type": "CONTACTLESS_MIFARE",
6              "value": "A14E5D5F"
7          },
8          {
9              "type": "CONTACTLESS_EM_MARINE",
10             "value": "8100A7BC5D"
11         }
12     ],
13     "custom_fields": [
14         {
15             "name": "esc_number",
16             "value": "abc123"
17         },
18         {
19             "name": "library_id",
20             "value": "441556222104"
21         }
```

```
22        ]
23 }
```

Sample Response Body

```
 1 {
 2     "message": "OK",
 3     "data": [
 4         {
 5             "card_id": 4233658,
 6             "cardholder_id": 445562,
 7             "number": "H420123456789A",
 8             "type": "ISIC_SCHOLAR",
 9             "form": "DIGITAL",
10             "status": "ACTIVE",
11             "valid_from": "2019-09-01",
12             "valid_to": "2020-12-31",
13             "design": "HA-420-145",
14             "smart_technologies": [
15                 {
16                     "type": "CONTACTLESS_MIFARE",
17                     "value": "A14E5D5F"
18                 },
19                 {
20                     "type": "CONTACTLESS_EM_MARINE",
21                     "value": "8100A7BC5D"
22                 }
23             ],
24             "institution_name_line_1": "Základní škola Kladrubská,",
25             "institution_name_line_2": "Praha 10",
26             "custom_fields": [
27                 {
28                     "name": "esc_number",
29                     "value": "abc123"
30                 },
31                 {
32                     "name": "library_id",
33                     "value": "441556222104"
34                 }
35             ]
36         }
37     ]
38 }
```

POST /cards.changeValidity

Card validity extension. The end of card validity will be replaced by new date. In case the plastic card was issued and its validity can be extended both digital and plastic card validities will be extended. It is not possible to shorten the card validity.

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
card_id	Integer	Yes	Validity of cancelled, returned, and anonymized cards cannot be changed.
valid_to	Date	Yes	Date must comply with card validity cycles available for selected card type at the time when the card is reported. Format "yyyy-MM-dd".

Response

- HTTP 200 – OK + *[MODEL] Card*

Sample Request Body

```
1 {
2     "card_id": 198665,
3     "valid_to": "2021-12-31"
4 }
```

Sample Response Body

```
1 {
2     "message": "OK",
3     "data": [
4         {
5             "card_id": 198665,
6             "cardholder_id": 214552,
7             "number": "S420123456789A",
8             "type": "ISIC",
9             "form": "DIGITAL",
10            "status": "ACTIVE",
11            "valid_from": "2019-09-01",
12            "valid_to": "2021-12-31",
13            "design": "SA-420-071",
14            "smart_technologies": [
15                {
16                    "type": "CONTACTLESS_MIFARE",
17                    "value": "A14E5D5F"
18                },
19                {
20                    "type": "CONTACTLESS_EM_MARINE",
21                    "value": "8100A7BC5D"
22                }
23            ],
24            "institution_id": 10896,
25            "institution_name_line_1": "VŠ aplikované informatiky,",
26            "institution_name_line_2": "Kladno",
27            "custom_fields": [
28                {
29                    "name": "esc_number",
30                    "value": "abc123"
31                }
```

```
32              ]
33          }
34      ]
35 }
```

POST /cards.changeStatus

Card status change. In case of card return the card will be locked for any future changes. Card number will become available for new usage. All returned cards are strictly monitored to avoid misuse of this feature!

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
card_id	Integer	Yes	Status of returned and anonymized cards cannot be changed.
status	Date	Yes	See *[ENUM] Status* for the list of available values. Status of returned cards cannot be changed.

Response

- HTTP 200 – OK + *[MODEL] Card*

Sample Request Body

```
1 {
2     "card_id": 198665,
3     "status": "CANCELLED"
4 }
```

Sample Response Body

```
1 {
2     "message": "OK",
3     "data": [
4         {
5             "card_id": 198665,
6             "cardholder_id": 214552,
7             "number": "S420123456789A",
8             "type": "ISIC",
9             "form": "DIGITAL",
10            "status": "CANCELLED",
11            "valid_from": "2019-09-01",
12            "valid_to": "2021-12-31",
13            "design": "SA-420-071",
14            "smart_technologies": [
15                {
16                    "type": "CONTACTLESS_MIFARE",
17                    "value": "A14E5D5F"
18                },
19                {
```

```
20                         "type": "CONTACTLESS_EM_MARINE",
21                         "value": "8100A7BC5D"
22                     }
23                 ],
24             "institution_id": 10896,
25             "institution_name_line_1": "VŠ aplikované informatiky,",
26             "institution_name_line_2": "Kladno",
27             "custom_fields": [
28                 {
29                     "name": "esc_number",
30                     "value": "abc123"
31                 }
32             ]
33         }
34     ]
35 }
```

POST /cards.issuePlastic

Plastic card issuance report. During a card lifetime an unlimited count of plastic cards may be issued. Client's are requested to report all plastic cards issued (first plastic card for digital card, next new plastic cards or their duplicates for different reasons etc.). With every plastic card issuance report you can report smart technology changes. These card updates are not differential. Within every request the client must send all card's smart technology data as with newly issued card. **Data missing in the request will be considered as for removal and will be deleted with no way to recover. This includes smart technologies reported earlier when digital card was issued.**

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
card_id	Integer	Yes	Plastic card cannot be issued to cancelled, returned, and anonymized cards.
design_plastic	String	No	Requested card design must be enabled for the card issuer. If not specified, a default card issuer's card design for the card type will be used.
valid_to_plastic	Date	No	May be the same or shorter than the digital card validity end. If not specified, the end of the plastic card validity will be set the same as the digital card's validity. Format "yyyy-MM-dd".
smart_technologies	Array	No	Smart technologies are not mandatory but if sent, it must contain all its parameters marked below as mandatory.
type	String	Yes	See *[ENUM] Smart Technology Type* for the list of available values.
value	String	Yes	Value must be unique per smart technology type across the country.
custom_fields	Array	depends ->	Custom fields may be mandatory or optional based on client's agreement with the ISIC account manager. Ask your ISIC account manager for the list of mandatory custom fields applicable for your account. If mandatory, it must contain all its parameters marked below as mandatory.
name	String	Yes	
value	String	Yes	

Response

- HTTP 200 – OK + *[MODEL] Card*

Sample Request Body

```
1  {
2      "card_id": 198665,
3      "design_plastic": "SA-420-168",
4      "valid_to_plastic": "2021-12-31",
5      "smart_technologies": [
6          {
7              "type": "CONTACTLESS_MIFARE",
8              "value": "A14E5D5F"
9          },
10         {
11             "type": "CONTACTLESS_EM_MARINE",
12             "value": "8100A7BC5D"
13         }
14     ],
15     "custom_fields": [
16         {
17             "name": "esc_number",
18             "value": "abc123"
19         }
20     ]
21 }
```

Sample Response Body

```
1  {
2      "message": "OK",
3      "data": [
4          {
5              "card_id": 198665,
6              "cardholder_id": 214552,
7              "number": "S420123456789A",
8              "type": "ISIC",
9              "form": "DIGITAL_PLASTIC",
10             "status": "ACTIVE",
11             "valid_from": "2019-09-01",
12             "valid_to": "2021-12-31",
13             "valid_to_plastic": "2021-12-31",
14             "design": "SA-420-071",
15             "design_plastic": "SA-420-168",
16             "smart_technologies": [
17                 {
18                     "type": "CONTACTLESS_MIFARE",
19                     "value": "A14E5D5F"
20                 },
21                 {
22                     "type": "CONTACTLESS_EM_MARINE",
```

```
23                        "value": "8100A7BC5D"
24                    }
25                ],
26            "institution_id": 10896,
27            "institution_name_line_1": "VŠ aplikované informatiky,",
28            "institution_name_line_2": "Kladno",
29            "custom_fields": [
30                    {
31                        "name": "esc_number",
32                        "value": "abc123"
33                    }
34                ]
35            }
36        ]
37 }
```

GET /cards.list

Get data of cards filtered based on specified query parameters. Returned data are sorted by date of last modification in descending order (last modified record first).

Query Parameters

All query parameteres of string data type are case-insensitive.

Parameter Name	Data Type	Mandatory	Description
cardholder_id	Integer	No	Unique cardholder's identifier.
number	String	No	Card number.
status	String	No	Card status (see *[ENUM] Status*).
type	String	No	Card type (see *[ENUM] Type*).
modified_from	Datetime	No	Return records created or modified after specified date and time (for option of incremental updates on the API client's side).
offset	Integer	No	Result paging offset (zero based index of the first returned item).
limit	Integer	Yes	Result page size (how many items to return).

Response

- HTTP 200 – OK + collection of *[MODEL] Card*

GET /cards.get

Get data of the card specified in the query parameter.

Query Parameters

Parameter Name	Data Type	Mandatory	Description
card_id	Integer	Yes	Unique card identifier.

Response

- HTTP 200 – OK + *[MODEL] Card*

Workflows

How to issue a new card

Digital and plastic cards were issued together

1. Authenticate yourself.
2. Get to know if the cardholder already exists in NCDB (to get his/her ID) or use cardholder's ID stored in your system.
3. Create or update cardholder (including a photo if necessary) to secure his/her data stored in NCDB are actual.
4. Report card issuance.
   Please note: The card issuance have to be the last step of the process, otherwise the card will be issued with old cardholder's data and photo. Cardholder's data are automatically transferred from the cardholder object to the card object at the moment of card issuance or update.

Plastic card was issued later than the digital card

1. Authenticate yourself.
2. Get card ID from NCDB if it is not already stored in your system.
3. Report plastic card issuance by calling *POST /cards.issuePlastic* API endpoint. Card number remains the same as of the digital card.

The same process applies for all plastic cards issued during the card lifetime. Data of previous plastic card are overwritten by a new plastic card's data. Cardholder should not have more than one valid plastic card at the same time.

How to update cardholder's data stored in NCDB/displayed on a digital card

1. Authenticate yourself.
2. Get cardholder's ID from NCDB if it is not already stored in your system.
3. Update the cardholder.

4. Update the card by calling *POST /cards.update* API endpoint. By doing that, data of the cardholder will be automatically updated on the digital form of this card. Don't forget to include information about card's custom fields and smart technologies, otherwise these data will be deleted from the card record in NCDB.

   Please note: If the card has also its plastic version and a new plastic card with updated cardholder's data (surname, photo etc.) was issued, you have to send an API request to the endpoint *POST /cards.issuePlastic* instead of *POST /cards.update* to secure the information about newly issued plastic card is added to the evidence in NCDB.

How to update card validity, status, smart technology or custom fields data

1. Authenticate yourself.
2. Get card ID from NCDB if it is not already stored in your system.
3. Update the card using the appropriate API endpoint. Doing so, data of the cardholder will be automatically updated on a digital card.

How to delete a cardholder if a wrong data were sent

1. Authenticate yourself.
2. Get cardholder's ID from NCDB if it is not already stored in your system.
3. Ask for cardholder's data anonymization. Only cardholder without valid cards (valid to date of all his/her cards is in the past) may be anonymized.

Test Environment

The following details are necessary for web service integration testing. Please ask your ISIC account manager for authentication details and card issuer's setup based on your contract specification.

Documentation in Postman: will be specified after its completion
Base URL: *https://api.test.aliveplatform.com/v1*
Access Key ID: *ask your ISIC account manager*
Secret Access Key: *ask your ISIC account manager*
Card Issuer Type: *ask your ISIC account manager*
Card Issuing Mode: *ask your ISIC account manager*

Production Environment

Access details to the production environment will be provided **after full implementation and successful tests against the test environment**.

Base URL: *https://api.aliveplatform.com/v1*
Access Key ID: *ask your ISIC account manager*
Secret Access Key: *ask your ISIC account manager*
Card Issuer Type: *ask your ISIC account manager*
Card Issuing Mode: *ask your ISIC account manager*

Technical Support

For all support queries please contact the ALIVE Platform support team at *support@aliveplatform.com*.