



Digital Cards API Integration Manual

ALIVE Platform

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Revision History

Date	Version	Author	Description of Changes
27. 10. 2020	1.0	Lukas Kabicek	Initial release.
26. 11. 2020	1.1	Lukas Kabicek	Added description of the procedure for a case when cardholder's photo is required to be able to display the digital card but missing in the National Card Database (NCDB).
2. 12. 2020	1.2	Lukas Kabicek	A validation error code for cancelled card was amended to <i>CARD_CANCELLED</i> .
8. 12. 2020	1.3	Lukas Kabicek	A model and example of warning message in the API responses was added. It is used primarily for digital cards with missing cardholder's photo.

Introduction

The digital card is a modern representation of the International Student/Scholar/Teacher/Youth Identity Card or ALIVE card. These digital cards (except ALIVE) are available through ISIC global mobile platform and ALIVE Platform's mobile application, but may be also integrated by card issuers into their own mobile applications.

Integrators are required to maintain design defined in this document and implement all required security elements such as animated hologram and timestamp as specified in this document.

The imagery of the digital card may be retrieved through the ALIVE Platform's API which is described in this document together with the security approach and digital card related processes.

Digital Card Design

The screen with the card should adhere to the following rules, sample mobile app screenshots can be found on the second page of this document.

Card Design

- The card can be shown either in full screen or with rounded corners.
- The card must keep its aspect ratio. It must not be stretched on wide display.
- Orientation of the card must be with the photo near the timesamp like in the following sample pictures.
- Valid card must display dynamic hologram of ISIC globes on top of the card as a basic security measure against screenshots and replications of the card. The hologram can be constructed by overlaying GIF image, which can be downloaded [here](#), over the card's front page image.
- Expired card (based on its *valid_to* date) must be displayed in black & white without animated hologram. The cardholder must be informed that the card is expired.
- Card which validity starts in the future (based on its *valid_from* date) must be displayed in black & white without animated hologram. The cardholder must be informed that the card is not valid yet and when its validity starts.

Timestamp

- The application must include a timestamp at the top of the screen in the form of a stripe with the current date and time on the right side. The timestamp must be updated every second.
- If the card is valid the background of the timestamp must be in grey color (#4A4A4A) and the application must show green dot (#22BB44) with text **VALID** on the left side of the timestamp area.
- If the card is expired (based on its *valid_to* date) the timestamp background must be in red color (#FF0000), not show the green dot and it must show text **EXPIRED** on the left side of the timestamp area.
- If the card validity starts in the future (based on its *valid_from* date) the timestamp background must be in red color (#FF0000), not show the green dot and it must show text **INVALID** on the left side of the timestamp area.

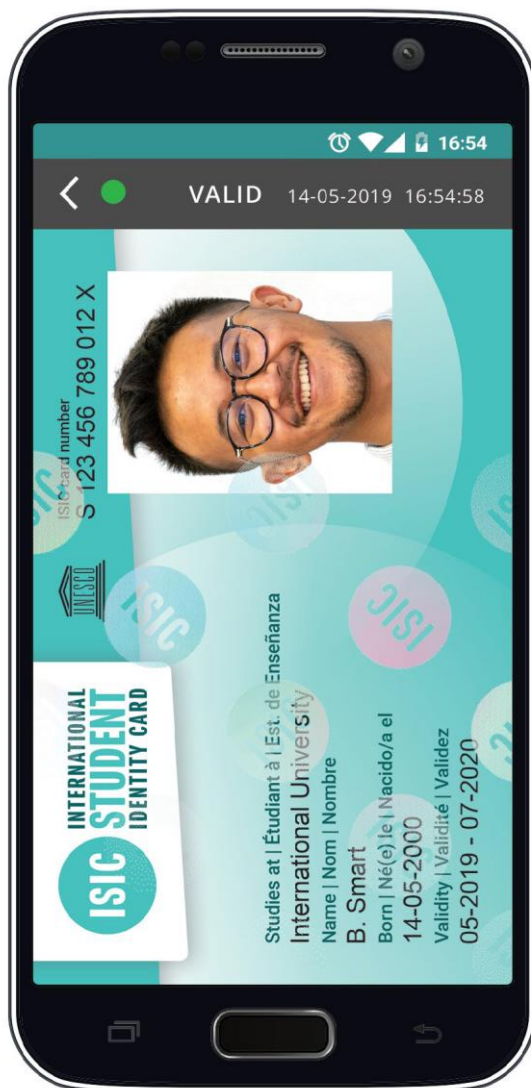
General Requirements

- User needs to be able to view all sides of the card (for example by swiping or tapping the card).
- Screen capturing should be disabled on devices that have this option.
- The card can be cached for offline use for the maximum of 30 days but no longer than the card validity (based on its *valid_to* date).

Example of Valid Digital Card

The following image shows the sample display of valid digital ISIC card.

The card is valid when actual date is within valid from and valid to dates of the card and its status is “ACTIVE”.



Example of Expired Digital Card

The following image shows the sample display of expired digital ISIC card. **All page images of expired digital card must be shown in black & white.** Integrators must show a message on top of the card informing the user that the card is expired. This information may be completed by call to action buttons to redirect the user to extend card's validity or to get a new card.

The card is expired when actual date is after the valid to date of the card.



API Specification

Authentication

- All API **endpoints are secured** to prevent unauthorized access 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**.
- Integrators are able to show only digital cards of their own cardholder base. It is not possible to request digital cards issued by other academic institutions.

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 **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.
- 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 use ISO 8601 extended format.
 - In API requests, date and time values are 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 case the date and time value is in a query parameter, character “+” must be substituted by “%2B” due to HTTP POST call technical limitations).
 - In API responses, date and time values are always in UTC.

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 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.

[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. <i>[MODEL] Digital Card</i>).
code	Integer	In case of error this attribute contains numeric error code.
warnings	Array	Optional nested array of objects representing warnings related to the data returned by the API endpoint.
errors	Array	Optional nested array of objects representing individual validation or error messages (see <i>[MODEL] Errors</i>).

[MODEL] Warnings

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

[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_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e"
6     }
7   ]
8 }

```

Sample Response Body – Warning

```

1 {
2   "message": "OK",
3   "warnings": [
4     {
5       "code": "CARDHOLDER_PHOTO_MISSING",
6       "message": "The card must contain cardholder's photo which was
not uploaded yet, thus the card cannot be displayed."
7     }
8   ],
9   "data": [
10    {
11      "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
12      "type": "ITIC",
13      "number": "T420650000870L",
14      "status": "ACTIVE",
15      "valid_from": "2019-09-01",
16      "valid_to": "2020-12-31",
17      "last_modified_at": "2020-04-28T09:11:11+00:00",

```

```

18         "pages": [
19 "https://api.test.aliveplatform.com/v1/digitalCards.getCardPage
    ?card_guid=9dff472f-debc-4eb0-b1ff-4b3db0bdc86e&page=1",
20 "https://api.test.aliveplatform.com/v1/digitalCards.getCardPage
    ?card_guid=9dff472f-debc-4eb0-b1ff-4b3db0bdc86e&page=2"
21         ]
22     }
23 ]
24 }

```

Sample Response Body – Error

```

1 {
2   "message": "Digital card already anonymized.",
3   "data": [],
4   "code": 3001
5 }

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

Digital Cards

[MODEL] Digital Card

Attribute Name	Data Type	Description
card_guid	String	Unique, primary digital card's identifier.
type	String	Card type.

number	String	Card number.
status	String	Card status.
valid_from	Date	Card validity start.
valid_to	Date	Card validity end.
last_modified_at	Datetime	Date and time of the last modification of the digital card (raw data and page images).
pages	Array	Array of URL addresses to call to get individual digital card's page images. See resource GET /digitalCards.getCardPage .

Enums

Digital Cards

[ENUM] Type

Value	Description
ISIC	ISIC card (for higher educational institution full-time students).
ISIC_SCHOLAR	ISIC SCHOLAR card (for primary/elementary school full-time students; 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] Status

Value	Description
ACTIVE	Active card (does not inform about card validity period!).
CANCELLED	Cancelled card (e.g. damaged, lost, stolen).

Process Flow

Digital Card Validation

To be able to access the digital card it is required first to verify the user to assure that the digital card will be displayed only to the correct and authorized cardholder. Digital card validation requires card number and cardholder's first and last name (see [POST /digitalCards.validate](#)). The integrator can validate the card either with data stored in its own information system where the user is authorized or request both of these data from the user (cardholder) at the beginning of the digital card's obtaining process. **Correct cardholder's authorization is an important responsibility of the API integrator!**

Digital card is not validated successfully in the following cases. For every case a specific error code is returned and the integrator should show an appropriate error message to the end user.

Validation Errors

When calling the API the following validation errors related to the end user's input may be returned. These errors apply to all API resources described later in this document.

Error Code	Description
CARD_NOT_FOUND	A card matching the specified parameters was not found.
CARD_CANCELLED	A card with specified parameters exists, but it is not active. Its status is "CANCELLED" – card damaged, lost, stolen etc. thus cannot be displayed and used by the cardholder.
CARD_ANONYMIZED	A card with specified parameters exists, but its personal data were already anonymized according to the terms of the personal data processing.

Cardholder's Photo

In case the digital card (any of its pages) contains a frame for cardholder's photo and that photo is not present in the National Card Database (NCDB), digital card page images cannot be fetched. The following validation error is returned to the client when calling [GET /digitalCards.getCardPage](#) API endpoint. The same message is returned also as a warning when calling [POST /digitalCards.validate](#) or [GET /digitalCards.get](#) to warn the client that it will not be possible to fetch the digital card images.

Error Code	Description
CARDHOLDER_PHOTO_MISSING	A cardholder photo is required to be able to display the digital card but missing in the National Card Database (NCDB). The cardholder's photo needs to be uploaded first.

In such cases the client must show a message to the user informing about missing photo which prevents the digital card from being displayed. Along with that the client should ask the cardholder for a photo upload through his/her ISIC client zone account.

Digital Card Rendering

Once the card validation is successfully completed, the integrator receives all essential information of the digital card in the API response. These information consist of unique digital card's identifier (*card_guid*) and data like card type, status, validity start and end dates and date and time of the digital card's last modification (see *[MODEL] Digital Card*). All of these information are essential in further work with the digital card in the system of the integrator.

Digital Card Caching

To reduce the amount of cross-application communication the integrators are allowed to cache all necessary information to identify the end user and his/her digital card including digital card's page images for the maximum of 30 days but no longer than the end of card's validity. Cached data should be used primarily for the case when the end user wants to display the digital card and is not connected to the internet. In all other cases the integrator should ask for the information about the digital card at the moment when the end user is asking for its display. If the date and time of digital card's last modification is newer than previous value (which should be stored in the integrator's system) the integrator should fetch also all digital card page images before displaying them to the end user.

Resources

Authentication

The authentication service is accessible without any credentials. In the request body the client must send 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": "digitalCards.api.test",
```

```
3   "secret_access_key": "LHKwwZ4f-FNW4qa"
4 }
```

Sample Response Body

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

Digital Cards

POST /digitalCards.validate

Validate digital card to get its unique identifier (*card_guid*) and essential information for further API communication.

Request Body Parameters

Parameter Name	Data Type	Mandatory	Note
card_number	String	Yes	Card number including type and check letters.
cardholder_first_name	String	Yes	Cardholder's first name.
cardholder_last_name	String	Yes	Cardholder's last name.

Response

- HTTP 200 – OK + *[MODEL] Digital Card*

Sample Request Body

```
1 {
2   "card_number": "T420650000870L",
3   "cardholder_first_name": "Alice",
4   "cardholder_last_name": "Pazderová"
5 }
```

Sample Response Body

```
1 {
```

```

2   "message": "OK",
3   "data": [
4     {
5       "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
6       "type": "ITIC",
7       "number": "T420650000870L",
8       "status": "ACTIVE",
9       "valid_from": "2019-09-01",
10      "valid_to": "2020-12-31",
11      "last_modified_at": "2020-04-28T09:11:11+00:00",
12      "pages": [
13        "https://api.test.aliveplatform.com/v1
/digitalCards.getCardPage?card_guid=9dff472f-debc-4eb0-b1ff-
4b3db0bdc86e&page=1",
14        "https://api.test.aliveplatform.com/v1
/digitalCards.getCardPage?card_guid=9dff472f-debc-4eb0-b1ff-
4b3db0bdc86e&page=2"
15      ]
16    }
17  ]
18 }

```

GET /digitalCards.get

Get digital card's data based on its unique identifier.

Query Parameters

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

Parameter Name	Data Type	Mandatory	Description
card_guid	String	Yes	Unique digital card's identifier.

Response

- HTTP 200 – OK + *[MODEL] Digital Card*

Sample Response Body

```

1 {
2   "message": "OK",
3   "data": [
4     {
5       "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
6       "type": "ITIC",
7       "number": "T420650000870L",
8       "status": "ACTIVE",
9       "valid_from": "2019-09-01",
10      "valid_to": "2020-12-31",
11      "last_modified_at": "2020-04-28T09:11:11+00:00",
12      "pages": [

```



```

13         "https://api.test.aliveplatform.com/v1
14         /digitalCards.getCardPage?card_guid=9dff472f-debc-4eb0-b1ff-
15         4b3db0bdc86e&page=1",
16         "https://api.test.aliveplatform.com/v1
17         /digitalCards.getCardPage?card_guid=9dff472f-debc-4eb0-b1ff-
18         4b3db0bdc86e&page=2"
    ]
}
]
}

```

GET /digitalCards.getCardPage

Get digital card's page image based on the card's unique identifier. **Digital card pages** are numbered sequentially in the order **1 = front, 2 = back, 3 = custom 1, 4 = custom 2**, etc. Digital card may have unlimited number of custom pages. **Clients must always fetch and display all pages.**

Query Parameters

Parameter Name	Data Type	Mandatory	Description
card_guid	String	Yes	Unique digital card's identifier.
page	Integer	Yes	Digital card's page number.

Response

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

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*

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*

Technical Support

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