GTSALIVE

Subscriptions Service API Integration Manual

ALIVE Platform

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Revision History

Date	Version	Author	Description of Changes
20. 8. 2021	0.5	Lukas Kabicek	Initial release.
21. 8. 2021	0.5.1	Lukas Kabicek	Attribute name unification in the resource descriptions.
25. 8. 2021	0.6	Lukas Kabicek	• GET /subscribers.get endpoint correction – query parameter *external_id* instead of request body attribute. • Minor corrections across the document.

Introduction

This document describes the Subscriptions Service API of the information system ALIVE Platform. The API is intended for partners with user subscription business model and would like to communicate with the Subscription Service in an automated way. The API allows to manage subscribers and their subscriptions.

API Specification

Authentication

- All API **endpoints except the authentication one 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 account manager.
- The **validity of the token** is very short (exact 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.

Content Type

- 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.

Charset

- All requests should be send 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 a response returned with the HTTP 422 Unprocessable entity status code (see object model "Errors").
- The error codes and messages are returned 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.
    - o 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 "2021-08-20T14:35:26+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.

Responses Handling

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

Data Model

General Object Models

API Responses

API responses contains from HTTP status 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. *[MODEL] Subscriber*).
code	Integer	In case of authentication 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             "subscriber_id": 12345
 6         },
 7         {
 8             "subscriber_id": 127455
 9         }
10     ]
11 }
```

Sample Response Body – Error

```
1 {
2     "message": "Invalid credentials.",
3     "data": [],
4     "code": 2001
5 }
```

OR

```
 1 {
 2     "message": "Invalid data.",
 3     "data": [],
 4     "errors": [
 5         {
 6             "message": "Subscriber already exists.",
 7             "code": "SUBSCRIBER_EXISTS"
 8         }
 9     ]
10 }
```

Data Object Models

Subscribers and Subscriptions

[MODEL] Subscriber

Attribute Name	Data Type	Description

subscriber_id	Integer	Unique, primary identifier of the subscriber.
external_id	String	Subscriber's identifier from the client's system. Unique per client.
language	String	Preferred language of communication with the subscriber. ISO 639-1 language code (2 letter, see *[ENUM] Language*).
status	String	Status of the subscriber's registration process (see *[ENUM] Subscriber's Status)*.
registration_link	String	A shortened URL where to direct the subscriber to complete the registration process. The URL is unique for every subscriber distinguished by his External ID. Available only when the registration is in pending status.
subscriptions	Array	Nested array of objects representing the subscriber's subscriptions (see *[MODEL] Subscription)*.
cards	Array	Nested array of objects representing subscriber's cards (see *[MODEL] Card*).

[MODEL] Subscription

Attribute Name	Data Type	Description
key	String	Subscription type key.
status	String	Subscription status (see *[ENUM] Subscription Status*).
active_from	Datetime	Subscription start date.
active_to	Datetime	Subscription end date.

Cards

[MODEL] Card

Attribute Name	Data Type	Description
card_id	Integer	Unique, primary card identifier.
card_guid	String	Unique, secondary card identifier.
cardholder_id	Integer	Unique, primary cardholder's identifier.
number	String	Card number.
type	String	Card type (see *[ENUM] Card Type*).
form	String	Card form (see *[ENUM] Card Form*).
status	String	Card status (see *[ENUM] Card Status*).
valid_from	Date	Card validity start.
valid_to	Date	Card validity end.
valid_to_plastic	Date	Plastic card validity end (may be the same or shorter than the main card validity end).

design	String	Card design part number.
design_plastic	String	Plastic card design part number.
institution_id	Integer	ID of the institution where the cardholder studies/teaches/works as stored in NCDB's institution database.
institution_name_line_1	String	First line of the institution name where the cardholder studies/teaches/works as stated on a card.
institution_name_line_2	String	Second line of the institution name where the cardholder studies/teaches/works as stated on a card.
smart_technologies	Array	Nested array of objects representing smart technologies related to the digital card or included in a plastic card (see *[MODEL] Smart Technology*).
custom_fields	Array	Nested array of objects representing additional custom fields for various types of data related to the card (see *[MODEL] Custom Field*).

[MODEL] Smart Technology

Attribute Name	Data Type	Description
type	String	Smart technology type (see *[ENUM] Smart Technology Type*).
value	String	Smart technology value (RFID's UID, values stored in magnetic stripe etc.).

[MODEL] Custom Field

Attribute Name	Data Type	Description
name	String	Custom field key.
value	String	Custom field value.

Enums

Subscribers and Subscriptions

[ENUM] Subscriber's Status

Value	Description
PENDING_REGISTRATION	A subscriber who has not completed the registration process.
REGISTERED	Fully registered subscriber.

[ENUM] Subscription Status

Value	Description
ACTIVE	Active subscription.

INACTIVE	Inactive subscription.

[ENUM] Language

Preferred language for communication with a subscriber or cardholder. ISO 639-1 language codes (2 letter, https://www.iso.org/standard/22109.html).

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.

Cards

[ENUM] Card Type

Value	Description
ISIC	ISIC card (for full-time students).
ISIC_SCHOLAR	ISIC SCHOLAR card (for pupils).
ITIC	ITIC card (for teachers).
IYTC	IYTC card (for youth people).
ALIVE	ALIVE card (for members of sport associations and other companies).
ALIVE_STUDENT	ALIVE Student card (for part-time students).
ALIVE_STAFF	ALIVE Staff card (for non-teaching staff of academic institutions).
ALIVE_ALUMNI	ALIVE Alumni card (for academic institution graduates).

[ENUM] Card Form

Value	Description
DIGITAL	Digital card.

DIGITAL_PLASTIC	Digital and plastic card.

[ENUM] Card Status

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

[ENUM] Smart Technology Type

Value	Description
CONTACT_CHIP	Contact chip.
CONTACTLESS_MOBILE_KEY	Mobile (digital) key used for cardholder's identification by using 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 account manager.

POST /authentication.authenticate

Request Body Attributes

Attribute 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
- HTTP 400 Bad request (invalid credentials or unable to parse request data)
- HTTP 422 Unprocessable entity

Sample Request Body

```
1 {
2     "access_key_id": "subscribers.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 }
```

Subscribers and Subscriptions

POST /subscribers.register

Register a new subscriber represented by an External ID parameter value and activate subscriptions for that subscriber. The subscriber will be in *PENDING_REGISTRATION* status and his/her subscriptions will be in *INACTIVE* status until the subscriber's registration process is completed.

Request Body Attributes

Attribute Name	Data Type	Mandatory	Description and Validations
external_id	String	Yes	Subscriber's identifier from the client's system. • Unique per client.
language	String	No	Preferred language of communication with the subscriber. ISO 639-1 language code (2 letter, see *[ENUM] Language*). • Enum value. • If not specified, English (en) language will be used.
subscriptions	Array	Yes	Nested **array of objects** representing the subscriber's subscriptions.
key	String	Yes	Subscription type key based on the agreement with the client's account manager. • Subscription key must exist and be enabled for the client.

active_from	Datetime	No	Subscription start date. • Must be in the future and earlier than *active_to* date. • If not specified, the subscription will be activated immediately after the subscriber completes the registration process.
active_to	Datetime	No	Subscription end date. • Must be in the future and later than *active_from* date. • If not specified, the subscription will be activated for an indefinite period.

Responses

- HTTP 200 OK + *[MODEL] Subscriber*
- HTTP 400 Bad Request (unable to parse request data)
- HTTP 422 Unprocessable entity

Error Code	Description
SUBSCRIBER_EXISTS	The subscriber with specified External ID already exists.
IS_BLANK_ERROR	The value should not be blank.
INVALID_SUBSCRIPTION_KEY	The specified subscription key does not exist or is not enabled for the client.
DATE_NOT_IN_FUTURE	The specified date and time are not in the future.
REVERSED_SUBSCRIPTION_PERIOD	The active from date and time are not earlier than the active to date and time or vice versa.

Sample Request Body

```
 1 {
 2     "external_id": "25766084",
 3     "language": "en",
 4     "subscriptions": [
 5         {
 6             "key": "SwypYouthHub",
 7             "active_from": "2021-08-20T14:30:00+04:00",
 8             "active_to": "2021-12-31T23:59:59+04:00"
 9         }
10     ]
11 }
```

Sample Response Body

```
 1 {
 2     "message": "OK",
 3     "data": [
 4         {
 5             "subscriber_id": 436,
 6             "external_id": "25766084",
 7             "language": "en",
 8             "status": "PENDING_REGISTRATION",
```

```
 9              "registration_link": "https://abc.xyz/123",
10              "subscriptions": [
11                  {
12                      "key": "SwypYouthHub",
13                      "active_from": "2021-08-20T10:30:00+00:00",
14                      "active_to": "2021-12-31T19:59:59+00:00"
15                  }
16              ],
17              "cards": []
18          }
19      ]
20 }
```

GET /subscribers.get

Get information about the subscriber with specified Subscriber ID or External ID, his/her subscriptions and cards.

Query Parameters

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

Parameter Name	Data Type	Mandatory	Description
subscriber_id	Integer	No	Unique, primary identifier of the subscriber.
external_id	String	No	Subscriber's identifier from the client's system. Unique per client.

Responses

- HTTP 200 OK + *[MODEL] Subscriber*
- HTTP 400 Bad Request (unable to parse request data)
- HTTP 422 Unprocessable entity

Error Code	Description
SUBSCRIBER_NOT_FOUND	The subscriber with specified Subscriber ID or External ID does not exist.
MISSING_FIELD_ERROR	None of the query parameters was sent in the request.

Sample Request

- https://api.test.aliveplatform.com/v1/subscribers.get?external_id=25766084

Sample Response Body

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

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```
 4          {
 5              "subscriber_id": 436,
 6              "external_id": "25766084",
 7              "language": "en",
 8              "status": "REGISTERED",
 9              "subscriptions": [
10                  {
11                      "key": "SwypYouthHub",
12                      "status": "ACTIVE",
13                      "active_from": "2021-08-20T10:30:00+00:00",
14                      "active_to": "2021-12-31T19:59:59+00:00"
15                  }
16              ],
17              "cards": [
18                  {
19                      "card_id": 1895546,
20                      "cardholder_id": 2614465,
21                      "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
22                      "number": "S971123456789A",
23                      "type": "ISIC",
24                      "form": "DIGITAL",
25                      "status": "ACTIVE",
26                      "valid_from": "2021-08-01",
27                      "valid_to": "2022-08-31",
28                      "design": "SA-971-045",
29                      "smart_technologies": [
30                          {
31                              "type": "CONTACTLESS_MIFARE",
32                              "value": "A14E5D5F"
33                          }
34                      ],
35                      "institution_name_line_1": "University of Dubai",
36                      "custom_fields": [
37                          {
38                              "name": "student_id",
39                              "value": "abc123"
40                          }
41                      ]
42                  }
43              ]
44          }
45      ]
46 }
```

POST /subscriptions.activate

Request Body Attributes

Attribute Name	Data Type	Mandatory	Description and Validations
external_id	String	Yes	Subscriber's identifier from the client's system.
key	String	Yes	Subscription type key based on the agreement with the client's account manager. • Subscription key must exist and be enabled for the client.

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active_from	Datetime	No	Subscription start date. • Must be in the future and earlier than *active_to* date. • If not specified, the subscription will be activated immediately.
active_to	Datetime	No	Subscription end date. • Must be in the future and later than *active_from* date. • If not specified, the subscription will be activated for an indefinite period.

Responses

- HTTP 200 OK + *[MODEL] Subscriber*
- HTTP 400 Bad Request (unable to parse request data)
- HTTP 422 Unprocessable entity

Error Code	Description
SUBSCRIBER_NOT_FOUND	The subscriber with specified External ID does not exist.
SUBSCRIBER_PENDING_REGISTRATION	The subscriber with specified External ID exists but has not completed the registration yet.
IS_BLANK_ERROR	The value should not be blank.
INVALID_SUBSCRIPTION_KEY	The specified subscription key does not exist or is not enabled for the client.
DATE_NOT_IN_FUTURE	The specified date and time are not in the future.
REVERSED_SUBSCRIPTION_PERIOD	The active from date and time are not earlier than the active to date and time or vice versa.

Sample Request Body

```
1  {
2      "external_id": "25766084",
3      "key": "SwypYouthHub",
4      "active_from": "2021-08-20T14:30:00+04:00",
5      "active_to": "2021-12-31T23:59:59+04:00"
6  }
```

Sample Response Body

```
1  {
2      "message": "OK",
3      "data": [
4          {
5              "subscriber_id": 436,
6              "external_id": "25766084",
7              "language": "en",
8              "status": "REGISTERED",
9              "subscriptions": [
10                 {
11                     "key": "SwypYouthHub",
12                     "status": "ACTIVE",
```

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```
13                    "active_from": "2021-08-20T10:30:00+00:00",
14                    "active_to": "2021-12-31T19:59:59+00:00"
15                }
16            ],
17            "cards": [
18                {
19                    "card_id": 1895546,
20                    "cardholder_id": 2614465,
21                    "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
22                    "number": "S971123456789A",
23                    "type": "ISIC",
24                    "form": "DIGITAL",
25                    "status": "ACTIVE",
26                    "valid_from": "2021-08-01",
27                    "valid_to": "2022-08-31",
28                    "design": "SA-971-045",
29                    "smart_technologies": [
30                        {
31                            "type": "CONTACTLESS_MIFARE",
32                            "value": "A14E5D5F"
33                        }
34                    ],
35                    "institution_name_line_1": "University of Dubai",
36                    "custom_fields": [
37                        {
38                            "name": "student_id",
39                            "value": "abc123"
40                        }
41                    ]
42                }
43            ]
44        }
45    ]
46 }
```

POST /subscriptions.deactivate

Request Body Attributes

Attribute Name	Data Type	Mandatory	Description and Validations
external_id	String	Yes	Subscriber's identifier from the client's system.
key	String	Yes	Subscription type key based on the agreement with the client's account manager. • Subscription key must exist and be enabled for the client. • Subscriber must have active subscription of that type.
active_to	Datetime	No	Subscription end date. • Must be in the future and later than *active_from* date. • If not specified, the subscription will be deactivated immediately.

Responses

- HTTP 200 OK + *[MODEL] Subscriber*

- HTTP 400 Bad Request (unable to parse request data)
- HTTP 422 Unprocessable entity

Error Code	Description
SUBSCRIBER_NOT_FOUND	The subscriber with specified External ID does not exist.
SUBSCRIBER_PENDING_REGISTRATION	The subscriber with specified External ID exists but has not completed the registration yet.
IS_BLANK_ERROR	The value should not be blank.
INVALID_SUBSCRIPTION_KEY	The specified subscription key does not exist or is not enabled for the client.
DATE_NOT_IN_FUTURE	The specified date and time are not in the future.
REVERSED_SUBSCRIPTION_PERIOD	The active from date and time are not earlier than the active to date and time or vice versa.
SUBSCRIPTION_ALREADY_INACTIVE	The subscription with the specified key is already inactive.

Sample Request Body

```
1 {
2     "external_id": "25766084",
3     "key": "SwypYouthHub",
4     "active_to": "2021-12-31T23:59:59+04:00"
5 }
```

Sample Response Body

```
1 {
2     "message": "OK",
3     "data": [
4         {
5             "subscriber_id": 436,
6             "external_id": "25766084",
7             "language": "en",
8             "status": "REGISTERED",
9             "subscriptions": [
10                {
11                    "key": "SwypYouthHub",
12                    "status": "ACTIVE",
13                    "active_from": "2021-08-20T10:30:00+00:00",
14                    "active_to": "2021-12-31T19:59:59+00:00"
15                }
16            ],
17            "cards": [
18                {
19                    "card_id": 1895546,
20                    "cardholder_id": 2614465,
21                    "card_guid": "9dff472f-debc-4eb0-b1ff-4b3db0bdc86e",
22                    "number": "S971123456789A",
23                    "type": "ISIC",
24                    "form": "DIGITAL",
```

```json
25                      "status": "ACTIVE",
26                      "valid_from": "2021-08-01",
27                      "valid_to": "2022-08-31",
28                      "design": "SA-971-045",
29                      "smart_technologies": [
30                          {
31                              "type": "CONTACTLESS_MIFARE",
32                              "value": "A14E5D5F"
33                          }
34                      ],
35                      "institution_name_line_1": "University of Dubai",
36                      "custom_fields": [
37                          {
38                              "name": "student_id",
39                              "value": "abc123"
40                          }
41                      ]
42                  }
43              ]
44          }
45      ]
46 }
```

Test Environment

The following details are necessary for web service integration testing. Please ask your account manager for authentication details based on your contract specification.

Base URL: https://api.test.aliveplatform.com/v1
Access Key ID: *ask your account manager*
Secret Access Key: *ask your account manager*
Subscription Key: *ask your 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 account manager*
Secret Access Key: *ask your account manager*
Subscription Key: *ask your account manager*

Technical Support

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