

# GTSALIVE

## ALIVE Platform

### Card Verifications API Integration Manual

Version 3.3  
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# Revision History

Date	Version	Author	Description of Changes
2018-09-03	3.3	Lukas Kabicek	Revision history was added. Document graphics and formatting was changed.
2018-08-09	3.2	Radek Klein	Cardholder date of birth can be newly verified using POST /verifications endpoint.
2018-06-19	3.1	Lukas Kabicek	<p>Due to GDPR implications the card validity start and card validity end parameters will be no longer returned by POST /verifications endpoint.</p> <p>A new restriction will be applied for POST /receipts endpoint. Each verification should be linked to just one receipt.</p> <p>These changes will apply in the production system from 1<sup>st</sup> January 2019.</p>
2014-10-01	1.0	Radek Klein	Initial release.

# Introduction

ISIC, ITIC, IYTC and ALIVE cards can be automatically verified online through the REST API of the application Discount Manager. The verification works for both local and foreign cards and verifies them based on the combination of card number and name of the cardholder or the unique RFID chip number (UID).

Cards can be also using Mifare, DESFire or EM-Marine contactless chips. In case the card is not found based on the chip number it is necessary to verify it based on the combination of card number and name on the card.

The API also supports tracking of discount usage by cardholders.

## API Specification

The API provides three services available for the verification and tracking of discount usage:

- **POST /verifications** – Create new card verification request
- **POST /receipts** – Report discount usage
- **PUT /receipts/{id}/status** – Revoke discount usage

### Authentication

- All requests use **HTTP Basic** access authentication.
- Data transfers are encrypted using **SSL**.

### Content Type

- All requests and responses use **application/json** content-type.

### Charset

- All requests should use **utf-8** charset.

### Responses Handling

- Integrators are required to ignore any unknown attributes in the response to support forward compatibility.
- The order of attributes in JSON responses is not significant and can change over time. Integrators should not rely on the order of attributes in JSON responses.

## Validation Errors

Failed validation is reported as HTTP 400 Bad Request response:

```
1 {
2   "message": "General message.",
3   "errors": [
4     {
5       "path": "parameterPath",
6       "code": "errorCode",
7       "params": { },
8       "message": "translated message"
9     }
10  ]
11 }
```

Validation errors are being reported by various subsystems where some of these already translate their messages (while omitting the error code), some of them report only the error code and error parameters. This is why these messages should be used only for debugging purposes and are not meant to be displayed to end users.

# API Endpoints

## POST /verifications

This service is used to verify card based on the combination of card number and name of the cardholder or using the unique RFID chip number (UID). On top of that the service can also verify cardholder's date of birth.

### Request

```
1 {  
2   "cardNumber": "S420001000071J",  
3   "cardholderName": "Roman Horník",  
4   "discountId": 12701  
5 }
```

OR

```
1 {  
2   "chipNumber": "51B7E6F2",  
3   "discountId": 12701,  
4   "cardholderDateOfBirth": "2000-09-18"  
5 }
```

### Attributes

Name	Data Type	Required	Description
cardNumber	String (14)	Yes	Card number including initial type and end check letter.
cardholderName	String (128)	Yes	Name of the cardholder as displayed (printed) on the card.
chipNumber	String (32)	Yes	Unique Mifare or EM-Marine RFID chip number (UID).
discountId	Number	No	Related discount identifier. Verification service will check discount restrictions if set.
cardholderDateOfBirth	Date	No	Cardholder's date of birth.

## Response

HTTP 201 Created

```
1 {
2     "id": 2822248,
3     "createdOn": "2018-06-13T09:58:18+0000",
4     "cardNumber": "S420001000071J",
5     "cardholderName": "Roman Horník",
6     "mode": "CARDHOLDER",
7     "discountId": 12701,
8     "result": "FAILED",
9     "reason": "NOT_ELIGIBLE",
10    "cardType": "ISIC",
11    "eligibilityErrors": [
12        {
13            "code": "cardType.invalidValue",
14            "params": {
15                "allowed": [
16                    "ALIVE",
17                    "ITIC",
18                    "IYTC"
19                ]
20            }
21        },
22        {
23            "code": "timeOfDay.outOfRange",
24            "params": {
25                "min": "16:00",
26                "max": "20:00"
27            }
28        }
29    ]
30 }
```

OR

```
1 {
2     "id": 2822242,
3     "createdOn": "2018-06-13T09:46:04+0000",
4     "mode": "CHIP",
5     "discountId": 12701,
6     "result": "SUCCESSFUL",
7     "cardType": "ISIC",
8     "chipNumber": "51B7E6F2",
9     "cardholderDateOfBirth": "2000-09-18"
10 }
```

## Attributes

Name	Data Type	Description
id	Number	Unique verification identifier.
createdOn	String	Date and time when the verification was created (ISO 8601 extended format).
cardNumber	String	Card number from the verification request.
cardholderName	String	Name of the cardholder from verification request.
cardholderDateOfBirth	Date	Date of birth of the cardholder. Returned only if set in the original request.
mode	String	Verification mode – „CARDHOLDER“ or „CHIP“.
discountId	Number	Related discount identifier.
result	String	Verification result – „SUCCESSFUL“ or „FAILED“.
reason	String	Reason for failed verification (see below for possible reasons).
cardType	String	Verified card type – „ISIC“ or „ISIC_SCHOLAR“ or „ITIC“ or „IYTC“ or „ALIVE“.
chipNumber	String	Unique RFID chip number (UID) from the verification request.
eligibilityErrors	Array	Errors from checking restrictions for the specified discount (only checked when discountId parameter is set).

## Failure reasons

Name	Description
INVALID_NUMBER	Card number does not have a valid format.
CHECK_LETTER_MISMATCH	Provided card number check letter is missing or is not valid.
INVALID_CHIP_NUMBER	Provided RFID chip number (UID) does not have a valid format.
CARD_NOT_FOUND	Card with the specified card number or RFID chip number (UID) has not been found.
CARD_CANCELLED	Card with the specified card number or RFID chip number (UID) has been cancelled.
CARD_EXPIRED	Card with the specified card number or RFID chip number (UID) is already expired.
CARD_VALID_IN_FUTURE	Card with the specified card number or RFID chip number (UID) is not valid yet.
NAME_MISMATCH	Provided cardholder name does not match the name displayed (printed) on the card.
DATE_OF_BIRTH_MISMATCH	Provided cardholder's date of birth does not match the date on the card.



NOT_ELIGIBLE	Provided card is not eligible for given discount.
OTHER	Other unspecified verification failure.

## Eligibility errors

Following discount restrictions are checked:

- Card type
  - { "code": "cardType.invalidValue", "params": { "allowed": ["ALLOWED\_CARD\_TYPES"] } }
- Card issuer
  - { "code": "cardIssuer.invalidValue", "params": { "allowed": ["ALLOWED\_ISSUER\_IDS"] } }
- Usage rate
  - { "code": "rateQuota.exceeded", "params": { "limit": "USAGE\_LIMIT", "interval": "USAGE\_INTERVAL", "type": "DAY|WEEK|MONTH|YEAR" } }
- Cardholder age
  - { "code": "cardholderAge.outOfRange", "params": { "min": "MIN\_AGE", "max": "MAX\_AGE" } }
- Day of week
  - { "code": "dayOfWeek.invalidValue", "params": { "allowed": ["MONDAY|TUESDAY|WEDNESDAY|THURSDAY|FRIDAY|SATURDAY|SUNDAY"] } }
- Time of day
  - { "code": "timeOfDay.outOfRange", "params": { "min": "MIN\_TIME", "max": "MAX\_TIME" } }
- Student status
  - { "code": "onlyForStudents.notEligible", "params": [] } }
- Minimal card validity
  - { "code": "minCardValidity.notEligible", "params": [] } }

Format of the restrictions is similar to validation errors. However currently only *codes* and *params* are supported. It is possible that a fully translated messages for end-users will be added in the future.

## POST /receipts

This service is used to report discount usage by cardholder. It should be called once the transaction was finished. To each verification (distinguished by *verificationId*) can be linked just one receipt.

### Request

```

1 {
2   "discountId": 12701,
3   "verificationId": 2822238,
4   "issuedOn": "2018-06-13T10:19:45+0200",
5   "amountPaid": 250.00
6 }
```

## Attributes

Name	Data Type	Required	Description
discountId	Number	Yes	Related discount identifier.
verificationId	Number	Yes	Related verification identifier.
issuedOn	String (24)	Yes	Date and time when the transaction was made (ISO 8601 extended format).
amountPaid	Number	Yes	Amount of money the cardholder paid (including VAT).

## Response

HTTP 201 Created

```
1 {
2     "createdOn": "2018-06-13T12:19:51+0000",
3     "id": 2243,
4     "discountId": 12701,
5     "verificationId": 2822238,
6     "amountPaid": 250,
7     "issuedOn": "2018-06-13T10:19:45+0200"
8 }
```

## Attributes

Name	Data Type	Description
createdOn	String	Date and time when the receipt was created (ISO 8601 extended format).
id	Number	Unique receipt identifier.
discountId	Number	Related discount identifier.
verificationId	Number	Related verification identifier.
amountPaid	Number	Amount of money the cardholder paid (including VAT).
issuedOn	String	Date and time when the transaction was made (ISO 8601 extended format).

## PUT /receipts/{id}/status

This service is used to revoke the discount usage, e.g. in case customer has returned a product. It can be only called for receipts that are not older than 30 days.

## Request

```
1 {  
2   "status": "REVOKED"  
3 }
```

## Attributes

Name	Data Type	Required	Description
id	Number	Yes	Unique receipt identifier.
status	String	Yes	Receipt status – „REVOKED“.

## Response

*HTTP 200 OK*

# Test Environment

Web service should be tested in the test environment before going public.

**Test URL:** <https://gts-dm.orchitech.net/api>

**Username:** testdm

**Password:** testdm

**DiscountId:** 156 (discount is limited to ISIC card)

**Test card number:** S123456789000A

**Card type:** ISIC

**Chip number:** A1B2C3D4E5

**Name on the card:** John Doe

**Test card number:** T420534000046N

**Card type:** ITIC

**Chip number:** 65B7E4A4

**Name on the card:** Leo Gallas

Access to the production environment will be provided after successful implementation against the test environment.

## Sample Code

Sample scripts in PHP can be downloaded bellow.

**URL:** <http://www.aliveplatform.com/downloads/card-verification-php.zip>

## Contacts

For all support queries please contact GTS ALIVE IT department at [support@gtsalive.com](mailto:support@gtsalive.com).