TradeSafe API User Guide

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The TradeSafe API User Guide outlines the steps needed to start using our API in your business.

The source code for the Documentation is available on GitHub and we welcome contributions.

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Getting Started

Useful Links:

- API spec The API specification.
- sandbox Our sandbox environment for testing.

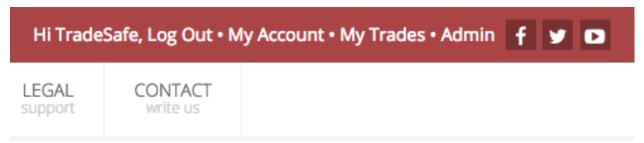
To start using our API you first need to crate an account on our sandbox environment. Ensure that both your email and mobile number have been validated.

From here you can manually create test trades through the sandbox site to get an idea of how the process works.

To get your API key send a request to support once approved you can then generate your API key.

Creating your API Key

Once you have received notice that the API has been enabled, login and goto My Account.



On your account settings page you will now see a new section called API Access.

API Access

You can access the api and the documentation at api.tradesafe.co.za. Please contact support@tradesafe.co.za is you have any queries.

Website URL

https://sandbox.tradesafe.co.za

Callback URL

https://sandbox.tradesafe.co.za

JSON Web Token

Fill in both the website url and *callback* url. You can use a service like mockbin for your callback url if your don't have one yet.

Once you have saved the page a JSON Web Token (JWT) will be generated for you.

Note: If you change the **Website URL** and new token will be generated for your account. You can change the callback url at any time.

Receiving a Callback

All callbacks include the following data. When receiving a callback you must return a 200 response code, TradeSafe will continue retry the callback until a 200 response code is received or the timeout condition it met.

3.1 Example of the callback data

```
"id": "5899715f-bda4-4c91-b78c-033aac102991",
2
    "transaction_id":"123456"
    "buyer_id":"1"
    "seller_id":"2"
    "owner_id":"2"
    "litigation_initiator_id":"0"
    "negotiation_id":null
    "step": "FUNDS_RECEIVED"
    "sent_started":null
10
    "industry": "GENERAL_GOODS_SERVICES"
11
    "meta"
12
       "reference":"my_reference"
13
    "name": "Trade Name"
15
    "description": "Trade Description"
16
    "fee_allocation":"1"
17
    "value": "10000.00",
18
    "value_total":"0.00"
19
    "renegotiated_value":null
20
    "buyer_cost":"0.00"
21
    "seller_cost":"0.00"
22
    "admin_cost":null
23
    "completion_total_days":"0"
24
    "completion_days":"5"
25
    "completion_months":"0"
26
    "completion_years":"0"
```

```
"inspection_days":"5"
28
    "counterparty_email":""
29
    "tracking_number":null,
30
    "courier":null,
31
    "delivery_required":false,
32
    "delivery_type": "not_required",
    "delivery_address":null
34
    "delivery_start_date":null
35
    "delivery_street":null,
36
    "delivery_extra":null,
37
    "delivery_suburb":null
38
    "delivery_city":null,
    "delivery_country":null
    "delivery_zip":null,
41
    "delivery_comment": null,
42
    "review" false,
43
    "amendment":false,
44
    "updated": "2016-06-04 14:52:00"
    "created": "2016-06-04 07:03:59"
```

Validate a User

The technical specifications can be viewed on our API docs.

Warning: You are responsible for providing the correct information.

Before creating a user you can check the data using the verify endpoint. On a successful validation the API will return a 200 status code along with the data you posted.

4.1 PHP Example

```
<?php
   // get cURL resource
   // set url
   // set method
11
   // return the transfer as a string
12
13
14
   // set headers
15
17
18
19
20
   // json body
```

```
22
      'id number' => '8208014477088'
23
      'mobile_country' => 'ZA'
24
      'mobile' => '084 116 7762'
25
      'first_name' => 'Joe'
26
      'last_name' => 'Somebody'
27
      'email' => 'joe.sombody@example.com'
28
      'bank_account' =>
29
       'number' => '1234567890'
30
        'bank' => '123456'
31
        'type' => 'CHEQUE'
32
        'branch_code' => '123456'
35
     'company' =>
       'name' => 'Company Name'
36
        'req_number' => '123/456/789'
37
        'type' => 'Company Type'
38
39
40
41
42
   // set body
43
   curl_setopt($ch, CURLOPT_POST, 1);
44
45
   // send the request and save response to $response
48
49
   // stop if fails
50
   if (!$response
51
     die('Error: "' . curl_error($ch) . '" - Code: ' . curl_errno($ch));
52
53
54
   echo 'HTTP Status Code: ' . curl_getinfo($ch, CURLINFO_HTTP_CODE) . PHP_EOL;
55
   echo 'Response Body: ' . $response . PHP_EOL;
56
57
   // close curl resource to free up system resources
58
```

Creating a User

The technical specifications can be viewed on our API docs.

Warning: You are responsible for providing the correct information.

When creating a contract you need a user_id to identify the user. This can be done by either creating an account for the user or allowing then you link their existing TradeSafe Account.

The example below will create a user in response you will receive a *user_id* that you can associate with the user account on your system. This action only needs to be done once and the *user_id* can be user for all subsequent transactions. A user can then manage their details from their TradeSafe account.

```
<?php
   // get cURL resource
   // set url
9
   // set method
10
11
   // return the transfer as a string
12
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
13
14
   // set headers
17
18
19
20
21
   // json body
```

```
'id_number' => '8208014477088'
23
      'mobile country' => 'ZA'
24
      'mobile' => '084 116 7762'
25
      'first_name' => 'Joe'
26
      'last_name' => 'Somebody'
27
      'email' => 'joe.sombody@example.com'
28
      'bank_account' =>
29
       'number' => '1234567890'
30
        'bank' => '123456'
31
        'type' => 'CHEQUE'
32
        'branch_code' => '123456'
33
     'company' =>
       'name' => 'Company Name'
36
        'reg_number' => '123/456/789'
37
        'type' => 'Company Type'
38
39
41
    $body = json_encode($json_array);
42
   // set body
43
44
45
47
   \ensuremath{//} send the request and save response to $response
   response = curl_exec($ch)
49
   // stop if fails
50
51
    die('Error: "' . curl_error($ch) . '" - Code: ' . curl_errno($ch));
52
53
   echo 'HTTP Status Code: ' . curl_getinfo($ch, CURLINFO_HTTP_CODE) . PHP_EOL
55
   echo 'Response Body: ' . $response . PHP_EOL;
56
57
   // close curl resource to free up system resources
58
```

Linking a User Account

In some cases a user might already have a user account. I this case you can request that they link their TradeSafe account. This is a two step process.

6.1 Request Auth Token

You first need to generate an auth token. This is used to identify your platform an validate the request is valid.

```
<?php
   // get cURL resource
   // set url
   // set method
10
11
   // return the transfer as a string
12
13
   // set headers
18
19
   // send the request and save response to $response
20
21
22
23
   // stop if fails
     die('Error: "' . curl_error($ch) . '" - Code: ' . curl_errno($ch));
```

```
26 | 27 | 28 | echo 'HTTP Status Code: ' . curl_getinfo($ch, CURLINFO_HTTP_CODE) . PHP_EOL; 29 | echo 'Response Body: ' . $response . PHP_EOL; 30 | // close curl resource to free up system resources | curl_close($ch);
```

You will get a response with the token, created time and expiry time. If the token expires before the user links their account a new token will be required.

```
"token": "6855476e6f64b280b5f8be63f58f422cdd22072faa89710ddd3f623721944223",
"created": 1559296474,
"expire": 1559300074
"
```

6.2 Create Authorization Request

Once you have the token it can be used to create a form request to /api/authorize

auth_key This is your user_id

auth_token This is the token generated using /api/authorize/token

success_url Where should the user be redirected if successful

failure_url Where should the user be redirected if they cancel

parameters[name] You can define several parameters that will be sent to you along with the user_id in a callback. For example the username or ID od the current user account.

If the user successfully authorizes the request a callback will be sent to the URL defined in your account along with any parameters you defined.

Validate a Trade

The technical specifications can be viewed on our API docs.

Warning: You are responsible for providing the correct information.

Before creating a contract you can use the validate endpoint to ensure that the data is correct. On a successful validation the API will return a 200 status code along with the data you posted.

7.1 PHP Example

```
<?php
   // get cURL resource
   // set url
   // set method
10
11
   // return the transfer as a string
12
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
13
14
   // set headers
15
16
17
18
19
```

```
// json body
21
22
      'name' => 'Contract Name'
23
      'description' => 'Description of the new Contract'
24
      'reference' => 'your_reference'
25
      'industry' => 'GENERAL_GOODS_SERVICES'
26
      'buyer' => '184c16a9-6013-4aaa-896d-2fab38adb603'
27
      'seller' => '9f816402-3f15-4a3d-bela-8a16a67872e1'
28
      'agent' => 'a68f4d96-f94e-4a4c-8335-54f41d87b9a5'
29
      'beneficiary' =>
30
31
          'value' => 50,
          'user_id' => '5cdbfa9d-2e40-4ca7-ae0f-1ba80ad33704'
          'type' => 'OTHER'
34
          'fee type' => 0
35
          'fee allocation' => 3
36
37
38
      'value' => 10000
39
      'agent_fee_type' => 0
40
      'agent_fee' => '50'
41
      'agent_fee_allocation' => 0
42
      'delivery_fee' => 123.45
43
     'completion_days' => 30
44
     'completion_months' => 12
45
     'completion_years' => 5,
47
     'inspection_days' => 7
     'fee allocation' => 0
48
     'delivery_required' => false
49
50
51
52
   // set body
53
    curl_setopt($ch, CURLOPT_POST, 1)
54
55
56
57
   // send the request and save response to $response
   // stop if fails
60
   if (!$response
61
    die('Error: "' . curl error($ch) . '" - Code: ' . curl erroo($ch));
62
63
   echo 'HTTP Status Code: ' . curl_getinfo($ch, CURLINFO_HTTP_CODE) . PHP_EOL
65
   echo 'Response Body: ' . $response . PHP_EOL
66
67
   // close curl resource to free up system resources
68
```

Creating a Trade

The technical specifications can be viewed on our API docs.

Warning: You are responsible for providing the correct information.

8.1 PHP Example

```
<?php
2
   // get cURL resource
   // set url
   // set method
10
11
   // return the transfer as a string
12
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
13
14
   // set headers
19
20
   // json body
21
      son_array =
22
     'name' => 'Contract Name'
23
     'description' => 'Description of the new Contract'
```

```
'reference' => 'your_reference'
25
     'industry' => 'GENERAL GOODS SERVICES'
26
     'buyer' => '184c16a9-6013-4aaa-896d-2fab38adb603'
27
     'seller' => '9f816402-3f15-4a3d-bela-8a16a67872e1'
28
     'agent' => 'a68f4d96-f94e-4a4c-8335-54f41d87b9a5'
29
     'beneficiary' =>
30
31
          'value' => 50
32
          'user_id' => '5cdbfa9d-2e40-4ca7-ae0f-1ba80ad33704'
33
          'type' => 'OTHER'
34
          'fee_type' => 0
35
          'fee_allocation' => 3
38
     'value' => 10000
39
     'agent_fee_type' => 0
40
     'agent_fee' => '50'
41
     'agent_fee_allocation' => 0
42
     'delivery_fee' => 123.45
43
     'completion_days' => 30
44
     'completion_months' => 12
45
     'completion_years' => 5
46
     'inspection_days' => 7
47
     'fee_allocation' => 0
48
     'delivery_required' => false
51
52
53
   // set body
54
55
56
   // send the request and save response to $response
57
58
59
   // stop if fails
60
61
   if (!$response
   die('Error: "' . curl_error($ch) . '" - Code: ' . curl_errno($ch));
64
   echo 'HTTP Status Code: ' . curl getinfo($ch,
                                                     CURLINFO HTTP CODE) . PHP EOL
65
   echo 'Response Body: ' . $response . PHP_EOL
66
67
   // close curl resource to free up system resources
68
```

8.2 The Payment URL

When you create a trade a summary of the information you posted will be sent back to you along with a **payment_url** [/api/payment/eftsecure/YOUR-TRADE-ID]. This link can be embedded into your website through an iframe and will allow users to access to our banking details for EFT payment.

You wil also get a **payfast_payment_url**. This URL provides an html button formatted in JSON that you can embed on your website.

Also included is a **withdraw_url** [/api/contracts/deposit/YOUR-TRADE-ID]. This allows sellers to add their own banking details to a trade.

Warning: The **withdraw_url** been deprecated in favor of receiving the banking details during the create trade process.

Retrieve Trade Information

The technical specifications can be viewed on our API docs.

9.1 PHP Example

```
<?php
# The JWT for your account
Sjson_token = 'your_jwt_token';

# The url of the API
Sservice_url = 'https://sandbox.tradesafe.co.za/api/contract/{ID_OF_THE_TRADE}';

Scurl = curl_init(Sservice_url);

curl_sstopt_array(Scurl, array(
    CURLOPT_HTTPHEADER => array(
        'Authorization: Bearer ' . Sjson_token,
        'Content-Type: application/json'
    ));

Scurl_response = curl_exec(Scurl);

curl_close(Scurl);

Sresponse = json_decode(Scurl_response);

print_r(Sresponse);

print_r(Sresponse);

print_r(Sresponse);
```

This allows you to query any trade you have created at any time, the data is similar to what you receive when creating a trade.

This can be useful for recovering from an outage for example. We recommend that you cache this data and only make requests when necessary. As the callback will send through data every time the trade is transitioned to a new step.

Updating a Trade

The technical specifications can be viewed on our API docs.

To update a trade certain conditions have to be met. In this example we must have already verified the funds before this request can be processed.

Not all steps are available and currently we do not allow any modification of the trade data after it has been accepted.

The example below would be typically run once you have received notification that your user has received the goods or service.

10.1 PHP Example 1

```
<?php
   # The JWT for your account
2
         _token = 'your_jwt_token';
3
   # The url of the API
   $service_url = 'https://sandbox.tradesafe.co.za/api/contract/{ID_OF_THE_TRADE}';
     postfields = array
10
     "id" => "5899715f-bda4-4c91-b78c-033aac102991"
11
     "step" => "GOODS_ACCEPTED"
12
13
14
15
     CURLOPT_CUSTOMREQUEST => "PUT"
16
     CURLOPT_RETURNTRANSFER => TRUE
17
     CURLOPT_HTTPHEADER => array
18
       'Authorization: Bearer ' .
19
20
```

```
curl_POSTFIELDS => json_encode($postfields)
));

scale="block" style="block" styl
```

When declining a trade after the funds deposited step but before the goods sent step, the contract can be declined. The standard behaviour is to issue a refund to the buyer however a refund split can be defined, for example when implementing a late cancellation penalties.

10.2 PHP Example 2

```
<?php
   # The JWT for your account
   $json_token = 'your_jwt_token'
   # The url of the API
   $service_url = 'https://sandbox.tradesafe.co.za/api/contract/{ID_OF_THE_TRADE}',
8
     ostfields = array
10
     "id" => "5899715f-bda4-4c91-b78c-033aac102991"
11
     "step" => "DECLINED"
12
     "refund" => array
       "buyer_refund" => 100
       "agent_fee" => 0
15
       "seller_fee" => 10
16
17
18
20
     CURLOPT_CUSTOMREQUEST => "PUT"
21
     CURLOPT_RETURNTRANSFER => TRUE
22
     CURLOPT_HTTPHEADER => array
23
        'Authorization: Bearer ' .
24
25
26
     CURLOPT_POSTFIELDS =>
28
29
30
31
32
33
34
35
```

Amending a trade

When a client has accepts the goods there may be an amendment required. For example a 1000 items were ordered but only 950 were delivered, the client wants to accept the goods on the condition of a refund for the items not delivered.

This can be done by adding an amendment when setting the GOODS_ACCEPTED step. The 'renegotiated_value' replaces the original trade value before fees are deducted.

11.1 PHP Example 3

```
<?php
   # The JWT for your account
   $json_token = 'your_jwt_token';
   # The url of the API
    $service_url = 'https://sandbox.tradesafe.co.za/api/contract/{ID_OF_THE_TRADE}';
       stfields = array
10
     "id" => "5899715f-bda4-4c91-b78c-033aac102991"
11
     "step" => "GOODS_ACCEPTED"
12
     "amend" => array(
13
       "renegotiated_value" => 100.01
14
       "stock_volume" => 0, // optional
15
       "refund_to_wallet" => 0, // optional
17
18
19
20
     CURLOPT_CUSTOMREQUEST => "PUT"
21
22
     CURLOPT_RETURNTRANSFER => TRUE
     CURLOPT_HTTPHEADER => array
23
       'Authorization: Bearer ' .
```

```
curl_response = curl_exec($curl);
curl_close($curl);
from the content of the
```

Updating a Milestone

The technical specifications can be viewed on our API docs.

To update a milestone certain conditions have to be met. In this example we must have already verified the funds before this request can be processed.

Not all steps are available and currently we do not allow any modification of the milestone data after it has been accepted.

The example below would be typically run once you have received notification that your user has received the goods or service for a specific milestone.

Warning: Once the last milestone marked as completed the whole trade will be updated as completed.

12.1 PHP Example

```
<?php
   # The JWT for your account
2
   $json_token = 'your_jwt_token';
   # The url of the API
   service_url = 'https://sandbox.tradesafe.co.za/api/milestone/{ID_OF_THE_TRADE}/{ID_
6

    →OF_THE_MILESTONE } '
8
     ostfields = array
10
     "id" => "5899715f-bda4-4c91-b78c-033aac102991"
11
     "milestone_id" => 10,
12
     "step" => "GOODS_ACCEPTED"
13
14
```

```
16
     CURLOPT_CUSTOMREQUEST => "PUT"
17
     CURLOPT_RETURNTRANSFER => TRUE
18
     CURLOPT_HTTPHEADER => array(
        'Authorization: Bearer ' . $json_token,
20
21
22
     CURLOPT_POSTFIELDS => json_encode($postf
23
24
25
26
27
29
30
31
   ?>
32
```

Get Constants from the API

There are a number of constants that are used to create a contract ranging from industry to a list of steps and many more. You can always get the most recent values using the *constant* endpoint.

Below is an example to retrieve a list of industries.

```
<?php
2
   // get cURL resource
    // set url
6
    →types');
    // set method
12
    // return the transfer as a string
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
13
14
    // set headers
15
16
17
18
19
20
    // json body
21
    $json_array =
22
23
25
26
   // set body
27
28
```

```
30
   // send the request and save response to $response
31
32
33
   // stop if fails
35
     die('Error: "' . curl_error($ch) . '" - Code: ' . curl_errno($ch))
36
37
38
   echo 'HTTP Status Code: ' . curl_getinfo($ch, CURLINFO_HTTP_CODE) . PHP_EOL
39
   echo 'Response Body: ' . $response . PHP_EOL;
   // close curl resource to free up system resources
43
```

Example Response:

```
"GENERAL_GOODS_SERVICES": "General Goods & Services"
2
     "AGRICULTURE_LIVESTOCK_GAME": "Agriculture, Livestock & Game"
3
     "ART_ANTIQUES_COLLECTIBLES": "Art, Antiques & Collectibles"
     "BUSINESS_SALE_BROKING": "Business Sale & Broking"
     "VEHICLES_WATERCRAFT": "Cars, Bikes & Watercraft"
     "CONSTRUCTION": "Construction"
     "CONTRACT_WORK_FREELANCING": "Contract Work & Freelancing",
     "FUEL": "Diesel, Petroleum & Biofuel (Local)",
     "FUEL_INTERNATIONAL": "Diesel, Petroleum & Biofuel (Cross-Border)".
10
     "DONATIONS_TRUSTS": "Donations & Trusts"
11
     "FILMS_PRODUCTION": "Films & Production"
12
     "HOLIDAY_LETS_DEPOSITS": "Holiday Lets & Deposits"
13
     "INVESTMENTS_EXITS": "Investments & Exits"
14
     "MINING": "Mining, Metals & Minerals"
15
     "LEASES_RENTAL_DEPOSITS": "Rental Deposits"
16
     "USED_PARTS": "Used Parts"
17
     "SOFTWARE_DEV_WEB_DOMAINS": "Web Domain Purchases & Transfers"
     "WEDDINGS_FUNCTIONS": "Weddings & Functions"
```

There are several other constants available:

Note: Replace {constant-type} in /api/constant/{constant-type} with any of the values below.

industry-types A list of available industries

step-types A list of all the steps

beneficiary-types A list of different types of beneficiaries

fee-allocation-types A list of types of fee allocations

company-types A list of company types

company-suffix-types A list of company suffixes

bank-account-types A list of bank account types

bank-codes A list of bank branch (CBC) codes

Constants & Variables

14.1 Industries

The following constants are used for industry.

- ART_ANTIQUES_COLLECTABLES Art, Antiques & Collectables
- BUSINESS_SALE_BROKING Business Sale & Broking
- CONSTRUCTION Construction
- CONTRACT_WORK_FREELANCING Contract Work & Freelancing
- DONATIONS_TRUSTS Donations & Trusts
- FILMS_PRODUCTION Films & Production
- GENERAL_GOODS_SERVICES General Goods & Services
- HOLIDAY_LETS_DEPOSITS Holiday Lets & Deposits
- INVESTMENTS EXITS Investments & Exits
- LEASES_RENTAL_DEPOSITS Rental Deposits
- PETS_LIVESTOCK_GAME Pets, Livestock & Game
- SOFTWARE_DEV_WEB_DOMAINS Web Domain purchases and transfers
- USED_PARTS Used Parts
- VEHICLES_WATERCRAFT Cars, Bikes & Watercraft
- WEDDINGS_FUNCTIONS Weddings & Functions

14.2 Steps

The following constants are used for step.

- CREATED Invitation to be sent
- INVITATION_SENT Invitation Sent
- NEGOTIATION Trade Negotiation
- ACCEPTED Trade Accepted
- FUNDS_DEPOSITED Funds Deposited
- FUNDS RECEIVED Funds Received & Cleared
- · SENT Goods Sent / Service Initiated
- GOODS_RECEIVED Goods Received / Service Received
- GOODS_ACCEPTED Goods Accepted / Service Accepted
- FUNDS_RELEASED Funds Released
- COMPLETED Trade Completed
- DECLINED Trade Declined
- DISPUTED Trade Disputed
- LEGAL Legal
- SUSPENDED Suspended by admin

14.3 Fee Allocation

The following constants are used for TradeSafe's escrow fee fee_allocation.

- 0 Buyer Pays
- 1 Seller Pays
- 2 50/50 Split [Buyer / Seller]
- 3 Agent Pays
- 4 50/50 Split [Agent / Buyer]
- 5 50/50 Split [Agent / Seller]
- 6 3-Way Split [Agent / Buyer / Seller]

The following constants are used for agent_fee_allocation

- 0 Buyer Pays
- 1 Seller Pays
- 2 50/50 Split [Buyer / Seller]

14.4 Beneficiaries

The following is used to for beneficiary_types

- · ADVISER Adviser
- CONSULTANT Consultant
- DELIVERY_COMPANY Delivery Company

- FINANCIAL_INSTITUTION Financial Institution
- INTERMEDIARY Intermediary
- LEGAL_COUNSEL Legal counsel
- SUB_AGENT Sub-Agent
- {custom_bank_name} Other

14.5 Bank Accounts

The following is used to for account_types

- CHEQUE Cheque/Current Account
- SAVINGS Savings Account
- TRANSMISSION Transmission Account
- BOND Bond Account

14.6 Company Types

- private Private company (Pty) Ltd
- public Public company (Ltd)
- state State-owned company (SOC)
- inc Personal liability company (Inc)
- cc Close Corporation (CC)
- npc Non-profit company (NPC)
- trust Trust
- · other Other

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