SDK.finance

SDK.Finance manual guide

General

Authorization

Roles: All roles

- On the sign in page enter login information:
    - Login: email or phone
    - Password
- Press the "Sign in" button.
- If login and password are correct, the user’s back-office is opened.
- If login and/or password is incorrect, the message “Invalid login/password” is displayed.

> ⚠ If the password is entered incorrectly more than three times, the user account is locked by the system. The next authorization attempt is available after 1800 seconds.

Password recovery

Roles: All roles

- On the sign-in page click "Forgot password"
- Enter email or phone
- Press the “Recover” button
- A message with a code for password recovery is sent to the specified phone or email
- Click “Confirm password recovering”.
- Enter the received code and specify the new password.
- Press “Confirm” button.
- Password is changed.
- To login to the system click “Go to the login” or open Sign-in page.
- Message about password changing is sent to specified phone or email.

Change password

- Perform authorization in the system.
- Click on the user’s email or phone in the top left corner or open profile settings for business roles.
- In the opened menu go to “Password” section.
- Specify the old password.
- Specify and confirm the new password.
- Press “Update” button.

Business roles

Self - registration

Roles: Individual, Merchant

- On the main page, click "Sign up".
- B default, Individual account will be created. To register the Merchant account click “Need merchant account?” and chose the legal type: “Corporation” or “Individual”.
- Enter an email or phone.
- Press "Sign up" button.
- An email or SMS with a code to activate the account will be sent to the specified email or phone.
- Enter code, create new password for the account and press “Confirm” button. You can confirm registration from the Sign-up page. Click “confirm by OTP”, enter email/phone, code and press “Confirm” button.
- User’s back-office is opened.
- Email with the account information is sent to the specified email.

Profile management

Roles: Individual, Merchant

Manage Profile info, system notifications, two-factor authentication and login credentials

- Perform authorization in the system.
- Click on the user’s name or icon to open Profile settings.
- In the opened menu go to the required section:
    - Personal information - to change name, surname, email, phone or birth date
    - Documents - to upload documents
    - Password - to change password
    - Security - to change notifications or 2FA settings
    - Login details - to add another type of login (email or phone depends on what was specified while registration)
- Specify the required information.
- Press “Update” button.

Create account

Users with business roles have the possibility to create accounts in each of the currencies available in the system.

> ⚠ If user already created accounts in all available currencies account creation will be unavailable. By default, user is able to have only one account in each currency.

- Perform authorization in the system.
- Go to the Accounts section.
- Click button "Add account".
- Specify account name.
- Choose currency from drop-down list.
- Press button “Add account”.
- Account is created and is visible in the Accounts section.

Change account name

- Perform authorization in the system.
- Go to the “Accounts” section.
- Click on the required account.
- In the opened menu go to the “Settings” section
- Specify new account name.
- Press button “Update”.

Block/unblock account

- Perform authorization in the system.
- Go to the “Accounts” section.
- Click on the required account.
- In the opened menu go to the “Settings” section
- Switch on/switch off toggle “Block account”.
- Press button “Update”.

Link card to the account

> ⚠ To link payment card to the account integration with provider is required

- Perform authorization in the system.
- Go to the “Accounts” section.
- Click on the required account.
- In the opened menu go to the “Cards” section.
- Click “Acdd card”.
- Specify card name.
- Press button “Link card”.

Specify bank account details

This use case is covered by APIs and can be added to the user’s back-office depends on the required business flow.

Specify bank account details by user

```
POST /my/bank-accounts/coin/{coinSerial}/with-bank
```

Request:

```
{
  "bankAccountNumber": "string",
  "iban": "string",
  "bankId": "string",
  "fullName": "string"
}
```

Response:

```
{
  "bankAccountNumber": "string",
  "bankAccountId": "string",
  "bankInfo": {
    "address": "string",
    "bankId": "string",
    "bic": "string",
    "city": "string",
    "country": "string",
    "name": "string",
    "swift": "string",
    "zipCode": "string"
  },
  "fullName": "string",
  "iban": "string",
  "message": "string",
  "status": "ok"
}
```

To get `bankId`**:**

`GET /bank-catalog`

Response:

```
{
  "message": "string",
  "records": [
    {
      "address": "string",
      "bankId": "string",
      "bic": "string",
      "city": "string",
      "country": "string",
      "name": "string",
      "swift": "string",
      "zipCode": "string"
    }
  ],
  "status": "ok"
}
```


Approve/reject bank account details by compliance

`POST /bank-accounts/{bankAccountId}/approve`

`POST /bank-accounts/{bankAccountId}/reject`

Top-up account

To add method to top-up account, e.g. card payment, wire transfer etc. integration with provider is required.

Top-up account by payment card

- Perform authorization in the system.
- Press button “Top-up”.
- Choose option “Debit card”.
- Specify card details: Card number, Expiry date and CVV.
- Press button “Next”.
- Choose account from the drop-down list.
- Specify amount, the commission is displayed according to the contracts settings.
- Press button “Next”.
- Message about top-up result is displayed.
- If top-up is successful account balance is changed.

Top-up account by bank transfer

- Perform authorization in the system.
- Press button “Top-up”.
- Choose option “Regular bank transfer”.
- Choose account.
- Parameters for bank transfer is displayed, user is able to print or copy them.
- User performs regular bank transfer using provided parameters.

Make payment

To add option to make payment, e.g. payment to card, bank transfer, payment to mobile etc. integration with provider is required.

Payment to card

- Perform authorization in the system.
- Press button “Make payment”.
- Choose “Payment to card” option.
- Choose source card from drop-down list (cards linked to the user’s accounts is displayed with account balances).
- Specify destination card, specify recipient email or phone, or choose template from drop-down list.
- Specify payment amount.
- Commission is displayed according to the contract settings.
- Press button “Next”.
- Check payment details.
- Press button “Make payment”.
- Message with payment result is displayed.
- Close notification or press button “Save as template” to save this payment as template.
- Specify template name.
- Press button “Save as template”.

Payment to account

- Perform authorization in the system.
- Press button “Make payment”.
- Choose “Payment to account” option.
- Choose source account from the drop-down list.
- Specify destination account or choose template from the drop-down list
- Specify payment amount.
- Commission is displayed according to the contract settings.
- Press button “Next”.
- Check payment details.
- Press button “Make payment”.
- Message with payment result is displayed.
- Close notification or press button “Save as template” to save this payment as template.
- Specify template name.
- Press button “Save as template”.

Mobile top-up

- Perform authorization in the system.
- Press button “Make payment”.
- Choose “Mobile top-up” option.
- Choose source account from the drop-down list.
- Specify phone number.
- Specify payment amount.
- Commission is displayed according to the contract settings.
- Press button “Next”.
- Check payment details.
- Press button “Make payment”.
- Message with payment result is displayed.

Vouchers (prepaid)

User with business role is able to create or activate previously created prepaid voucher. The recipient of the voucher can be any person. To activate the voucher, you need its ID number and pin code, which are generated when creating the voucher.

The amount of the voucher is debited from the user's account after the voucher is created. When the voucher is activated, the amount is credited to the user's who activates the voucher account.

This use case is covered by APIs and can be added to the user’s back-office depends on the required business flow.

Create prepaid voucher

`POST /prepaid-coins`

Request:

```
{
  "srcSerial": "string",
  "prepaidAmount": 0,
  "prepaidName": "string"
}
```

Calculate commission

`POST /prepaid-coins/calculate`

Request:

```
{
  "srcSerial": "string",
  "prepaidAmount": 0,
  "prepaidName": "string"
}
```

Commission is calculated according to the contract settings.

Response:

```
{
  "status": "ok",
  "message": "string",
  "transactionAmount": 0,
  "senderAmountPush": 0,
  "recipientAmountPush": 0,
  "commissionAmountPush": 0,
  "issuer": {
    "id": "string",
    "sn": "string",
    "currency": "string",
    "symbol": "string"
  }
}
```

Activate prepaid voucher

`POST /prepaid-coins/{serial}/activate`

Request:

```
{
  "prepaidPin": "string",
  "destSerial": "string"
}
```


Currency Exchange

User with business role is able to exchange currencies between his accounts.

- Perform authorization in the system.
- Press button “Exchange”.
- Choose “Sell” or “Buy” option.
- Choose source account from the drop-down list.
- Choose destination account from the drop-down list.
- Specify amount to sell/buy.
- See exchange rate and amount to receive/amount to pay.
- Press button “Sell”/”Buy”.
- Message with exchange result is displayed.

Invoices

Merchant is able to create invoice and specify Individual or Merchant as a payer. Individual user is able to pay invoice received from Merchant.

Create invoice

Role: Merchant.

- Perform authorization in the system.
- Go to “Invoices” section.
- Press button “Create invoice”.
- Specify required information:
    - Template - for creation invoice from template. In this case, all parameters are loaded from the template;
    - Invoice name;
    - Payer contact - contact of payer registered in the system (email or phone);
    - Recipient coin - choose the coin on which you’ll receive the payment from drop-down list;
    - Expires at - choose expiration date for invoice;
    - Product code – code of the goods/services that you are sending invoice for;
    - Count – quantity of products/services;
    - Product price – price per 1 item of the product/service;
    - Amount – total amount of the invoice;
    - Description – product/service description or the field to leave some notes to the payer.
- You can save this invoice as a template for future usage by switching “Save templated” toggle.
- Specify template name if the previous option was enabled.
- Press button “Next”.
- See invoice information:
    - Payer;
    - Commission amount;
    - Invoice amount;
- Press button “Create invoice”.
- See information about invoice creation.

Pay for invoice

Role: Merchant, Individual

This use case is covered by APIs and can be added to the user’s back-office depends on the required business flow.

`POST /invoices/{identifier}/pay`

Request:

```
{
  "payerCoin": "string"
}
```

Service roles

User Management

Create user

Role: Administrator

- Perform authorization.
- Go to “Users” section.
- Press button “Add”.
- Fill the required fields.
- Press button “Create”.
- An email with the account credentials are sent to the email of the user: login and password.

Modify existing user

Role: Administrator

- Perform authorization.
- Go to “Users” section.
- Click on user’s record.
- In the opened menu fill the required information.
- Press button “Apply”.

Deactivate user

Role: Administrator

- Perform authorization.
- Go to “Users” section.
- Find required user with “Active” status.
- Click Deactivate in the “Actions” column for the selected user.
- User’s status is changed to “Inactive”.
- Message about account blocking is sent to the user.

Activate user

Role: Administrator

- Perform authorization.
- Go to “Users” section.
- Find required user with “Inactive” status.
- Click “Activate” in the “Actions” column for the selected user.
- User’s status is changed to “Active”.
- Message about account activation is sent to the user.

Delete user

Role: Administrator

- Perform authorization.
- Go to “Users” section.
- Find required user.
- Click “Delete user” in the “Actions” column for the selected user.
- User is deleted from the system.

Transaction History

View transactions list

Role: Administrator, Compliance manager

- Perform authorization.
- Go to “Transactions” section
- In the “Transactions” section, user is able to filter and view all transactions performed by all users.

View transactions for selected user

Role: Administrator, Compliance manager

- Perform authorization.
- Go to “Users” section.
- Click on user’s record.
- Go to “Transactions” section.
- In the “Transaction” section for the selected user, user is able to view and filter all transactions related to the selected user.

Issuers management

Role: Administrator

By Issuers in this section is meant a payment unit of the System.

Create new issuer (disabled on demo instance)

- Perform authorization.
- Go to “Issuers” section.
- Press button “New”.
- Specify required information.
- Press button “Create Issuer”.

Update existing issuer: (disabled on demo instance)

- Perform authorization.
- Go to “Issuers” section.
- Click on issuer record.
- Press button “Update”.
- Specify required information.
- Press button “Update Issuer”.

Activate/deactivate existing issuer: (disabled on demo instance)

- Perform authorization.
- Go to “Issuers” section.
- Click on issuer record.
- Press button “Update”.
- Switch on/off “Active”.
- Press button “Update Issuer”.

After blocking, currency transactions become unavailable.

Currency management

Role: Administrator

Create new currency: (disabled on demo instance)

- Perform authorization.
- Go to “Currency” section.
- Press button “New”.
- Specify required information.
- Press button “Create currency”.

After currency creation, administrator is able to create a new Issuer for this currency.

After Issuer creation, user with business role is able to create a new wallet in this currency.

Actions of users

Role: Administrator

Administrator is able to view and filter the actions of users in the “Actions of users” section.

Contracts

Role: Administrator

Contracts are managed by the administrator. Contracts determine a set of rules for business actors. Such rules include:

- types of available transactions
- commission for each type of transaction in each currency
- limits for each type of transaction in each currency
- available gates for external transactions

Provider Commissions and limits

In this section, user is able to set up commission for external operations that are performed using any 3rd party integration. Commission settings include Total commission which is paid by customer for the operation and Provider commission which is paid by system to the 3rd party.

Also user is able to add new provider from the list of already integrated provider.

Role: Administrator

To add provider:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “Provider commission” tab.
- Press the button “Add provider”
- Specify the following information:
    - Choose provider from the drop-down list
    - Choose currency from the drop-down list
- Press the button “Create”

To add provider commission:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “Provider commission” tab.
- On required provider record press button “View settings” in “Action” column.
- In the commission block press the button “Add new commission”
- Choose transaction type from the drop-down list
- Specify the following information for Provider commission:
    - Choose commission type from the drop-down list
    - Specify commission value depends on the chosen type
- Specify the following information for Total commission:
    - Choose commission type from the drop-down list
    - Specify commission value depends on the chosen type
- Set toggle “Active” to the required status
- Press the button “Create”

Available commission types and required commission values:

Type of commission	**Description and required values**
Zero	Commission for the selected transaction is not charged
% of amount	Value of interest
fixed amount	Value of the fixed commission amount

greater of % or fixed	Value of the commission percentage Value of the fixed commission amount
less of % or fixed	Value of the commission percentage Value of the fixed commission amount

To change provider commission:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “Provider commission” tab.
- On required provider record press button “View settings” in “Action” column.
- On the required commission record press button “Edit”
- Specify the following information for Provider commission:
    - Choose commission type from the drop-down list
    - Specify commission value depends on the chosen type
- Specify the following information for Total commission:
    - Choose commission type from the drop-down list
    - Specify commission value depends on the chosen type
- Set toggle “Active” to the required status
- Press the button “Update”

To set provider limit:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “Provider commission” tab.
- On required provider record press button “View settings” in “Action” column.
- In the limits block click “Add limit rule”
- Specify the following information
    - Choose transaction type from the drop-down list
    - Choose qualifier (Amount/Quantity) from the drop-down list
    - Specify limit value
    - Choose time unit from the drop-down list
    - Switch on toggle “Active”
- Press button “Create”

Possible time units:

- Per transaction
- Per day
- Per week
- Per month
- Per quater
- Per year
- Per life

To change provider limit:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “Provider commission” tab.
- On required provider record press button “View settings” in “Action” column.
- In the required limit press button “Edit” in the Action column
- Specify value
- Switch on/off toggle “Active”
- Press button “Update”

System Commissions and limits

Commission settings flow:

- Add operation
- Add commission rule
- Add commission range and specify commission value

Add operation:

- Perform authorization.

- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.
- In the opened commission list press button “Add operation”.
- Specify required information:
    - Choose operation flow from the drop-down list
    - Chose currency from the drop-down list
- Press button “Create”

To add commission rule to the existing operation:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.
- On required operation record press button “View details” in “Action” column.
- Go to the “Commissions” tab
- Press the button “Add rule”
- Specify the following information:
    - Start date
    - End date
    - For transfer operation choose direction from the drop-down list
    - Choose status from the drop-down list
- Press the button “Add rule”

Available directions:

IN - commission is paid by the receiver.
OUT - commission is paid by the sender.

SHARED - commission is paid by sender and receiver 50/50.

To specify commission value:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.
- On required operation record press button “View details” in “Action” column.
- Go to the “Commissions” tab
- Click “Add range” for the required commission rule
- Specify the following information:
    - Amount from
    - Amount to
    - Commission type
    - Commission value depends on the selected type
- Save changes

⚠ If specified range intersects existing range - error will be returned

To change existing commission value:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.
- On required operation record press button “View details” in “Action” column.
- Go to the “Commissions” tab
- On the required commission range click “Edit”
- Specify the following information:
    - Amount from
    - Amount to
    - Commission type
    - Commission value depends on the selected type
- Save changes

To add limit to the existing operation:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.

- On required operation record press button “View details” in “Action” column.
- Go to the “Limits” tab
- Press button “Add rule”
- Specify the following information
    - Choose transaction type from the drop-down list
    - Choose qualifier (Amount/Quantity) from the drop-down list
    - Specify limit value
    - Choose time unit from the drop-down list
    - Switch on toggle “Active”
- Press button “Create”

To change limit:

- Perform authorization.
- Go to the “Contracts” section.
- On required contract record press button “View details” in “Action” column.
- Go to the “System commission” tab.
- On required operation record press button “View details” in “Action” column.
- Go to the “Limits” tab
- On the required limit press button “Edit”
- Specify the following information
    - Specify limit value
    - Switch on/off toggle “Active”
- Press button “Update”

Activation / deactivation of system operations

For operation activation, the commission rule for this operation should exist and be activated. For operation deactivation, the commission rule should be deactivated.