StoreKeeper Documentation

Release 0.4.0

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Contents

| 1 | Feat | res | 3 |
|---|-------|---------------|----|
| 2 | Dem | site | 5 |
| 3 | Lang | uages | 7 |
| 4 | The | Fuide | 9 |
| | 4.1 | Setup | |
| | 4.2 | Upgrade | 9 |
| | 4.3 | Client | 0 |
| | 4.4 | Server | .0 |
| 5 | Indi | es and tables | 57 |
| H | TTP F | outing Table | 59 |

StoreKeeper is an open source, multilingual warehouse/store management software

Warning: Project is under development!

Contents 1

2 Contents

Features

The following features are available:

- User login, logout
- Manage items and its barcodes, units, vendors
- Add/remove items in store
- Able to use barcode reader for collecting items
- Can use barcode printer to create labels

The following features are only available via API now:

- Manage users, handle permissions
- Can make acquisition and stocktaking
- Can crate works and its customers (handle outbound, returned items)

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You can test the latest development version on our demo server: http://storekeeper-demo.dras.hu/storekeeper Default username and password: admin / admin

Languages

StoreKeeper is building in multilingual approach, therefore it can easily translate to a new language.

- You should create a new .po file in your language, then put to client/po/directory and create a pull request.
- Or use *Transifex* for online translation: https://www.transifex.com/projects/p/storekeeper/

The Guide

4.1 Setup

4.1.1 Prepare & Run

All commands can run with package.sh scripts what you want. All of these scripts has --help argument for available getting some info about the current module.

- 1. Clone repo, or download & extract a release .tar.gz file
- 2. Install all dependencies: ./package.sh -p install
- 3. Check the config/config.yml for database and other settings
- 4. Prepare database: ./package.sh upgrade_database
- 5. Start server: ./package.sh start

Now, you can open the WebUI: http://localhost:8000/storekeeper

4.1.2 Details

Basically, the install command consists of preinstall and postinstall parts.

- preinstall checks/prepares system components for postinstall and start. This command has only one dependency, an **DEB** based system (for *apt-get install*).
- postinstall checks/prepares external dependencies (e.g. Python, Bower modules).

You can modify installing method with this arguments:

- --global makes changes on system instead of virtual environments.
- --production installs dependencies for production running only (e.g. did not install unit test framework)

4.2 Upgrade

The upgrade process is under construction, but there are the main steps:

- 1. Update source code with **git** / extract release .tar.gz from GitHub.
- 2. Update libs and others with ./package.sh -p install.
- 3. Follow up config changes based on config/config.default.yml.
- 4. Upgrade database scheme with ./package.sh upgrade_database.

Note: Proper, seamless upgrade process will be supported between the stable versions!

4.2.1 Upgrade from v0.2.1 to v0.3.0

Changed the database migration framework in v0.3.0, therefore have to make some changes by hand:

- 1. Do common upgrade scenario step-by-step without upgrading database (step 4)
- 2. Remove server/db_repository directory
- 3. Run the following SQL commands:

```
ALTER TABLE item ALTER COLUMN purchase_price SET DEFAULT 0;

DROP TABLE migrate_version;
CREATE TABLE alembic_version (version_num character varying(32) NOT NULL);
-- ALTER TABLE public.alembic_version OWNER TO sql_user_of_storekeeper;
INSERT INTO alembic_version VALUES ('305c2b0084f');
```

4. Now, upgrade database scheme with ./package.sh upgrade_database.

Note: Run this commands as StoreKeeper's SQL user or use ALTER TABLE to set owner of the new table.

4.3 Client

The UI of **StoreKeeper** will be implemented in AngularStrap.

4.4 Server

The backend of **StoreKeeper** is based on Flask and used several plugins of it.

4.4.1 Interfaces

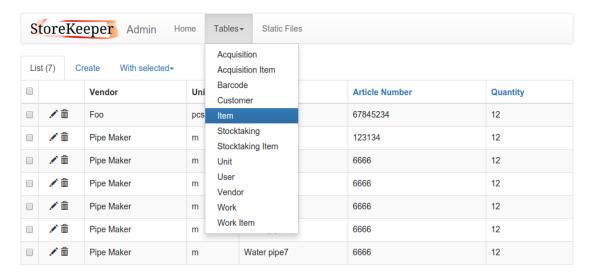
Admin page

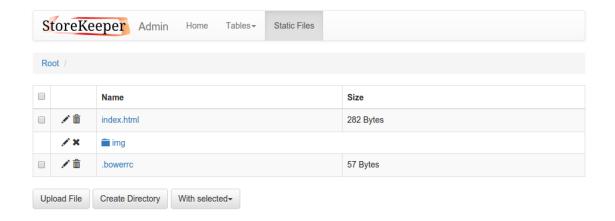
StoreKeeper has admin interface (with Flask-Admin), where you can manage database tables and static files directly.

You can reach this on: http://localhost:8000/<name>/admin

Note: Admin page is not available in in production mode.

Interface





RPC API

StoreKeeper uses HATEOAS RCP API for communicate server and client side each other. The URLs are prefixed with name of application what you can customize in server/config.yml.

Example URL:

http://localhost:8000/<name>/api/<command>

Endpoints

Acquisitions API endpoint for manage acquisitions.

Data management

/api/acquisitions

GET /storekeeper/api/acquisitions

List acquisitions

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/acquisitions HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

POST /storekeeper/api/acquisitions

Create acquisition

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/acquisitions HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "Maybe missing some items"
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "comment": "Maybe missing some items",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999430+00:00"
}
```

/api/acquisitions/<id>

${\tt GET /storekeeper/api/acquisitions/(int:}\ id)$

Get acquisition

Parameters

• id – ID of selected acquisition for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition

Example request:

```
GET /storekeeper/api/acquisitions/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "comment": "Maybe missing some items",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999430+00:00"
}
```

PUT /storekeeper/api/acquisitions/(int: id)

Update acquisition

Parameters

• id – ID of selected acquisition for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
PUT /storekeeper/api/acquisitions/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "A box has been damaged"
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "comment": "A box has been damaged",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999430+00:00"
}
```

DELETE /storekeeper/api/acquisitions/(int: id)

Delete acquisition

Parameters

• id – ID of selected acquisition for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition

Example request:

```
DELETE /storekeeper/api/acquisitions/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

/api/acquisitions/<id>/items

${\tt GET /storekeeper/api/acquisitions/(int: } id) {\tt /items}$

List acquisition items

Parameters

• id – ID of acquisition

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/acquisitions/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
[
  {
    "id": 1,
    "item": {
      "article_number": "F0213546",
      "id": 2,
      "location": "B02/01",
      "name": "Pipe",
      "purchase_price": 0.0,
      "quantity": 0.0,
      "unit": {
        "id": 1,
        "unit": "m"
      },
      "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
      "warning_quantity": 0.0
    "quantity": 132.4
  },
    "id": 2,
    "item": {
```

```
"article_number": "SK132465",
    "id": 1,
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
    "unit": {
      "id": 2,
      "unit": "pcs"
    },
    "vendor": {
      "id": 1,
      "name": "Heavy Duty Ltd."
    },
    "warning_quantity": 4.0
  "quantity": 32.1
}
```

POST /storekeeper/api/acquisitions/(int: id) /items

Create acquisition item

Parameters

• id – ID of acquisition

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
POST /storekeeper/api/acquisitions/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    },
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 132.4
```

```
HTTP/1.0 201 CREATED
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 132.4
```

/api/acquisitions/<id>/items

GET /storekeeper/api/acquisitions/(int: id)/items/

int: item_id Get acquisition item

Parameters

- id ID of acquisition
- item_id ID of selected acquisition item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition item

Example request:

```
GET /storekeeper/api/acquisitions/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "item": {
        "article_number": "F0213546",
        "id": 2,
        "location": "B02/01",
        "name": "Pipe",
        "purchase_price": 0.0,
        "quantity": 0.0,
        "unit": {
```

```
"id": 1,
    "unit": "m"
},
    "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
     },
     "warning_quantity": 0.0
},
    "quantity": 132.4
}
```

PUT /storekeeper/api/acquisitions/(int: id)/items/

int: item_id Update acquisition item

Parameters

- id ID of acquisition
- item_id ID of selected acquisition item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
PUT /storekeeper/api/acquisitions/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 132.4
```

```
HTTP/1.0 200 OK
Content-Type: application/json
{
    "id": 1,
```

```
"item": {
  "article_number": "F0213546",
  "id": 2,
  "location": "B02/01",
  "name": "Pipe",
  "purchase_price": 0.0,
  "quantity": 0.0,
  "unit": {
    "id": 1,
    "unit": "m"
  "vendor": {
    "id": 2,
    "name": "Star Shop Ltd."
  "warning_quantity": 0.0
},
"quantity": 132.4
```

DELETE /storekeeper/api/acquisitions/(int: id)/items/

int: item_id Delete acquisition item

Parameters

- id ID of acquisition
- item_id ID of selected acquisition item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no acquisition item

Example request:

```
DELETE /storekeeper/api/acquisitions/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Barcodes API endpoint for fetching barcodes.

Data management

/api/barcodes

GET /storekeeper/api/barcodes

List barcodes items

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/barcodes HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
    "barcode": "SKT10492",
    "id": 1,
    "item_id": 1,
    "main": true,
    "master": true,
    "quantity": 32.7
  },
  {
    "barcode": "9843-184125",
    "id": 2,
    "item_id": 1,
    "main": false,
    "master": false,
    "quantity": 1.5
  }
```

Config API endpoint for getting client related settings from server config.

Getting config values

```
/api/config
```

GET /storekeeper/api/config

Get server settings

Status Codes

• 200 OK – no error

Example request:

```
GET /storekeeper/api/config HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "app_name": "storekeeper",
    "app_title": "StoreKeeper",
    "currency": "$",
    "debug": false,
    "forced_language": null
}
```

Customers API endpoint for manage customers.

Data management

/api/customers

GET /storekeeper/api/customers

List customers

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/customers HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

[
        "id": 1,
        "name": "Big Customer Ltd."
     },
        {
            "id": 2,
            "name": "Buy Everything Co."
        }
      }
}
```

POST /storekeeper/api/customers

Create customer

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field / customer is already exist

Example request:

```
POST /storekeeper/api/customers HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "Big Customer Ltd."
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json
{
    "id": 1,
```

```
"name": "Big Customer Ltd."
}
```

/api/customers/<id>

${\tt GET /storekeeper/api/customers/(int:}\ id)$

Get customer

Parameters

• id – ID of selected customer for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no customer

Example request:

```
GET /storekeeper/api/customers/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "name": "Big Customer Ltd."
}
```

PUT /storekeeper/api/customers/(int: id)

Update customer

Parameters

- id-ID of selected customer for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no customer
- 422 Unprocessable Entity there is wrong type / missing field / customer is already exist

Example request:

```
PUT /storekeeper/api/customers/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "new_foo"
}
```

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "name": "new_foo"
}
```

DELETE /storekeeper/api/customers/ (int: id)

Delete customer

Parameters

• id – ID of selected customer for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no customer

Example request:

```
DELETE /storekeeper/api/customers/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Error API endpoint for getting client side errors to alerting administrator.

Push error messages

/api/error

POST /storekeeper/api/error

Receive client side errors and forward to logfile / email / syslog (what specified in config)

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/error HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "message": "foo is not defined",
    "name": "ReferenceError",
    "stack": "ReferenceError: foo is not defined\n at Scope.printLabel (http://.../store)
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json
null
```

Items API endpoint for manage items.

Data management

/api/items

GET /storekeeper/api/items

List items

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
  {
    "article_number": "SK132465",
    "id": 1,
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
    "unit": {
      "id": 2,
      "unit": "pcs"
    "vendor": {
      "id": 1,
      "name": "Heavy Duty Ltd."
    "warning_quantity": 4.0
  },
  {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
```

POST /storekeeper/api/items

Create item

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
  "article_number": "sk132465",
  "location": "A12/12",
  "name": "Spray",
  "purchase_price": 60.4,
  "unit": {
    "id": 2,
    "unit": "pcs"
  },
  "vendor": {
    "id": 1,
    "name": "Heavy Duty Ltd."
  },
  "warning_quantity": 4.0
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json
  "article_number": "SK132465",
  "id": 1,
  "location": "A12/12",
  "name": "Spray",
  "purchase_price": 60.4,
  "quantity": 0.0,
  "unit": {
    "id": 2,
    "unit": "pcs"
  },
  "vendor": {
    "id": 1,
    "name": "Heavy Duty Ltd."
  "warning_quantity": 4.0
```

/api/items/search

GET /storekeeper/api/items/search

Search in items and barcodes

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/items/search?expression=sk&limit=6 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

/api/items/<id>

GET /storekeeper/api/items/(int: id)

Get item

Parameters

• id – ID of selected item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
{
    "article_number": "SK132465",
    "id": 1,
```

```
"location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
    "unit": {
        "id": 2,
        "unit": "pcs"
    },
    "vendor": {
        "id": 1,
        "name": "Heavy Duty Ltd."
    },
    "warning_quantity": 4.0
}
```

${\tt PUT /storekeeper/api/items/(int: \it id)}$

Update item

Parameters

• id – ID of selected item for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
PUT /storekeeper/api/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "article_number": "sk132465",
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "unit": {
        "id": 2,
        "unit": "pcs"
    },
    "vendor": {
        "id": 1,
        "name": "Heavy Duty Ltd."
    },
    "warning_quantity": 4.0
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "article_number": "SK132465",
    "id": 1,
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
```

```
"unit": {
    "id": 2,
    "unit": "pcs"
},
"vendor": {
    "id": 1,
    "name": "Heavy Duty Ltd."
},
    "warning_quantity": 4.0
}
```

DELETE /storekeeper/api/items/(int: id)

Delete item

Parameters

• id – ID of selected item for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
DELETE /storekeeper/api/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

/api/items/<id>/barcodes

${\tt GET /storekeeper/api/items/(int: } id) / {\tt barcodes}$

List barcodes.

Parameters

• id - ID of item

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/items/1/barcodes HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
```

```
"barcode": "SKT21609",
    "id": 1,
    "main": true,
    "master": true,
    "quantity": 32.7
},

{
    "barcode": "9843-184125",
    "id": 2,
    "main": false,
    "master": false,
    "quantity": 1.5
}
```

POST /storekeeper/api/items/(int: id)/barcodes

Create barcode (if missing barcode then server will generate one)

Parameters

• id - ID of item

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one barcode twice / can not generate unique new barcode / can not set non-main barcode as master barcode / can not set more than one master barcode to an item

Example request:

```
POST /storekeeper/api/items/1/barcodes HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "barcode": "SKT21609",
    "master": true,
    "quantity": 32.7
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "barcode": "SKT21609",
    "id": 1,
    "main": true,
    "master": true,
    "quantity": 32.7
}
```

/api/items/<id>/barcodes/<id>

```
GET /storekeeper/api/items/(int: item_id) /barcodes/
int: id Get barcode
```

Parameters

- id ID of selected barcode for get
- item_id ID of item

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no barcode

Example request:

```
GET /storekeeper/api/items/1/barcodes/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "barcode": "SKT21609",
    "id": 1,
    "main": true,
    "master": true,
    "quantity": 32.7
}
```

PUT /storekeeper/api/items/(int: item_id)/barcodes/

int: id Update barcode

Parameters

- id ID of selected barcode for put
- item_id ID of item

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no barcode
- 422 Unprocessable Entity there is wrong type / missing field / can not add one barcode twice / can not set non-main barcode as master barcode / can not set more than one master barcode to an item

Example request:

```
PUT /storekeeper/api/items/1/barcodes/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "barcode": "SKT21609",
    "master": true,
    "quantity": 32.7
}
```

```
HTTP/1.0 200 OK
Content-Type: application/json
```

```
"barcode": "SKT21609",

"id": 1,

"main": true,

"master": true,

"quantity": 32.7
}
```

DELETE /storekeeper/api/items/(int: item_id) /barcodes/

int: id Delete barcode

Parameters

- id ID of selected barcode for delete
- item_id ID of item

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no barcode

Example request:

```
DELETE /storekeeper/api/items/1/barcodes/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Commands

/api/items/<id>/barcodes/<id>/print

```
GET /storekeeper/api/items/(int: item id) /barcodes/
```

int: id/print Generate barcode label to PDF with some details, and starts downloading that.

Parameters

- id ID of selected barcode for get
- item_id ID of item

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no barcode

Example request:

```
GET /storekeeper/api/items/1/barcodes/1/print HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/pdf
Content-Disposition: attachment; filename=label__SK642031__4f0ff51c73703295643a325e55bc7e
Content-Length: 11234
<file content>
```

PUT /storekeeper/api/items/(int: item_id)/barcodes/

int: id/print Print barcode label with some details

Parameters

- id ID of selected barcode for get
- item_id ID of item

Status Codes

- 200 OK no error
- 400 Bad Request missing pycups python3 module
- 401 Unauthorized user was not logged in
- 404 Not Found there is no barcode
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
PUT /storekeeper/api/items/1/barcodes/1/print HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "copies": 3
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Session API endpoint for manage the current session.

Session management

/api/session

GET /storekeeper/api/session

Get current session

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/session HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "admin": true,
    "disabled": false,
    "email": "admin@test.com",
    "id": 1,
    "username": "admin"
}
```

POST /storekeeper/api/session

Login user

Status Codes

- 201 Created no error
- 401 Unauthorized bad authentication data or user is disabled
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/session HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "password": "secret",
    "remember": false,
    "username": "admin"
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "admin": true,
    "disabled": false,
    "email": "admin@test.com",
    "id": 1,
    "username": "admin"
}
```

DELETE /storekeeper/api/session

Logout user

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
DELETE /storekeeper/api/session HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Stocktakings API endpoint for manage stocktaking results.

Data management

/api/stocktakings

GET /storekeeper/api/stocktakings

List stocktakings

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/stocktakings HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
[
    "close_timestamp": null,
    "close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
    "comment": "Maybe missing some items",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999517+00:00"
  },
    "close_timestamp": null,
    "close_user": {
     "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
    "comment": null,
    "id": 2,
    "timestamp": "2016-02-29T04:31:57.999538+00:00"
```

POST /storekeeper/api/stocktakings

Create stocktaking

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/stocktakings HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "Maybe missing some items"
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "close_timestamp": null,
    "close_user": {
        "admin": null,
        "disabled": null,
        "email": null,
        "id": null,
        "username": null
      },
      "comment": "Maybe missing some items",
      "id": 1,
      "timestamp": "2016-02-29T04:31:57.999517+00:00"
}
```

/api/stocktakings/<id>

```
GET /storekeeper/api/stocktakings/(int: id)
Get stocktaking
```

Parameters

• id – ID of selected stocktaking for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no stocktaking

Example request:

```
GET /storekeeper/api/stocktakings/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
{
    "close_timestamp": null,
```

```
"close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
    "username": null
},
    "comment": "Maybe missing some items",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999517+00:00"
}
```

PUT /storekeeper/api/stocktakings/(int: id)

Update stocktaking

Parameters

• id – ID of selected stocktaking for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no stocktaking
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
PUT /storekeeper/api/stocktakings/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "A box has been damaged"
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "close_timestamp": null,
    "close_user": {
        "admin": null,
        "disabled": null,
        "email": null,
        "id": null,
        "username": null
    },
    "comment": "A box has been damaged",
    "id": 1,
    "timestamp": "2016-02-29T04:31:57.999517+00:00"
}
```

DELETE /storekeeper/api/stocktakings/(int: id)

Delete stocktaking

Parameters

• id – ID of selected stocktaking for delete

Status Codes

• 200 OK – no error

- 401 Unauthorized user was not logged in
- 404 Not Found there is no stocktaking

Example request:

```
DELETE /storekeeper/api/stocktakings/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

/api/stocktakings/<id>/items

GET /storekeeper/api/stocktakings/(int: id)/items

List stocktaking items.

Parameters

• id – ID of stocktaking

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/stocktakings/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
    "id": 1,
    "item": {
      "article_number": "F0213546",
      "id": 2,
      "location": "B02/01",
      "name": "Pipe",
      "purchase price": 0.0,
      "quantity": 0.0,
      "unit": {
        "id": 1,
        "unit": "m"
      },
      "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
      },
      "warning_quantity": 0.0
    "quantity": 52.1
```

```
{
  "id": 2,
  "item": {
    "article_number": "SK132465",
    "id": 1,
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
    "unit": {
      "id": 2,
      "unit": "pcs"
    },
    "vendor": {
      "id": 1,
      "name": "Heavy Duty Ltd."
    "warning_quantity": 4.0
  "quantity": 26.8
}
```

POST /storekeeper/api/stocktakings/(int: id) /items

Create stocktaking item

Parameters

• id - ID of stocktaking

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not add new stocktakings item after items was closed
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
POST /storekeeper/api/stocktakings/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
```

```
},
    "quantity": 52.1
}
```

```
HTTP/1.0 201 CREATED
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 52.1
```

/api/stocktakings/<id>/items/<item_id>

GET /storekeeper/api/stocktakings/(int: id) /items/

int: item_id Get stocktaking item

Parameters

- id ID of stocktaking
- item_id ID of selected stocktaking item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no stocktaking item

Example request:

```
GET /storekeeper/api/stocktakings/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "item": {
        "article_number": "F0213546",
        "id": 2,
```

```
"location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,

"unit": {
        "id": 1,
        "unit": "m"
    },
    "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
    },
    "warning_quantity": 0.0
},
    "quantity": 52.1
}
```

PUT /storekeeper/api/stocktakings/(int: id)/items/

int: item_id Update stocktaking item

Parameters

- id ID of stocktaking
- item_id ID of selected stocktaking item for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not change work item after outbound/returned items was closed
- 404 Not Found there is no stocktaking item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
PUT /storekeeper/api/stocktakings/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 52.1
```

```
HTTP/1.0 200 OK
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "quantity": 52.1
```

DELETE /storekeeper/api/stocktakings/(int: id)/items/

int: item_id Delete stocktaking item

Parameters

- id ID of stocktaking
- item_id ID of selected stocktaking item for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not delete stocktaking item after items was closed
- 404 Not Found there is no stocktaking item

Example request:

```
DELETE /storekeeper/api/stocktakings/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Commands

/api/stocktakings/<id>/close

```
PUT /storekeeper/api/stocktakings/(int: id)/close Close items on stocktaking
```

Parameters

• id – ID of selected stocktaking for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no stocktaking
- 422 Unprocessable Entity there is wrong type / missing field / items have been closed / insufficient quantities for close the stocktaking items

Example request:

```
PUT /storekeeper/api/stocktakings/1/close HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "close_timestamp": "2016-02-29T04:31:57.999554+00:00",
    "close_user": {
        "admin": false,
        "disabled": false,
        "email": "foo@bar.com",
        "id": 2,
        "username": "foo"
        },
        "comment": "Maybe missing some items",
        "id": 1,
        "timestamp": "2016-02-29T04:31:57.999517+00:00"
    }
}
```

Units API endpoint for manage units.

Data management

```
/api/units
```

```
GET /storekeeper/api/units
```

List units

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/units HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

POST /storekeeper/api/units

Create unit

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field / unit is already exist

Example request:

```
POST /storekeeper/api/units HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "unit": "m"
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "id": 1,
    "unit": "m"
}
```

/api/units/<id>

GET /storekeeper/api/units/(int: id)

Get unit

Parameters

• id - ID of selected unit for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no unit

Example request:

```
GET /storekeeper/api/units/1 HTTP/1.1

Host: localhost:8000

Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "unit": "m"
}
```

PUT /storekeeper/api/units/(int: id)

Update unit

Parameters

• id – ID of selected unit for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no unit
- 422 Unprocessable Entity there is wrong type / missing field / unit is already exist

Example request:

```
PUT /storekeeper/api/units/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "unit": "dl"
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "unit": "dl"
}
```

${\tt DELETE /storekeeper/api/units/}\ (int: id)$

Delete unit

Parameters

• id – ID of selected unit for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no unit

Example request:

44

```
DELETE /storekeeper/api/units/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Users API endpoint for manage users.

Data management

/api/users

GET /storekeeper/api/users

List users (for administrators only)

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden user has not enough rights

Example request:

```
GET /storekeeper/api/users HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

POST /storekeeper/api/users

Create user (for administrators only)

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in

- 403 Forbidden user has not enough rights
- 422 Unprocessable Entity {original} / user is already exist

Example request:

```
POST /storekeeper/api/users HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "email": "foo@bar.com",
    "password": "bar",
    "username": "foo"
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "foo"
}
```

/api/users/<id>

```
GET /storekeeper/api/users/(int: id)
Get user
```

Parameters

• id – ID of selected user for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no user

Example request:

```
GET /storekeeper/api/users/2 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "foo"
}
```

PUT /storekeeper/api/users/(int: id)

Update user

Parameters

• id – ID of selected user for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden user can not modify other users
- 404 Not Found there is no user
- 422 Unprocessable Entity {original} / user is already exist

Example request:

```
PUT /storekeeper/api/users/2 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "email": "foo@bar.com",
    "password": "bar",
    "username": "new_foo"
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "new_foo"
}
```

DELETE /storekeeper/api/users/(int: id)

Delete user (for administrators only)

Parameters

• id – ID of selected user for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden user can not remove itself
- 404 Not Found there is no user

Example request:

```
DELETE /storekeeper/api/users/2 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Config management

/api/users/<id>/config

GET /storekeeper/api/users/(int: id)/config

List user items.

Parameters

• id - ID of user

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/users/2/config HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

POST /storekeeper/api/users/(int: id)/config

Create user item

Parameters

• id - ID of user

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
POST /storekeeper/api/users/2/config HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "lang",
    "value": "hu"
}
```

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "name": "lang",
    "value": "hu"
}
```

/api/users/<id>/config/<id>

```
GET /storekeeper/api/users/(int: id) /config/
string: name Get user item
```

Parameters

- id ID of user
- name Name of selected user config value for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no user item

Example request:

```
GET /storekeeper/api/users/2/config/lang HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "name": "lang",
    "value": "hu"
}
```

PUT /storekeeper/api/users/(int: id)/config/

string: name Update user item

Parameters

- id ID of user
- name Name of selected user config value for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no user item
- 422 Unprocessable Entity there is wrong type / missing field / can not use one config name twice

Example request:

```
PUT /storekeeper/api/users/2/config/lang HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "lang",
    "value": "hu"
}
```

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "name": "lang",
    "value": "hu"
}
```

DELETE /storekeeper/api/users/(int: id)/config/

string: *name* Delete user item

Parameters

- id ID of user
- name Name of selected user config value for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no user item

Example request:

```
DELETE /storekeeper/api/users/2/config/lang HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Vendors API endpoint for manage vendors.

Data management

/api/vendors

GET /storekeeper/api/vendors

List vendors

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/vendors HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

POST /storekeeper/api/vendors

Create vendor

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity {original} / vendor is already exist

Example request:

```
POST /storekeeper/api/vendors HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "Heavy Duty Ltd."
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "id": 1,
    "name": "Heavy Duty Ltd."
}
```

/api/vendors/<id>

${\tt GET /storekeeper/api/vendors/(int:}\ id)$

Get vendor

Parameters

• id – ID of selected vendor for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no vendor

Example request:

```
GET /storekeeper/api/vendors/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "name": "Heavy Duty Ltd."
}
```

PUT /storekeeper/api/vendors/(int: id)

Update vendor

Parameters

• id – ID of selected vendor for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no vendor
- 422 Unprocessable Entity {original} / vendor is already exist

Example request:

```
PUT /storekeeper/api/vendors/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "name": "new_foo"
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json

{
    "id": 1,
    "name": "new_foo"
}
```

DELETE /storekeeper/api/vendors/(int: id)

Delete vendor

Parameters

• id – ID of selected vendor for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no vendor

Example request:

```
DELETE /storekeeper/api/vendors/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Works API endpoint for manage works.

Data management

```
/api/works
```

GET /storekeeper/api/works

List works

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in

Example request:

```
GET /storekeeper/api/works HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
    "comment": "First work",
    "customer": {
      "id": 1,
      "name": "Big Customer Ltd."
    "id": 1,
    "outbound_close_timestamp": null,
    "outbound_close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
    "returned_close_timestamp": null,
    "returned_close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
```

```
{
    "comment": null,
    "customer": {
      "id": 2,
      "name": "Buy Everything Co."
    "id": 2,
    "outbound_close_timestamp": null,
    "outbound_close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
    "returned_close_timestamp": null,
    "returned_close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
  }
]
```

POST /storekeeper/api/works

Create work

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
POST /storekeeper/api/works HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "First work",
    "customer": {
        "id": 1,
        "name": "Big Customer Ltd."
    }
}
```

Example response:

```
HTTP/1.0 201 CREATED
Content-Type: application/json

{
    "comment": "First work",
    "customer": {
        "id": 1,
        "name": "Big Customer Ltd."
    },
    "id": 1,
    "outbound_close_timestamp": null,
    "outbound_close_user": {
```

```
"admin": null,
   "disabled": null,
   "email": null,
   "id": null,
   "username": null
},
   "returned_close_timestamp": null,
   "returned_close_user": {
      "admin": null,
      "disabled": null,
      "email": null,
      "id": null,
      "username": null
}
```

/api/works/<id>

GET /storekeeper/api/works/(int: id) Get work

Parameters

• id – ID of selected work for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work

Example request:

```
GET /storekeeper/api/works/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
  "comment": "First work",
  "customer": {
   "id": 1,
    "name": "Big Customer Ltd."
  "id": 1,
  "outbound_close_timestamp": null,
  "outbound_close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
    "username": null
  "returned_close_timestamp": null,
  "returned_close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
```

```
"username": null
}
```

${\tt PUT /storekeeper/api/works/(int: \it id)}$

Update work

Parameters

• id – ID of selected work for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work
- 422 Unprocessable Entity there is wrong type / missing field

Example request:

```
PUT /storekeeper/api/works/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "comment": "Something are not finished",
    "customer": {
        "id": 1,
        "name": "Big Customer Ltd."
    }
}
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
  "comment": "Something are not finished",
  "customer": {
    "id": 1,
    "name": "Big Customer Ltd."
  "id": 1,
  "outbound_close_timestamp": null,
  "outbound_close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
    "username": null
  },
  "returned_close_timestamp": null,
  "returned_close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
    "username": null
  }
```

DELETE /storekeeper/api/works/(int: id)

Delete work

Parameters

• id – ID of selected work for delete

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work

Example request:

```
DELETE /storekeeper/api/works/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

/api/works/<id>/items

GET /storekeeper/api/works/(int: id)/items

List work items

Parameters

• id - ID of work

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no item

Example request:

```
GET /storekeeper/api/works/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
"unit": "m"
    },
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    },
    "warning_quantity": 0.0
  "outbound_quantity": 132.8,
  "returned_quantity": null
},
{
  "id": 2,
  "item": {
    "article_number": "SK132465",
    "id": 1,
    "location": "A12/12",
    "name": "Spray",
    "purchase_price": 60.4,
    "quantity": 0.0,
    "unit": {
      "id": 2,
      "unit": "pcs"
    },
    "vendor": {
      "id": 1,
      "name": "Heavy Duty Ltd."
    },
    "warning_quantity": 4.0
  "outbound_quantity": 41.2,
  "returned_quantity": 2.1
}
```

POST /storekeeper/api/works/(int: id)/items

Create work item

Parameters

• id - ID of work

Status Codes

- 201 Created no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not add new work item after outbound items was closed
- 404 Not Found there is no item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
POST /storekeeper/api/works/1/items HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "item": {
        "article_number": "FO213546",
        "id": 2,
        "location": "B02/01",
```

```
"name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
        "id": 1,
        "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
      },
      "warning_quantity": 0.0
    },
    "outbound_quantity": 132.8
}
```

```
HTTP/1.0 201 CREATED
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
     "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "outbound_quantity": 132.8,
  "returned_quantity": null
```

/api/works/<id>/items/<item_id>

GET /storekeeper/api/works/(int: id)/items/

int: item_id Get work item

Parameters

- id ID of work
- $item_id$ ID of selected work item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work item

Example request:

```
GET /storekeeper/api/works/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  "outbound_quantity": 132.8,
  "returned_quantity": null
```

PUT /storekeeper/api/works/(int: id)/items/

int: item_id Update work item

Parameters

- id ID of work
- item_id ID of selected work item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not change work item after outbound/returned items was closed
- 404 Not Found there is no work item
- 422 Unprocessable Entity there is wrong type / missing field / can not add one item twice

Example request:

```
PUT /storekeeper/api/works/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json

{
    "item": {
        "article_number": "FO213546",
        "id": 2,
        "location": "B02/01",
        "name": "Pipe",
```

```
"purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
        "id": 1,
        "unit": "m"
      },
      "vendor": {
        "id": 2,
        "name": "Star Shop Ltd."
      },
      "warning_quantity": 0.0
    },
    "outbound_quantity": 132.8
}
```

```
HTTP/1.0 200 OK
Content-Type: application/json
  "id": 1,
  "item": {
    "article_number": "F0213546",
    "id": 2,
    "location": "B02/01",
    "name": "Pipe",
    "purchase_price": 0.0,
    "quantity": 0.0,
    "unit": {
      "id": 1,
      "unit": "m"
    "vendor": {
      "id": 2,
      "name": "Star Shop Ltd."
    "warning_quantity": 0.0
  },
  "outbound_quantity": 132.8,
  "returned_quantity": null
```

DELETE /storekeeper/api/works/(int: id)/items/

int: item_id Delete work item

Parameters

- id ID of work
- $item_id$ ID of selected work item for get

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 403 Forbidden can not delete work item after outbound/returned items was closed
- 404 Not Found there is no work item

Example request:

```
DELETE /storekeeper/api/works/1/items/1 HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

```
HTTP/1.0 200 OK
Content-Type: application/json
null
```

Commands

/api/works/<id>/close-outbound

${\tt PUT /storekeeper/api/works/(int: } id) / {\tt close-outbound}$

Close outbound items on work

Parameters

• id – ID of selected work for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work
- 422 Unprocessable Entity there is wrong type / missing field / outbound items have been closed /insufficient quantities for close the outbound work items

Example request:

```
PUT /storekeeper/api/works/1/close-outbound HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
  "comment": "First work",
  "customer": {
    "id": 1,
    "name": "Big Customer Ltd."
  "id": 1,
  "outbound close timestamp": "2016-02-29T04:31:57.999948+00:00",
  "outbound_close_user": {
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "foo"
  },
  "returned_close_timestamp": null,
  "returned_close_user": {
    "admin": null,
    "disabled": null,
    "email": null,
    "id": null,
```

```
"username": null
     }
}
```

/api/works/<id>/close-returned

PUT /storekeeper/api/works/(int: id)/close-returned

Close returned items on work

Parameters

• id – ID of selected work for put

Status Codes

- 200 OK no error
- 401 Unauthorized user was not logged in
- 404 Not Found there is no work
- 422 Unprocessable Entity there is wrong type / missing field / outbound items have not been closed / returned items have been closed /insufficient quantities for close the returned work items

Example request:

```
PUT /storekeeper/api/works/1/close-returned HTTP/1.1
Host: localhost:8000
Content-Type: application/json
```

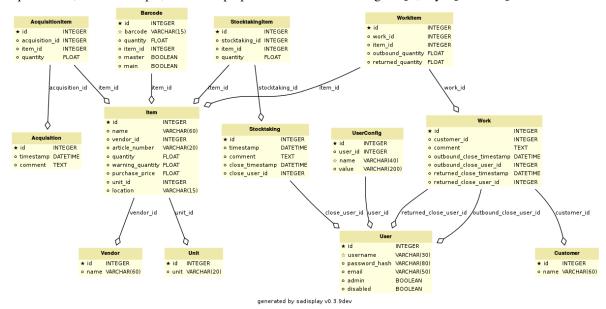
Example response:

```
HTTP/1.0 200 OK
Content-Type: application/json
  "comment": "First work",
  "customer": {
   "id": 1,
    "name": "Big Customer Ltd."
  "id": 1,
  "outbound_close_timestamp": "2016-02-29T04:31:57.999948+00:00",
  "outbound_close_user": {
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "foo"
  "returned_close_timestamp": "2016-02-29T04:31:57.999980+00:00",
  "returned_close_user": {
    "admin": false,
    "disabled": false,
    "email": "foo@bar.com",
    "id": 2,
    "username": "foo"
  }
}
```

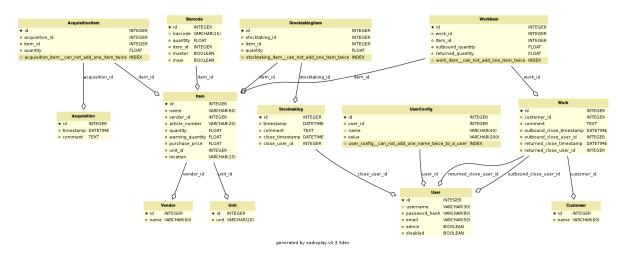
4.4.2 Details

SQL Model

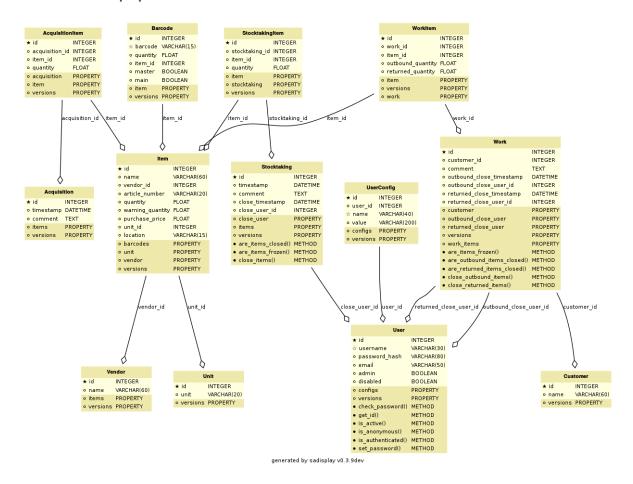
This software is SQL independent (thank you for SQL Alchemy), and we want to hold it in future. However, requirements, installer scripts, tests were prepared for and ran on PostgreSQL, MySQL and SQLite databases.



Model with indexes



Model with active properties and methods



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| | | | | | |

Indices and tables

• genindex

```
/storekeeper
                                        GET /storekeeper/api/works, 53
                                        GET /storekeeper/api/works/(int:id),
GET /storekeeper/api/acquisitions, 12
GET /storekeeper/api/acquisitions/(int:id)
                                        GET /storekeeper/api/works/(int:id)/items,
       13
GET /storekeeper/api/acquisitions/(int:id)/items,

15 GET /storekeeper/api/works/(int:id)/items/(int:it)
       15
GET /storekeeper/api/acquisitions/(int:id)/items/(int:item_id),
                                        POST /storekeeper/api/acquisitions, 13
       17
                                        POST /storekeeper/api/acquisitions/(int:id)/items
GET /storekeeper/api/barcodes, 19
GET /storekeeper/api/config, 20
                                        POST /storekeeper/api/customers, 21
GET /storekeeper/api/customers, 21
GET /storekeeper/api/customers/(int:id), POST /storekeeper/api/error, 23
                                        POST /storekeeper/api/items, 25
       22
                                        POST /storekeeper/api/items/(int:id)/barcodes,
GET /storekeeper/api/items, 24
GET /storekeeper/api/items/(int:id),
                                        POST /storekeeper/api/session, 33
GET /storekeeper/api/items/(int:id)/barcodes/storekeeper/api/stocktakings,34
                                        POST /storekeeper/api/stocktakings/(int:id)/items
GET /storekeeper/api/items/(int:item id)/barcodes/(int:id),
                                        POST /storekeeper/api/units, 43
GET /storekeeper/api/items/(int:item_id)/bar/codes/(int:idepi/items,45
                                             /storekeeper/api/users/(int:id)/config,
                                        POST
                                               48
GET /storekeeper/api/items/search, 26
                                        POST /storekeeper/api/vendors, 51
GET /storekeeper/api/session, 32
                                        POST /storekeeper/api/works, 54
GET /storekeeper/api/stocktakings, 34
GET /storekeeper/api/stocktakings/(int:id), /storekeeper/api/works/(int:id)/items,
GET /storekeeper/api/stocktakings/(int:id)/istorekeeper/api/acquisitions/(int:id),
GET /storekeeper/api/stocktakings/(int.PUT /istorekeeper/api/iagquisitions/(int:id)/items/
                                        PUT /storekeeper/api/customers/(int:id),
GET /storekeeper/api/units,42
GET /storekeeper/api/units/(int:id),
                                        PUT /storekeeper/api/items/(int:id),
       43
                                               2.7
GET /storekeeper/api/users, 45
                                        PUT /storekeeper/api/items/(int:item_id)/barcodes
GET /storekeeper/api/users/(int:id),
                                               30
GET /storekeeper/api/users/(int:id)/config,/storekeeper/api/items/(int:item_id)/barcodes
                                               32
GET /storekeeper/api/users/(int:id)/config/(storekeeper/api/stocktakings/(int:id), 49
                                        PUT /storekeeper/api/stocktakings/(int:id)/close,
GET /storekeeper/api/vendors, 50
GET /storekeeper/api/vendors/(int:id),
                                        PUT /storekeeper/api/stocktakings/(int:id)/items/
       51
```

```
PUT /storekeeper/api/units/(int:id),
PUT /storekeeper/api/users/(int:id),
PUT /storekeeper/api/users/(int:id)/config/(string:name),
PUT /storekeeper/api/vendors/(int:id),
PUT /storekeeper/api/works/(int:id),
PUT /storekeeper/api/works/(int:id)/close-outbound,
PUT /storekeeper/api/works/(int:id)/close-returned,
PUT /storekeeper/api/works/(int:id)/items/(int:item_id),
DELETE /storekeeper/api/acquisitions/(int:id),
      14
DELETE /storekeeper/api/acquisitions/(int:id)/items/(int:item_id),
      19
DELETE /storekeeper/api/customers/(int:id),
DELETE /storekeeper/api/items/(int:id),
DELETE /storekeeper/api/items/(int:item_id)/barcodes/(int:id),
      31
DELETE /storekeeper/api/session, 33
DELETE /storekeeper/api/stocktakings/(int:id),
      36
DELETE /storekeeper/api/stocktakings/(int:id)/items/(int:item_id),
DELETE /storekeeper/api/units/(int:id),
      44
DELETE /storekeeper/api/users/(int:id),
DELETE /storekeeper/api/users/(int:id)/config/(string:name),
DELETE /storekeeper/api/vendors/(int:id),
DELETE /storekeeper/api/works/(int:id),
DELETE /storekeeper/api/works/(int:id)/items/(int:item_id),
```

70 HTTP Routing Table

A admin, 10 api, 12 C client, 10 D dependencies, 9 F Flask-Admin, 10 P package.sh, 9 R RCP API, 12 S server, 10 sql, 64