Snippy Documentation

Release 0.8.0

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Contents:

1 Introduction **1**

2 Installation **3**

3 Features **5**
- 3.1 Terminal . . . 5
- 3.2 Server . . . 5

4 Usage **7**
- 4.1 Terminal . . . 7
- 4.2 Server . . . 7

5 Workflows **9**
- 5.1 Getting help . . . 9
- 5.2 Creating content . . . 9
- 5.3 Searching content . . . 10
- 5.4 Updating content . . . 10
- 5.5 Deleting content . . . 11
- 5.6 Migrating content . . . 11

6 Api **13**

7 Development **17**
- 7.1 Quick Start . . . 17
- 7.2 Python Virtual Environment . . . 17
- 7.3 Pylint . . . 18
- 7.4 Releasing . . . 18
- 7.5 Modules . . . 21

8 License **27**

HTTP Routing Table **39**

CHAPTER 1

Introduction

Manage command snippets and solution examples from command line or through a RESTish API that follows subset of JSON API specification v1.0.

The Snippy tool is intended to support software development and troubleshooting workflows by collecting command examples and troubleshooting solutions into one manager. The tool may be helpful for example when working with different open source components that all have different configuration settings and troubleshooting methods. You can share the best examples through REST API server or by exporting and importing the data with common data serialization languages YAML or JSON.

CHAPTER 2

Installation

To install, run:

```
pip install snippy --user
```

To remove, run:

```
pip uninstall --yes snippy
```

To install from Docker Hub, run:

```
docker pull heilaaks/snippy
```

To install from Github, run:

```
git clone https://github.com/heilaaks/snippy.git
cd snippy
make install
```

To try for the very first time, run:

CHAPTER 3

Features

3.1 Terminal

Content managed by Snippy is divided into two categories called snippets and solutions. Snippets are short command examples and solutions are longer solution descriptions. You can add metadata like links and tags to help to search content.

You can operate snippet or solution content with six basic operations: create, search, update, delete, import and export. These operations manage the content in persistent file storage installed into the same place as the tool.

3.2 Server

You can run the Snippy as a server. The server can create, search, update and delete snippets and solutions. The server operates through RESTish API that follows a subset of JSON API v1.0 specification.

The server starts by default in localhost port 8080. You can change the IP address and port from the command line. You can also define the log format between string and JSON and verbosity level of logs.

The API is experimental and changes can be expected. The API is documented in Swagger Hub OpenAPI definitions.

The JSON REST API server is available only when the tool is installed from Docker Hub or directly from the source code.

```
# Start server by sharing host network and enable JSON logs with limited
# message length. Always remove previosly started container before running
# container with new options set.
docker rm -f snippy
sudo docker run -d --net="host" --name snippy heilaaks/snippy --server --log-json -vv
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?limit=2" -H "accept:␣
↪application/vnd.api+json" | python -m json.tool
curl -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&limit=2" -H
↪"accept: application/vnd.api+json" | python -m json.tool
```

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```
# Start the server and define the port and IP address when the network is
# shared between the container and host. Generate full length logs with
# the --debug option.
docker rm -f snippy
sudo docker run -d --net="host" --name snippy heilaaks/snippy --server --port 8080 --
↪ip 127.0.0.1 --log-json --debug
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&limit=2"␣
↪-H "accept: application/vnd.api+json" | python -m json.tool

# Run the server with string logs.
docker rm -f snippy
sudo docker run -d --net="host" --name snippy heilaaks/snippy --server --port 8080 --
↪ip 127.0.0.1 -vv
```

You can query the server logs with the Docker log command.

```
docker logs snippy
```

You can remove the server with the rm command.

```
docker rm -f snippy
```

Note that Docker container is immutable and it does not share volume from the host. If you want to run a server that allows content modification, you must install the server from code repository.

```
git clone https://github.com/heilaaks/snippy.git
cd snippy
make server
```

With a local server, you can change to location of the storage from the default. If the default content is needed, you need to import it into the new location before starting the server.

```
snippy import --defaults --storage-path ${HOME}/devel/temp
snippy import --defaults --solution --storage-path ${HOME}/devel/temp
snippy --server --storage-path ${HOME}/devel/temp --port 8080 --ip 127.0.0.1 -vv
```

CHAPTER 4

Usage

4.1 Terminal

Snippy command line commands always must include content operation and category. Content operation is one of the six basic operations and the category can be snippet or solution. The content category is snippet by default. Metadata attached to the content allows adding brief description of the content, single group to which the content belongs, list of tags to assist search operations and a list of links for more information about the content.

Snippy tool outputs always OK after successful operation and NOK with a failure string in case of failure. You can use debug option with the command to investigate possible problems. For more detailed troubleshooting instructions, please refer to the development section.

The workflow chapter contains use cases and examples.

Note: The tool is used by the author in Linux environment. There is an edit functionality with editor that always assumes vi editor. This limitation can be circumvented by using text based templates to import content or command line options in case of snippets.

Note: The default content is provided "as is" basis without warranties of any kind.

4.2 Server

Snippy can be run as a server. In this case you must access the content through a REST API with same principles as from command line.

CHAPTER 5

Workflows

5.1 Getting help

Use help option with keyword examples to read about basic usage. Read the documentation from Read the Docs or dive into the code in Github.

```
snippy --help
snippy --help examples
```

5.2 Creating content

5.2.1 Creating snippet with vi editor

Following command uses vi editor to create new content. The command opens an input template where you can define the mandatory snippet and optional brief description, group, tags and links related to the snippet.

```
snippy create --snippets --editor
```

5.2.2 Creating snippet from text template

Following commands allows using a text template to import new snippet.

```
snippy export --snippets --template
snippy import --snippets -f snippet-template.txt
```

5.2.3 Creating snippet from command line

You can add new snippet directly from command line. How ever, easiest way to create new content is to use editor.

```
snippy create --content 'docker rm $(docker ps -a -q)' --brief 'Remove all docker␣
↪containers' --tags docker,image,cleanup
snippy create --content 'docker rm --volumes $(docker ps --all --quiet)' --brief
↪'Remove all docker containers with volumes' --group docker --tags docker-ce,docker,
↪moby,container,cleanup --links 'https://docs.docker.com/engine/reference/
↪commandline/rm/'
```

5.2.4 Creating solution from text template

```
snippy export --solutions --template
snippy import --snippets -f solution-template.txt
```

5.3 Searching content

5.3.1 Printing all examples on terminal

It is possible to list all snippets on screen by using dot as a search keyword.

```
snippy search --sall .
OK
```

5.3.2 Filtering with grep

With Linux grep it is possible to filter for example only the actual commands from the search query.

```
snippy search --sall . --no-ansi | grep '\$'
snippy search --sgrp docker --no-ansi | grep '\$'
```

Filtering out solution content to list only the metadata.

```
snippy search --solution --sall . | grep -Ev '[^\s]+:'
```

5.4 Updating content

5.4.1 Updating snippet with vi editor

Following command allows updating existing snippet with vi editor. The command will launch a vi editor which allows you to modify the content. The content is updated automatically after the file is saved and editor is exit.

```
snippy update --digest 54e41e9b52a02b63
```

5.4.2 Updating solution from text template

Following commands allow updating existing solution by exporting the content to text file and importing it again.

```
snippy export --digest 76a1a02951f6bcb4
snippy import --digest 76a1a02951f6bcb4 --file howto-debug-elastic-beats.txt
```

5.4.3 Updating duplicated content with message digest

There is an unique constraint defined for the content. This means that two examples with the same content cannot be stored. There are two supported work flows.

The tool will prompt failure log with a message digest for content that is already existing. User can change the create operation to update and define the message digest. This will launch a vi editor that contain the values that were previously stored. User may change the values in editor and save the content which will get then updated.

```
snippy create --content 'docker rm $(docker ps -a -q)' --brief 'Remove all docker␣
↪containers' --tags docker,image,cleanup
NOK: content already exist with digest f6062e09e2c11b47
snippy update --digest f6062e09e2c11b47
OK
```

5.4.4 Updating duplicated content by defining content

The tool will prompt failure log with a message digest for content that is already existing. User can change the create operation to uddate and use the same command. This will launch a vi editor with the content defined in command line. If some of the values are not defined in command line, they are shown as previously stored. User may change the values in editor and save the content which will get then updated.

```
snippy create --content 'docker rm $(docker ps -a -q)' --brief 'Remove all docker␣
↪containers' --tags docker,image,cleanup
NOK: content already exist with digest 5feded9ec5945d6a
snippy update --content 'docker rm $(docker ps -a -q)' --brief 'Remove all docker␣
↪containers' --tags docker,image,cleanup
OK
```

5.5 Deleting content

Delete snippet with index.

```
snippy delete --digest 96471dce19fe9c90
```

5.6 Migrating content

5.6.1 Exporting content

Following commands allow exporting all snippets and solutions to YAML file that you use to back-up your data. The commands below will create snippets.yaml and solutions.yaml files into same directory where the command was executed. You can define the file name and path with the -fl–file option.

```
snippy export --snippets
snippy export --snippets -f my-snippets.yaml
snippy export --solutions
snippy export --solutions -f my-solutions.yaml
```

5.6.2 Importing content

Following commands allow importing snippets and solutions from default YAML files named snippets.yaml and solutions.yaml that must be located in the same directory where the command is executed. You can define the file name and path with the -fl–file option.

```
snippy import --snippets
snippy import --solutions
```

CHAPTER 6

Api

POST /snippets
Add new snippets

Status Codes

- 201 Created – Snippet created
- 400 Bad Request – Request not syntactically correct
- 403 Forbidden – Using client generated ID is not supported
- 500 Internal Server Error – Internal server error

GET /snippets
Search snippets

Query Parameters

- **sall** (*array*) – Search keywords from all fields.
- **stag** (*array*) – Search keywords only from tag field.
- **sgrp** (*array*) – Search keywords only from group field.
- **digest** (*string*) – Search only based on message digest field.
- **data** (*string*) – Search only from content data.
- **filter** (*string*) – Filter search result with provided regexp.
- **limit** (*string*) – Limit query result list.
- **offset** (*string*) – Offset from the beginning of search results.
- **sort** (*string*) – Sort based on defined field.
- **fields** (*array*) – Limit fields that are returned in result list.

Status Codes

- 200 OK – OK

- 400 Bad Request – Request not syntactically correct
- 404 Not Found – Snippet not found
- 500 Internal Server Error – Internal server error

POST /snippets/{digest}
Override POST with PUT, PATCH or DELETE

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.

Status Codes

- 200 OK – Snippet updated
- 204 No Content – Snippet deleted
- 400 Bad Request – Request not syntactically correct
- 404 Not Found – Snippet not found
- 403 Forbidden – Using client generated ID is not supported
- 500 Internal Server Error – Internal server error

Request Headers

- *X-HTTP-Method-Override* – Override POST method.

PUT /snippets/{digest}
Update defined snippet based on digest

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.

Status Codes

- 200 OK – Snippet updated
- 400 Bad Request – Request not syntactically correct
- 403 Forbidden – Using client generated ID is not supported
- 404 Not Found – Snippet not found
- 500 Internal Server Error – Internal server error

PATCH /snippets/{digest}
Update defined snippet based on digest

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.

Status Codes

- 200 OK – Snippet updated
- 400 Bad Request – Request not syntactically correct
- 403 Forbidden – Using client generated ID is not supported
- 404 Not Found – Snippet not found
- 500 Internal Server Error – Internal server error

GET /snippets/{digest}
Search defined snippet based on digest

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.

Status Codes

- 200 OK – OK
- 400 Bad Request – Request not syntactically correct
- 404 Not Found – Snippet not found
- 500 Internal Server Error – Internal server error

DELETE /snippets/{digest}
Delete defined snippet based on digest

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.

Status Codes

- 204 No Content – Snippet deleted
- 400 Bad Request – Request not syntactically correct
- 404 Not Found – Snippet not found
- 409 Conflict – More than one snippet found
- 500 Internal Server Error – Internal server error

GET /snippets/{digest}/{field}
Search defined snippet based on digest

Parameters

- **digest** (*string*) – Unique snippet identified by message digest.
- **field** (*string*) – One of the resource field attributes.

Status Codes

- 200 OK – OK
- 400 Bad Request – Request not syntactically correct
- 404 Not Found – Snippet not found
- 500 Internal Server Error – Internal server error

CHAPTER 7

Development

7.1 Quick Start

For the development, you can clone the repository and run the setup for Python virtual environment like below:

```
git clone https://github.com/heilaaks/snippy.git
mkvirtualenv snippy
make dev
```

The basic commands to run and test are:

```
python3 runner create -c 'docker rm $(docker ps -a -q)' -b 'Remove all docker␣
↪containers' -t docker,container,cleanup
make test
make lint
make coverage
make docs
make clean
```

7.2 Python Virtual Environment

You can install the Python virtual environment wrapper like below:

```
mkdir -p ${HOME}/devel/python-virtualenvs
sudo pip3 install virtualenvwrapper
virtualenv --version
export WORKON_HOME=${HOME}/devel/python-virtualenvs # Add to ~/.bashrc
export VIRTUALENVWRAPPER_PYTHON=/usr/bin/python3    # Add to ~/.bashrc
source /usr/bin/virtualenvwrapper.sh                # Add to ~/.bashrc
mkvirtualenv snippy
```

Example commands to operate the virtual environment are below. More information can be found from the Python virtualenvwrapper command reference documentation.

```
lssitepackages
lsvirtualenv
deactivate
workon snippy
rmvirtualenv snippy
```

7.3 Pylint

The Pylint rc file can be generated for the very first time like:

```
pylint --generate-rcfile > tests/pylint/pylint-snippy.rc
```

7.4 Releasing

1. Preparations

   1. Update version number in meta.py. 1. Update the CHANGELOG.rst. 1. Updated README.rst and documentation.

2. Run tests

   ```
   make test
   make lint
   make docs
   tox
   python setup.py check --restructuredtext
   ```

3. Test installation

   ```
   make clean
   make clean-db
   pip uninstall snippy
   pip install . --user
   snippy --help
   snippy import --defaults
   snippy import --defaults --solutions
   snippy import --defaults --references
   snippy search --sall docker
   rm -f ${HOME}/devel/temp/snippy.db
   snippy import --defaults --storage-path ${HOME}/devel/temp
   snippy import --defaults --solutions --storage-path ${HOME}/devel/temp
   snippy import --defaults --references --storage-path ${HOME}/devel/temp
   snippy --server --storage-path ${HOME}/devel/temp --port 8080 --ip 127.0.0.1 &
   curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&
   ↪limit=2" -H "accept: application/vnd.api+json" | python -m json.tool
   pkill snippy
   ```

4. Test with PyPI

```
# Install the tool into test PyPI.
make clean
make clean-db
python setup.py sdist bdist_wheel upload -r testpypi # repository: https://test.
↪pypi.org/legacy/ in ~/.pypirc
sudo pip uninstall snippy -y
pip uninstall snippy -y

# Set path to local user bin and install the tool from test PyPI.
PATH=$HOME/.local/bin:$PATH
pip install --user --index-url https://test.pypi.org/simple/ snippy
snippy --help
snippy import --defaults
snippy import --defaults --solutions
snippy search --sall docker

# Run all example commands from top down from:
snippy --help
snippy --help examples

# Uninstall
pip uninstall snippy -y
```

5. Test with Docker

```
su
make docker
docker rm $(docker ps --all -q -f status=exited)
docker images -q --filter dangling=true | xargs docker rmi
docker images
docker rmi heilaaks/snippy:v0.7.0
docker rmi docker.io/heilaaks/snippy:latest
docker rmi docker.io/heilaaks/snippy:v0.7.0
docker run heilaaks/snippy --help
docker run heilaaks/snippy search --sall docker
docker run -d --net="host" --name snippy heilaaks/snippy --server --port 8080 --
↪ip 127.0.0.1 -vv
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&
↪limit=2" -H "accept: application/vnd.api+json"
docker logs 632e97aa83fe
docker stop 632e97aa83fe
docker rm $(docker ps --all -q -f status=exited)
docker run -d --net="host" --name snippy heilaaks/snippy --server --log-json -vv &
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&
↪limit=2" -H "accept: application/vnd.api+json"
docker logs f72b3902dd4b
```

6. Test with PyPy

```
# Default test box install PyPy 2.7 from dnf.
sudo dnf install pypy
export PYTHONPATH=/usr/lib64/python2.7/site-packages/
wget https://bootstrap.pypa.io/get-pip.py
sudo pypy get-pip.py
sudo pypy -m pip install codecov
sudo pypy -m pip install logging_tree
sudo pypy -m pip install mock
```

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```
sudo pypy -m pip install pytest
sudo pypy -m pip install pytest-cov
sudo pypy -m pip install pytest-mock
sudo pypy -m pip install falcon
sudo pypy -m pip install gunicorn
sudo pypy -m pip install jsonschema
pypy runner --help
pypy runner --server -vv
pypy -m pytest -x ./tests/test_*.py --cov snipp
unset PYTHONPATH
```

7. Verify data in CHANGELOG.rst
   (a) Update the CHANGELOG.rst release date if needed.
8. Make tag

```
git tag -a v0.8.0 -m "Add new content category resources"
git push -u origin v0.8.0
```

9. Releas in PyPI

```
python setup.py sdist bdist_wheel
twine upload dist/*
```

10. Test PyPI release

```
sudo pip uninstall snippy -y
pip install snippy --user
snippy --help
snippy import --defaults
snippy import --defaults --solutions
snippy search --sall docker
```

11. Release in Docker Hub

```
su
docker login docker.io
docker images
sudo docker tag 5dc22d1d3380 docker.io/heilaaks/snippy:v0.7.0
sudo docker tag 5dc22d1d3380 docker.io/heilaaks/snippy:latest
sudo docker push docker.io/heilaaks/snippy:v0.7.0
sudo docker push docker.io/heilaaks/snippy:latest
```

12. Test Docker release

```
su
docker rm $(docker ps --all -q -f status=exited)
docker images -q --filter dangling=true | xargs docker rmi
docker images
docker rmi heilaaks/snippy:v0.7.0
docker rmi heilaaks/snippy:latest
docker rmi docker.io/heilaaks/snippy:latest
docker rmi docker.io/heilaaks/snippy:v0.7.0
docker run snippy --help
docker run snippy search --sall docker
docker run -d --net="host" --name snippy heilaaks/snippy --server --port 8080 --
↪ip 127.0.0.1 -vv
```

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```
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&
↪limit=2" -H "accept: application/vnd.api+json" | python -m json.tool
docker run -d --net="host" --name snippy heilaaks/snippy --server --log-json -vv
curl -s -X GET "http://127.0.0.1:8080/snippy/api/app/v1/snippets?sall=docker&
↪limit=2" -H "accept: application/vnd.api+json" | python -m json.tool
```

13. Release news

    (a) Make new release in Github.

7.5 Modules

7.5.1 snippy.logger

Service

Logger class offers logger for each caller based on the given module name. The configuration is controlled by global settings that are inherited by every logger.

The effective log level for all the loggers created under the 'snippy' logger namespace is inherited from the root logger which controls the log level. This relies on that the module level logger does not set the level and it remains as NOTSET. This causes module level logger to propagate the log record to parent where it eventually reaches the 'snippy' top level namespace that is just below the 'root' logger.

Behaviour

By default, there are no logs printed to the users. This applies also to error logs.

There are two levels of logging verbosity. All logs are printed in full length without filters with the –debug option. The -vv (very verbose) option prints limited length log messages in lower case letters.

There are two formats for logs: text (default) and JSON. JSON logs can be enabled with –log-json option. A JSON log has more information fields than text formatted log. When -vv option is used with JSON logs, it truncates log message in the same way as with text logs.

Timestamps are in local time with text formatted logs. In case of JSON logs, the timestamp is in GMT time zone and it follows strictly the ISO8601 format. Both timestamps are in millisecond granularity.

The log levels are are from Python logger but they follow severity level names from RFC 5424. There is a custom security level reserved only for security events.

All logs include operation ID that uniquely identifies all logs within specific operation. The operation ID must be refreshed by logger user after each operation is completed or the method must be wrapped with @Logger.timeit decorator which takes care of the OID refreshing.

All logs including Gunicorn server logs, are formatted to match format defined in this logger.

All logs are printed to stdout.

Security

There is a custom security level above critical level. This log level must be used only when there is a suspected security related event.

There is a hard maximum for log messages length for safety and security reasons. This tries to prevent extremely long log messages which may cause problems for the server.

Rules

1. Only OK or NOK with cause text must be printed with default settings.

2. There must be no logs printed to user.
3. There must be no exceptions printed to user.
4. Exceptions logs are printed as INFO and all other logs as DEBUG.
5. Variables printed in logs must be separated with colon.
6. All other than error logs must be printed as lower case string.
7. The –debug option must print logs without filters in full-length.
8. The -vv option must print logs in lower case and one log per line.
9. All external libraries must follow the same log format.
10. All logs must be printed to stdout.

Examples

```
# Variable printed at the end of log message is separated with colon.
2018-06-03 19:20:54.838 snippy[5756] [d] [b339bab5]: configured option␣
↪server: true

# Variable printed in the middle of log message is separated colons and
# space from both sides. The purpose is to provide possibility to allow
# log message post processing and to parse variables from log messages.
2018-06-03 19:20:54.838 snippy[5756] [d] [b339bab5]: server ip: 127.0.0.1␣
↪:and port: 8080
```

class snippy.logger.**Logger**

Global logging services.

classmethod get_logger(*name='snippy.logger'*)

Get logger.

A custom logger adapater is returned to support custom level with additional logging parameters.

Parameters **name** (*str*) – Name of the module that requests a Logger.

classmethod configure(*config*)

Set and update logger configuration.

Parameters **config** (*dict*) – Logger configuration dictionary.

Examples

```
>>> Logger.configure({'debug': True,
>>>                   'log_json': True,
>>>                   'log_msg_max': Logger.DEFAULT_LOG_MSG_MAX,
>>>                   'quiet': False,
>>>                   'very_verbose': False})
```

static reset()

Reset log level to default.

static remove()

Delete all logger handlers.

classmethod refresh_oid()

Refresh operation ID (OID).

The OID is used to separate logs within one operation. The helps post-processing of the logs by allowing for example querying all the logs in failing operation.

classmethod print_status(*status*)
Print status information like exit cause or server running.

Parameters **status** (*str*) – Status to be printed on stdout.

static timeit(*method=None*, *refresh_oid=False*)
Time method by measuring it latency.

The operation ID (OID) is refreshed at the end.

Parameters

- **method** (*str*) – Name of the method calling the timeit.
- **refresh_oid** (*bool*) – Define if operation ID is refreshed or not.

static remove_ansi(*message*)
Remove all ANSI escape codes from given string.

Parameters **message** (*str*) – Log message which ANSI escape codes are removed.

static debug()
Debug Logger by printing logging hierarchy.

7.5.2 snippy.cause

Service

Cause class offers storage services for normal and error causes. The causes are stored in a list where user can get all the failues that happened for example during the operation.

All causes are operated with predefind constants for HTTP causes and short descriptions of the event.

class snippy.cause.**Cause**
Cause code services.

classmethod reset()
Reset cause to initial value.

classmethod push(*status*, *message*)
Append cause to list.

Parameters

- **status** (*str*) – One of the predefined HTTP status codes.
- **message** (*str*) – Description of the cause.

Examples

```
>>> Cause.push(Cause.HTTP_CREATED, 'content created')
```

classmethod is_ok()
Test if errors were detected.

classmethod http_status()
Return the HTTP status.

classmethod json_message()
Return errors in JSON data structure.

classmethod get_message()
Return cause message.

classmethod print_message()
Print cause message.

classmethod print_failure()
Print only failure message.

classmethod debug()
Debug Cause.

7.5.3 snippy.storage.storage

Service

Storage class offers database agnosting storage services. This abstracts the actual database solution from rest of the implementation.

class snippy.storage.storage.**Storage**
Storage management for content.

create(*collection*)
Create new content.

Parameters **collection** (*Collection*) – Content container to be stored into database.

search(*category*, *sall=None*, *stag=None*, *sgrp=None*, *digest=None*, *data=None*)
Search content.

Parameters

- **category** (*str*) – Content category.
- **sall** (*tuple*) – Search all keyword list.
- **stag** (*tuple*) – Search tag keyword list.
- **sgrp** (*tuple*) – Search group keyword list.
- **digest** (*str*) – Search specific digest or part of it.
- **data** (*str*) – Search specific content data or part of it.

update(*digest*, *resource*)
Update resource specified by digest.

Parameters

- **digest** (*str*) – Content digest that is udpated.
- **resource** (*Resource*) – A single Resource() container that contains updates.

delete(*digest*)
Delete content.

Parameters **digest** (*str*) – Content digest that is deleted.

export_content(*category*)
Export content.

Parameters **category** (*str*) – Content category.

import_content (*collection*)
Import content.

Parameters **collection** (*Collection*) – Content container to be imported into database.

disconnect ()
Disconnect storage.

debug ()
Debug storage.

7.5.4 snippy.storage.sqlitedb

Service

SqliteDb class offers database implementation for the Storage class.

class snippy.storage.sqlitedb.**SqliteDb**
Sqlite database management.

init ()
Initialize database.

disconnect ()
Close database connection.

insert (*collection*)
Insert collection into database.

Parameters **collection** (*Collection*) – Content container to be stored into database.

Returns Collection of inserted content.

Return type Collection

select (*category*, *sall=()*, *stag=()*, *sgrp=()*, *digest=None*, *data=None*)
Select content based on search criteria.

Parameters

- **category** (*str*) – Content category.
- **sall** (*tuple*) – Search all keyword list.
- **stag** (*tuple*) – Search tag keyword list.
- **sgrp** (*tuple*) – Search group keyword list.
- **digest** (*str*) – Search specific digest or part of it.
- **data** (*str*) – Search specific content data or part of it.

Returns Collection of selected content.

Return type Collection

select_all (*category*)
Select all content from specific category.

Parameters **category** (*str*) – Content category.

Returns Collection of all content in database.

Return type Collection

update(*digest*, *resource*)
Update existing content.

Parameters

- **digest** (*str*) – Content digest that is udpated.
- **resource** (*Resource*) – Stored content in `Resource()` container.

Returns Collection of updated content.

Return type Collection

delete(*digest*)
Delete content based on given digest.

Parameters **digest** (*str*) – Content digest that is deleted.

debug()
Debug Sqlitedb.

CHAPTER 8

License

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    alternative is allowed only occasionally and noncommercially, and
    only if you received the object code with such an offer, in accord
    with subsection 6b.
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HTTP Routing Table

/snippets

GET /snippets, 13
GET /snippets/{digest}, 14
GET /snippets/{digest}/{field}, 15
POST /snippets, 13
POST /snippets/{digest}, 14
PUT /snippets/{digest}, 14
DELETE /snippets/{digest}, 15
PATCH /snippets/{digest}, 14

Index

C

Cause (class in snippy.cause), 23
configure() (snippy.logger.Logger class method), 22
create() (snippy.storage.storage.Storage method), 24

D

debug() (snippy.cause.Cause class method), 24
debug() (snippy.logger.Logger static method), 23
debug() (snippy.storage.sqlitedb.SqliteDb method), 26
debug() (snippy.storage.storage.Storage method), 25
delete() (snippy.storage.sqlitedb.SqliteDb method), 26
delete() (snippy.storage.storage.Storage method), 24
disconnect() (snippy.storage.sqlitedb.SqliteDb method), 25
disconnect() (snippy.storage.storage.Storage method), 25

E

export_content() (snippy.storage.storage.Storage method), 24

G

get_logger() (snippy.logger.Logger class method), 22
get_message() (snippy.cause.Cause class method), 24

H

http_status() (snippy.cause.Cause class method), 23

I

import_content() (snippy.storage.storage.Storage method), 24
init() (snippy.storage.sqlitedb.SqliteDb method), 25
insert() (snippy.storage.sqlitedb.SqliteDb method), 25
is_ok() (snippy.cause.Cause class method), 23

J

json_message() (snippy.cause.Cause class method), 23

L

Logger (class in snippy.logger), 22

P

print_failure() (snippy.cause.Cause class method), 24
print_message() (snippy.cause.Cause class method), 24
print_status() (snippy.logger.Logger class method), 23
push() (snippy.cause.Cause class method), 23

R

refresh_oid() (snippy.logger.Logger class method), 22
remove() (snippy.logger.Logger static method), 22
remove_ansi() (snippy.logger.Logger static method), 23
reset() (snippy.cause.Cause class method), 23
reset() (snippy.logger.Logger static method), 22

S

search() (snippy.storage.storage.Storage method), 24
select() (snippy.storage.sqlitedb.SqliteDb method), 25
select_all() (snippy.storage.sqlitedb.SqliteDb method), 25
SqliteDb (class in snippy.storage.sqlitedb), 25
Storage (class in snippy.storage.storage), 24

T

timeit() (snippy.logger.Logger static method), 23

U

update() (snippy.storage.sqlitedb.SqliteDb method), 25
update() (snippy.storage.storage.Storage method), 24