Capitains.Nautilus Documentation

Release 0.0.1

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Contents

CHAPTER 1

Capitains Nautilus

1.1 Documentation

CapiTainS Nautilus provides a Flask extension to build upon MyCapytain resolver. The finale goal of the application, built upon MyCapytain, is to serve either as a Web-API provider (Currently supporting CTS, partly DTS. OAI-PMH and a Sparql endpoint are scheduled.) These API can be used to access portion of or complete texts using standards. Metadata are exposed as well.

A second goal of Nautilus is to serve as a cache wrapper for resolver, in order to speed up serving texts for user interfaces such as Nemo .

A known implementation can be found at the University of Leipzig . You can find the set-up files on Github

1.2 Trying Nautilus with a test dataset example

With Python 3 only !

```
git clone https://github.com/Capitains/Nautilus.git
virtualenv -p /usr/bin/python3 venv
source venv/bin/activate
python app.py
```

Now go to http://localhost:5000 and check out http://localhost:5000/api/cts , http://localhost:5000/api/dts/collections, http://localhost:5000/api/cts?request=GetValidReff

1.3 Running Nautilus from the command line

This small tutorial takes that you have one or more Capitains formated repositories (such as http://github.com/PerseusDL/canonical-latinLit) in the folders /home/USERNAME/repository1 where USERNAME is your user session name.

1. (Advised) Create a virtual environment and source it : `virtualenv -p /usr/bin/python3 env`, `source env/bin/activate`
2. **With development version:**
    - Clone the repository : `git clone https://github.com/Capitains/Nautilus.git`
    - Go to the directory : `cd Nautilus`
    - Install the source with develop option : `python setup.py develop`
2. **With production version (not available for now):**
    - Install from pip : `pip install capitains-nautilus`
3. You will be able now to call capitains nautilus help information through `capitains-nautilus --help`
4. Basic setting for testing a directory is `capitains-nautilus --debug /home/USERNAME/repository1`. This can take more than one repository at the end such as `capitains-nautilus --debug /home/USERNAME/repository1 /home/USERNAME/repository2`. You can force host and port through –host and –port parameters.

1.4 Source for the tests

Textual resources and inventories are owned by Perseus under CC-BY Licences. See https://github.com/PerseusDL/canonical-latinLit and https://github.com/PerseusDL/canonical-farsiLit

1.5 Contents

1.5.1 CapiTainS Nautilus API Documentation

Resolvers

Resolver provides a system to retrieve a text file and an inventory from local resources for example.

CapiTainS formatted repository

class capitains_nautilus.cts.resolver.**NautilusCTSResolver**(*resource*, *name=None*, *logger=None*, *cache=None*, *dispatcher=None*)

XML Folder Based resolver.

Parameters

- **resource** (*[str]*) – Resource should be a list of folders retaining data as Capitains Guidelines Repositories
- **name** – Key used to make cache key

- **cache** (*BaseCache*) – Cache object to be used for the inventory
- **logger** (*logging.logger*) – Logging object

Variables

- **inventory_cache_key** – Werkzeug Cache key to get or set cache for the TextInventory
- **texts_cache_key** – Werkzeug Cache key to get or set cache for lists of metadata texts objects
- **texts_parsed** – Werkzeug Cache key to get or set cache for lists of parsed texts objects
- **texts** – List of Text Metadata objects
- **source** – Original resource parameter

> **Warning:** This resolver does not support inventories

Errors

exception capitains_nautilus.errors.**CTSError**
Bases: *capitains_nautilus.errors.NautilusError*

CODE = None

exception capitains_nautilus.errors.**InvalidContext**
Bases: *capitains_nautilus.errors.CTSError*

Invalid value for context parameter in GetPassage or GetPassagePlus request

CODE = 5

exception capitains_nautilus.errors.**InvalidLevel**
Bases: *capitains_nautilus.errors.CTSError*

Invalid value for level parameter in GetValidReff request

CODE = 4

exception capitains_nautilus.errors.**InvalidURN**
Bases: *capitains_nautilus.errors.CTSError*, MyCapytain.errors.InvalidURN

Syntactically valid URN refers in invalid value

CODE = 3

exception capitains_nautilus.errors.**InvalidURNSyntax**
Bases: *capitains_nautilus.errors.CTSError*

Invalid URN syntax

CODE = 2

exception capitains_nautilus.errors.**MissingParameter**
Bases: *capitains_nautilus.errors.CTSError*

Request missing one or more required parameters

CODE = 1

exception capitains_nautilus.errors.**NautilusError**
Bases: BaseException

An error has occurence

CODE = None

exception capitains_nautilus.errors.**UndispatchedTextError**
Bases: *capitains_nautilus.errors.CTSError*, MyCapytain.errors.UndispatchedTextError

A Text has not been dispatched

CODE = 7

exception capitains_nautilus.errors.**UnknownCollection**
Bases: MyCapytain.errors.UnknownCollection, *capitains_nautilus.errors.CTSError*

Resource requested is not found

CODE = 6

Flask Extension

class capitains_nautilus.flask_ext.**FlaskNautilus**(*prefix=''*, *app=None*, *name=None*, *resolver=None*, *flask_caching=None*, *access_Control_Allow_Origin=None*, *access_Control_Allow_Methods=None*, *logger=None*)
Bases: object

HTTP API Interfaces for MyCapytains resolvers

Parameters

- **prefix** – Prefix on which to install the extension
- **app** – Application on which to register
- **name** – Name to use for the blueprint
- **resolver** (*Resolver*) – Resolver
- **flask_caching** (*Cache*) – HTTP Cache should be a FlaskCaching Cache object
- **logger** (*logging.Logger*) – Logging handler.

Variables

- **access_Control_Allow_Methods** – Dictionary with route name and allowed methods over CORS
- **access_Control_Allow_Origin** – Dictionary with route name and allowed host over CORS or "*"
- ***ROUTES*** – List of triple length tuples
- ***Access_Control_Allow_Methods*** – Dictionary with route name and allowed methods over CORS
- ***Access_Control_Allow_Origin*** – Dictionary with route name and allowed host over CORS or "*"

- **LoggingHandler** – Logging handler to be set for the blueprint
- **logger** – Logging handler
- **resolver** – CapiTainS resolver

Access_Control_Allow_Methods = {'r_cts': 'OPTIONS, GET', 'r_dts_collection': 'OPTION

Access_Control_Allow_Origin = '*'

CACHED = ['_r_GetCapabilities', '_r_GetPassage', '_r_GetPassagePlus', '_r_GetValidReff

LoggingHandler
alias of logging.StreamHandler

ROUTES = [('/cts', 'r_cts', ['GET']), ('/dts/collections', 'r_dts_collection', ['GET',

cts_error(*error_name*, *message=None*)
Create a CTS Error reply

Parameters

- **error_name** – Name of the error
- **message** – Message of the Error

Returns CTS Error Response with information (XML)

dts_error(*error_name*, *message=None*)
Create a DTS Error reply

Parameters

- **error_name** – Name of the error
- **message** – Message of the Error

Returns DTS Error Response with information (JSON)

flaskcache

init_app(*app*)
Initiate the extension on the application

Parameters **app** – Flask Application

Returns Blueprint for Flask Nautilus registered in app

Return type Blueprint

init_blueprint()
Properly generates the blueprint, registering routes and filters and connecting the app and the blueprint

Returns Blueprint of the extension

Return type Blueprint

r_cts()
Actual main route of CTS APIs. Transfer typical requests through the ?request=REQUESTNAME route

Returns Response

r_dts_collection(*objectId=None*)
DTS Collection Metadata reply for given objectId

Parameters **objectId** – Collection Identifier

Returns JSON Format of DTS Collection

r_dts_collections(*objectId*)
DTS Collection Metadata reply for given objectId

Parameters **objectId** – Collection Identifier

Returns JSON Format of DTS Collection

setLogger(*logger*)
Set up the Logger for the application

Parameters **logger** – logging.Logger object

Returns Logger instance

view(*function_name*)
Builds response according to a function name

Parameters **function_name** – Route name / function name

Returns Function

Command-line Interface

capitains_nautilus.cmd.**cmd**()

Cache Manager

capitains_nautilus.manager.**FlaskNautilusManager**(*resolver*, *flask_nautilus*)
Provides a manager for flask scripts to perform specific maintenance operations

Parameters

- **resolver** (NautilusCTSResolver) – Nautilus Extension Instance
- **flask_nautilus** (FlaskNautilus) – Flask Application

Returns CLI

Return type click.group

Import with

capitains_nautilus.manager.**read_levels**(*text*)
Read text and get there reffs

Parameters **text** – Collection (Readable)

Returns

1.6 Indices and tables

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- modindex
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