
SKOS Suggester Documentation

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1.1 Get endpoint

Endpoint for retrieving SKOS concepts by their unique identifier.

GET /get

Get SKOS concepts by their URI

Example request:

```
GET /get?uri=http://id.worldcat.org/fast/869764 HTTP/1.1
Host: 127.0.0.1
Accept: application/json
```

Example request with multiple URIs:

```
GET /get?uri=http://id.worldcat.org/fast/1902995&uri=http://id.worldcat.org/fast/869764
Host: 127.0.0.1
Accept: application/json
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json
```

```
{
  "_links":
    {"self":
      {"href": "/search?uri=http://id.worldcat.org/fast/1902995&uri=http://id.worldcat.org/"}
    },
  "_embedded":
    {"concepts":
      [{"uri": "http://id.worldcat.org/fast/1902995",
        "prefLabel": "Depressions in motion pictures",
        "altLabels": [], "related": []},
       {"uri": "http://id.worldcat.org/fast/869764",
        "prefLabel": "Commodore 64 (Computer)",
        "altLabels": [],
        "related": [{"label": "Electronic digital computers", "uri": "http://id.worldcat.org/fas"}]}]}
}
```

Expect the same response if only one concept is requested (i.e. a list of one concept).

Query Parameters

- **uri** – unique identifier of a SKOS concept

Status Codes

- 200 OK – request done
- 400 Bad Request – Bad request (if you don't pass the parameter)
- 500 Internal Server Error – an exception occurred

1.2 Search endpoint

Endpoint for searching SKOS concepts

GET /search

Search for SKOS concepts by labels

Example request:

```
GET /search?q=http HTTP/1.1
Host: 127.0.0.1
Accept: application/json
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json
{"concepts": [
  {
    "uri": "http://id.worldcat.org/fast/950001",
    "prefLabel": "HTTP (Computer network protocol)",
    "altLabels": ["HyperText Transfer Protocol (Computer network protocol)"],
    "related": [
      {
        "label": "Computer network protocols",
        "uri": "http://id.worldcat.org/fast/872279"
      }
    ]
  },
  {
    "uri": "http://id.worldcat.org/fast/878049",
    "prefLabel": "Cookies (Computer science)",
    "altLabels": ["Persistent cookies (Computer science)", "HTTP cookies (Computer science)", "Magi"],
    "related": [
      {
        "label": "Data structures (Computer science)",
        "uri": "http://id.worldcat.org/fast/887978"
      }
    ]
  }
]
```

Query Parameters

- **q** – search query
- **count** – number of results
- **page** – page (pagination)

Status Codes

- 200 OK – request done
- 400 Bad Request – Bad request (if you don't pass the parameter)
- 404 Not Found – Not found
- 500 Internal Server Error – an exception occurred

1.3 Suggest endpoint

Endpoint for suggesting SKOS concepts

Mainly used for type-ahead

GET /suggest

Suggest SKOS concepts

Example request:

```
GET /suggest?q=secu HTTP/1.1
Host: 127.0.0.1
Accept: application/json
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json
```

```
{ "concepts": [
  { "uri": "http://id.worldcat.org/fast/872484", "prefLabel": "Computer security", "altLabels": [], "score": 1.0 },
  { "uri": "http://id.worldcat.org/fast/869774", "prefLabel": "Common Data Security Architecture (CDSA)", "altLabels": [], "score": 0.95 },
  { "uri": "http://id.worldcat.org/fast/1005142", "prefLabel": "Macintosh (Computer)--Security measures", "altLabels": [], "score": 0.9 },
  { "uri": "http://id.worldcat.org/fast/872590", "prefLabel": "Computer software--Security measures", "altLabels": [], "score": 0.85 },
  { "uri": "http://id.worldcat.org/fast/872437", "prefLabel": "Computer programs--Security measures", "altLabels": [], "score": 0.8 },
  { "uri": "http://id.worldcat.org/fast/872486", "prefLabel": "Computer security--Computer programs", "altLabels": [], "score": 0.75 },
  { "uri": "http://id.worldcat.org/fast/872485", "prefLabel": "Computer security--Auditing", "altLabels": [], "score": 0.7 },
  { "uri": "http://id.worldcat.org/fast/925719", "prefLabel": "Firewalls (Computer security)", "altLabels": [], "score": 0.65 },
  { "uri": "http://id.worldcat.org/fast/872487", "prefLabel": "Computer security--Costs", "altLabels": [], "score": 0.6 },
  { "uri": "http://id.worldcat.org/fast/872488", "prefLabel": "Computer security--Evaluation", "altLabels": [], "score": 0.55 }
]
```

Query Parameters

- **q** – search query
- **count** – number of results
- **page** – page (pagination)

Status Codes

- **200 OK** – request done
- **400 Bad Request** – Bad request (if you don't pass the parameter)
- **404 Not Found** – Not found
- **500 Internal Server Error** – an exception occurred

Importers

2.1 RDF file importer

Imports SKOS concepts from an RDF file. This is the recommended method if you have a small dataset as it is easier to use.

2.1.1 Importing the file into SKOS suggester

Run the following command, where *[path to file]* is the path of the RDF file, and *[configuration file]* is the Dropwizard configuration file.

```
java -jar target/skos-suggester-1.0-SNAPSHOT.jar skosimport -f [path to file] [configuration file]
```

2.2 Jena TDB importer

Imports SKOS concepts from a Jena TDB dataset. This is the recommended method if you have a fairly large dataset (e.g. FAST (Faceted Application of Subject Terminology) topics).

2.2.1 Requirements

You need to install [Jena](#) to use the *tdbloader* command-line tool.

2.2.2 Importing RDF files into Jena TDB

Run the following command, where *[path to store]* is the path of a directory, and *[path to RDF file]* is the RDF file to be imported.

```
tdbloader2 -loc [path to store] [path to RDF file]
```

See [TDB commands documentation](#) for more information.

2.2.3 Importing TDB into SKOS suggester

Run the following command, where *[path to store]* is the path of the TDB directory, and *[configuration file]* is the Dropwizard configuration file.

java -jar target/skos-suggester-1.0-SNAPSHOT.jar tdbimport -d [path to store] [configuration file]

3.1 Javadoc

3.1.1 uk.ac.ox.it.skossuggester

SkosSuggesterApplication

public class **SkosSuggesterApplication** extends Application<AppConfiguration>

Methods

initialize

public void **initialize** (Bootstrap<AppConfiguration> *bootstrap*)

main

public static void **main** (String[] *args*)

run

public void **run** (AppConfiguration *configuration*, Environment *environment*)

3.1.2 uk.ac.ox.it.skossuggester.cli

Skos

public class **Skos**

Utility methods used by importers RDF -> SolrDocument

Author martinfilliau

Fields

ALT_LABEL

public static final String **ALT_LABEL**

NS

public static final `String` **NS**

PREF_LABEL

public static final `String` **PREF_LABEL**

RELATED

public static final `String` **RELATED**

Methods

getDocument

protected static `SolrInputDocument` **getDocument** (`Resource res`)

Get a `SolrInputDocument` from a `Resource`

Parameters

- **res** – Resource to analyse

Returns `SolrInputDocument` to be ingested by Solr

SkosFileImporter

public class **SkosFileImporter** extends `ConfiguredCommand<AppConfiguration>`

Import SKOS concepts from an RDF file. Easier to use than `TdbImporter` as it does not need an intermediary Jena TDB store, but might reach memory limits

Author martinfilliau

Constructors

SkosFileImporter

public **SkosFileImporter** ()

Methods

configure

public void **configure** (`Subparser subparser`)

getDocsFromFile

protected `Collection<SolrInputDocument>` **getDocsFromFile** (`File file`, `String lang`)

Import a given RDF file to the search index

Parameters

- **file** – RDF file
- **lang** – RDF format (RDF/XML, N-TRIPLE, TURTLE or N3)

Throws

- [java.io.FileNotFoundException](#) –

Returns collection of `SolrInputDocument`

getDocsFromModel

protected `Collection<SolrInputDocument>` **getDocsFromModel** (Model *m*)

Import a Model

Parameters

- **m** – Jena Model

Returns collection of SolrInputDocument

run

protected void **run** (Bootstrap<AppConfiguration> *bootstrap*, Namespace *namespace*, AppConfiguration *configuration*)

TdbImporter

public class **TdbImporter** extends ConfiguredCommand<AppConfiguration>

Import SKOS concepts from a Jena TDB store More robust than SkosFileImporter for big data sets See <http://jena.apache.org/documentation/tdb/>

Author martinfilliau

Constructors**TdbImporter**

public **TdbImporter** ()

Methods**configure**

public void **configure** (Subparser *subparser*)

run

protected void **run** (Bootstrap<AppConfiguration> *btstpr*, Namespace *namespace*, AppConfiguration *configuration*)

3.1.3 uk.ac.ox.it.skossuggester.configuration

AppConfiguration

public class **AppConfiguration** extends Configuration

Methods**getSolrLocation**

public `String` **getSolrLocation** ()

setSolrLocation

public void **setSolrLocation** (`String` *solrLocation*)

3.1.4 uk.ac.ox.it.skossuggester.dao

SkosConceptsDao

public class **SkosConceptsDao**
Encapsulates all queries to Solr
Author martinfilliau

Constructors

SkosConceptsDao
public **SkosConceptsDao** (SolrServer *solr*)
Constructor for SkosConceptsDao

Parameters

- **solr** – Instance of SolrServer (e.g. HttpSolrServer)

Methods

get
public Optional<SkosConcepts> **get** (List<String> *uris*)
Get documents by their unique IDs

Parameters

- **uris** – list of URIs

Returns SkosConcepts or absent

search
public Optional<SkosConcepts> **search** (String *query*, Integer *start*, Integer *count*)
Search for documents by a query string

Parameters

- **query** – string to search
- **start** – first document to retrieve
- **count** – number of documents to retrieve

Returns SkosConcepts or absent

suggest
public Optional<SkosConcepts> **suggest** (String *query*, Integer *start*, Integer *count*)
Search for documents by a query string Use the “suggest” handler which provides a light response

Parameters

- **query** – string to search
- **start** – first document to retrieve
- **count** – number of documents to retrieve

Returns SkosConcepts or absent

3.1.5 uk.ac.ox.it.skossuggester.health

SolrHealth

public class **SolrHealth** extends HealthCheck
Health check

Author martinfilliau

Constructors

SolrHealth

public **SolrHealth** (SolrServer *solr*)

Methods

check

protected Result **check** ()

3.1.6 uk.ac.ox.it.skossuggester.jerseyutils

JsonIllegalArgumentExceptionMapper

public class **JsonIllegalArgumentExceptionMapper** implements [ExceptionMapper<IllegalArgumentException>](#)

Methods

toResponse

public [Response](#) **toResponse** ([IllegalArgumentException](#) *error*)

JsonIllegalArgumentExceptionMapper.ErrorMessage

public class **ErrorMessage**

Constructors

ErrorMessage

public **ErrorMessage** ([String](#) *message*)

Methods

getMessage

public [String](#) **getMessage** ()

3.1.7 uk.ac.ox.it.skossuggester.representations

Related

public class **Related**
Represents a skos:related concept

Constructors

Related
public **Related** ()

Related
public **Related** (*String label*, *String uri*)

Methods

equals
public boolean **equals** (*Object obj*)

getLabel
public *String* **getLabel** ()

getUri
public *String* **getUri** ()

hashCode
public int **hashCode** ()

setLabel
public void **setLabel** (*String label*)

setUri
public void **setUri** (*String uri*)

toString
public *String* **toString** ()

SkosConcept

public class **SkosConcept**
Represents a skos:concept
Author martinfilliau

Constructors

SkosConcept

public **SkosConcept** ()

Methods

addAltLabel

public void **addAltLabel** (*String label*)
Add an alternative label to the concept

Parameters

- **label** – String

addRelated

public void **addRelated** (*Related related*)
Add a Related concept to the concept

Parameters

- **related** – Related

equals

public boolean **equals** (*Object obj*)

fromSolr

public static *SkosConcept* **fromSolr** (*SolrDocument doc*)
Get a SkosConcept from a SolrDocument

Parameters

- **doc** – SolrDocument

Returns SkosConcept

getAltLabels

public *List<String>* **getAltLabels** ()

getPrefLabel

public *String* **getPrefLabel** ()

getRelated

public *List<Related>* **getRelated** ()

getUri

public *String* **getUri** ()

hashCode

public int **hashCode** ()

setAltLabels

public void **setAltLabels** (*List<String> altLabels*)

setPrefLabel

public void **setPrefLabel** (*String prefLabel*)

setRelated

public void **setRelated** (*List<Related> related*)

setUri

public void **setUri** (*String uri*)

toString

public *String* **toString** ()

SkosConcepts

public class **SkosConcepts**

Represents a list of SkosConcept

Author martinfilliau

Constructors

SkosConcepts

public **SkosConcepts** ()

SkosConcepts

public **SkosConcepts** (*List<SkosConcept> concepts*)

Methods

addConcept

public void **addConcept** (*SkosConcept concept*)

Add a SkosConcept to the list of concepts

Parameters

- **concept** – SkosConcept

equals

public boolean **equals** (*Object obj*)

fromSolr

public static [SkosConcepts](#) **fromSolr** (SolrDocumentList *docs*)
Get SkosConcepts from a SolrDocumentList

Parameters

- **docs** – SolrDocumentList

Returns SkosConcepts

getConcepts

public List<[SkosConcept](#)> **getConcepts** ()

hashCode

public int **hashCode** ()

setConcepts

public void **setConcepts** (List<[SkosConcept](#)> *concepts*)

3.1.8 uk.ac.ox.it.skossuggester.representations.hal

HalLink

public class **HalLink**

Represents a HAL link

Author martinfilliau

Constructors**HalLink**

public **HalLink** ()

HalLink

public **HalLink** ([String](#) *value*)

Methods**getValue**

public [String](#) **getValue** ()

setValue

public void **setValue** ([String](#) *value*)

HalLinks

public class **HalLinks**

Represents a collection of HAL Link

Author martinfilliau

Methods

getSelf

public [HalLink](#) **getSelf** ()

setSelf

public void **setSelf** ([HalLink](#) *self*)

HalRepresentation

public class **HalRepresentation**
Represents a HAL representation
Author martinfilliau

Constructors

HalRepresentation

public **HalRepresentation** ()

Methods

getEmbedded

public [SkosConcepts](#) **getEmbedded** ()

getLinks

public [HalLinks](#) **getLinks** ()

setEmbedded

public void **setEmbedded** ([SkosConcepts](#) *embedded*)

setLinks

public void **setLinks** ([HalLinks](#) *links*)

setSelfLink

public void **setSelfLink** ([HalLink](#) *link*)

3.1.9 uk.ac.ox.it.skossuggester.resources

Get

public class **Get**

Constructors

Get

public **Get** ([SkosConceptsDao](#) *dao*)

Methods

get

public [HalRepresentation](#) **get** ([List<String>](#) *uris*)

PaginationUtils

public class **PaginationUtils**

Author martinfilliau

Methods

getFirstResult

public static int **getFirstResult** (int *page*, int *count*)

Get the first result for a given page and count

Parameters

- **page** – page number
- **count** – number of results

Returns first result of the page

Search

public class **Search**

Constructors

Search

public **Search** ([SkosConceptsDao](#) *dao*)

Methods

search

public [HalRepresentation](#) **search** ([String](#) *query*, [IntParam](#) *page*, [IntParam](#) *count*)

Suggest

public class **Suggest**

Constructors

Suggest

public **Suggest** ([SkosConceptsDao](#) *dao*)

Methods

suggest

public HalRepresentation **suggest** (*String query*, *IntParam page*, *IntParam count*)

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