

soda4LCA release 2.0.0-beta2 Service API



Table of Contents

1. Namespace URIs	3
2. GET Datasets	4
Requests	4
Responses	5
Examples	5
3. GET Dataset	7
Requests	7
Responses	7
Examples	8
4. GET Exchanges of a Process Dataset	10
Requests	10
Responses	10
Examples	10
5. GET Producers or Consumers of a Flow	12
Requests	12
Responses	12
Examples	12
6. GET Digital File of a Source Dataset	13
Requests	13
Responses	13
Examples	13
7. POST Datasets	14
Requests	14
Responses	14
Examples	14
8. GET Process Datasets (Query)	15
Requests	15
Responses	15
Examples	15
9. GET Datastocks	16
Requests	16
Responses	16
Examples	17

10. GET Datasets from a Data Stock	18
Requests	18
Responses	18
Examples	18
11. Authentication	20
Login	20
Logout	21
Status	22
12. Node Information	24
Requests	24
Responses	24
Examples	25
13. Response Elements	27
DatasetList Response Elements	28
Process Response Elements	30
Flow Response Elements	36
FlowProperty Response Elements	39
UnitGroup Response Elements	41
Source Response Elements	42
Contact Response Elements	44
LCIAMethod Response Elements	46

1. Namespace URIs

If not otherwise specified, response elements (except in full dataset mode) belong to the <http://www.ilcd-network.org/ILCD/ServiceAPI> namespace. The following table lists the keys that are used to reference the namespaces for response elements.

Table 1. Namespace URIs

Key	Namespace URI
serviceapi	http://www.ilcd-network.org/ILCD/ServiceAPI
xlink	http://www.w3.org/1999/xlink
process	http://www.ilcd-network.org/ILCD/ServiceAPI/Process
flow	http://www.ilcd-network.org/ILCD/ServiceAPI/Flow
flowProperty	http://www.ilcd-network.org/ILCD/ServiceAPI/FlowProperty
unitGroup	http://www.ilcd-network.org/ILCD/ServiceAPI/UnitGroup
lciamethod	http://www.ilcd-network.org/ILCD/ServiceAPI/LCIAMethod
source	http://www.ilcd-network.org/ILCD/ServiceAPI/Source
contact	http://www.ilcd-network.org/ILCD/ServiceAPI/Contact
datastock	http://www.ilcd-network.org/ILCD/ServiceAPI/DataStock
nodeinfo	http://www.ilcd-network.org/ILCD/ServiceAPI/NodeInfo

2. GET Datasets

Basic GET operations that return a list of datasets. Applies to all dataset types.

Requests

Syntax

```
GET /processes
GET /flows
GET /flowproperties
GET /unitgroups
GET /sources
GET /contacts
GET /lciamethods
```

Request Parameters

Table 2.

Name	Description
<i>startIndex</i>	As all result sets are paged, this specifies the index of the first item of the entire result set of the operation that shall be included in the response. Type: Integer Default: 0
<i>pageSize</i>	The page size (number of items) for the response. Type: Integer Default: 500
<i>search</i>	Perform a search query that will return results matching the given query parameters. Type: Boolean Default: false
<i>distributed</i>	Perform a distributed search across all registered network nodes. Type: Boolean Default: false
<i>name</i>	search parameter Type: String Default: None
<i>description</i>	search parameter Type: String Default: None

Responses

Response Elements

The response returned is a list of dataset overview objects, wrapped in a dataSetList object. See the section "DataSetList Response Elements" [ServiceAPI#Response_Elements_DatasetList] for a detailed description.

Examples

Sample Request

```
GET /processes
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Content-Type: application/xml
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<serviceapi:dataSetList xmlns:serviceapi="http://www.ilcd-
network.org/ILCD/ServiceAPI" xmlns:xlink="http://www.w3.org/1999/
xlink" xmlns:process="http://www.ilcd-network.org/ILCD/ServiceAPI/
Process" serviceapi:totalSize="4" serviceapi:startIndex="0" serviceapi:pageSize="500">
  <process:process serviceapi:sourceId="ACME" xlink:href="http://lci.acme.com/DB/
processes/0a1b40db-5645-4db8-a887-eb09300b7b74">
    <serviceapi:uuid>0a1b40db-5645-4db8-a887-eb09300b7b74</serviceapi:uuid>
    <serviceapi:permanentUri>http://lca.jrc.ec.europa.eu/lcainfohub/datasets/elcd/
processes/0a1b40db-5645-4db8-a887-eb09300b7b74.xml</serviceapi:permanentUri>
    <serviceapi:dataSetVersion>03.00.000</serviceapi:dataSetVersion>
    <serviceapi:name xml:lang="en">Electricity Mix;AC;consumption mix, at consumer;1kV -
60kV</serviceapi:name>
    <serviceapi:classification name="ilcd">
      <serviceapi:class level="0">Energy carriers and technologies</serviceapi:class>
      <serviceapi:class level="1">Electricity</serviceapi:class>
    </serviceapi:classification>
    <process:type>LCI result</process:type>
    <process:location>EU-27</process:location>
    <process:time>
      <process:referenceYear>2002</process:referenceYear>
      <process:validUntil>2010</process:validUntil>
    </process:time>
    <process:parameterized>>false</process:parameterized>
    <process:hasResults>>false</process:hasResults>
    <process:lciMethodInformation>
      <process:methodPrinciple>Attributional</process:methodPrinciple>
      <process:approach>Allocation - mass</process:approach>
      <process:approach>Allocation - market value</process:approach>
      <process:approach>Allocation - exergetic content</process:approach>
      <process:approach>Allocation - net calorific value</process:approach>
    </process:lciMethodInformation>
    <process:complianceSystem name="ILCD Data Network - Entry-level">
      <serviceapi:reference type="source data set" version="00.00.000" uri="../../sources/
d92a1a12-2545-49e2-a585-55c259997756.xml"/>
      <process:overallCompliance>Not compliant</process:overallCompliance>
      <process:nomenclatureCompliance>Fully compliant</process:nomenclatureCompliance>
      <process:methodologicalCompliance>Fully compliant</
process:methodologicalCompliance>
      <process:reviewCompliance>Not compliant</process:reviewCompliance>
      <process:documentationCompliance>Not compliant</process:documentationCompliance>
      <process:qualityCompliance>Not defined</process:qualityCompliance>
    </process:complianceSystem>
    <process:accessInformation/>
  </process:process>
```

```
</serviceapi:datasetList>
```

3. GET Dataset

Basic GET operations for all dataset types to retrieve a single dataset

Requests

Syntax

```
GET /processes/{uuid}?version={version}
GET /flows/{uuid}?version={version}
GET /flowproperties/{uuid}?version={version}
GET /unitgroups/{uuid}?version={version}
GET /sources/{uuid}?version={version}
GET /contacts/{uuid}?version={version}
GET /lciamethods/{uuid}?version={version}
```

Versioning

By default, the most recent version of a dataset is retrieved. When specifying the version parameter, that specific version will be returned.

Request Parameters

Table 3.

Name	Description
<i>version</i>	The version number of the dataset to retrieve. If omitted, always the most recent version is retrieved. Type: Version number of the form 00.00.000 Default: None
<i>format</i>	Specifies the format of the response. Values: XML, HTML Default: HTML
<i>view</i>	Specifies whether the response should be summary of the dataset, the full dataset or just the metadata section. Values: overview, full, metadata Default: full

Responses

Response Elements

By default (and with proper access permissions), the full ILCD-formatted dataset is returned as HTML representation (if not otherwise specified). See the section "**Response Elements**" [ServiceAPI#response_elements] for response elements in overview.

Examples

Sample Request

```
GET /processes/00000000-0000-0000-0000-000000000000?  
format=xml&view=overview
```

Sample Response

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

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>  
<process xmlns:serviceapi="http://www.ilcd-network.org/ILCD/ServiceAPI" xmlns:xlink="http://  
www.w3.org/1999/xlink" xmlns="http://www.ilcd-network.org/ILCD/ServiceAPI/  
Process" xmlns:flow="http://www.ilcd-network.org/ILCD/ServiceAPI/  
Flow" xmlns:flowProperty="http://www.ilcd-network.org/ILCD/ServiceAPI/  
FlowProperty" xmlns:unitGroup="http://www.ilcd-network.org/ILCD/ServiceAPI/  
UnitGroup" xmlns:lciamethod="http://www.ilcd-network.org/ILCD/ServiceAPI/  
LCIAMethod" xmlns:source="http://www.ilcd-network.org/ILCD/ServiceAPI/  
Source" xmlns:contact="http://www.ilcd-network.org/ILCD/ServiceAPI/  
Contact" serviceapi:accessRestricted="true">  
  <serviceapi:uuid>00000000-0000-0000-0000-000000000000</serviceapi:uuid>  
  <serviceapi:permanentUri>http://db.ilcd-network.org/data/processes/processtest</  
serviceapi:permanentUri>  
  <serviceapi:dataSetVersion>01.00.000</serviceapi:dataSetVersion>  
  <serviceapi:name xml:lang="en">Foo unit process</serviceapi:name>  
  <serviceapi:classification>  
    <serviceapi:class level="0">Energy systems</serviceapi:class>  
    <serviceapi:class level="1">Foo energy systems</serviceapi:class>  
  </serviceapi:classification>  
  <serviceapi:generalComment xml:lang="en">foo bar</serviceapi:generalComment>  
  <serviceapi:synonyms xml:lang="en">Foobar</serviceapi:synonyms>  
  <serviceapi:synonyms xml:lang="de">Fubar</serviceapi:synonyms>  
  <type>Unit process, single operation</type>  
  <quantitativeReference>  
    <referenceFlow>  
      <name xml:lang="en">electricity mix</name>  
      <meanValue>0.0</meanValue>  
      <serviceapi:reference type="flow data  
set" refObjectId="00000000-0000-0000-0000-000000000000">  
        <serviceapi:shortDescription xml:lang="en">foo flow</  
serviceapi:shortDescription>  
      </serviceapi:reference>  
    </referenceFlow>  
    <functionalUnit xml:lang="en">Foofunctional Unit</functionalUnit>  
  </quantitativeReference>  
  <location>RER</location>  
  <time>  
    <referenceYear>2009</referenceYear>  
    <validUntil>2012</validUntil>  
  </time>  
  <parameterized>true</parameterized>  
  <hasResults>true</hasResults>  
  <containsProductModel>false</containsProductModel>  
  <lciMethodInformation>  
    <methodPrinciple>Attributional</methodPrinciple>  
    <approach>Allocation - gross calorific value</approach>  
    <approach>Allocation - element content</approach>  
  </lciMethodInformation>  
  <completenessProductModel>All relevant flows quantified</completenessProductModel>  
  <complianceSystem name="ILCD Compliance - entry level">  
    <overallCompliance>Fully compliant</overallCompliance>  
  </complianceSystem>  
  <review type="Independent external review">  
    <scope name="LCI results or Partly terminated system">  
      <method name="Element balance"/>  
    </scope>  
  </review>  
</process>
```


Sample Request

Sample Response

```
<?xml version="1.0" encoding="utf-8"?>
<?xml-stylesheet version="1.0" href="../../stylesheets/process2html.xsl" type="text/xsl"?>
<processDataSet xmlns="http://lca.jrc.it/ILCD/Process" xmlns:common="http://lca.jrc.it/ILCD/Common" locations="../../ILCDLocations.xml" version="1.1">
<processInformation>
<dataSetInformation>
<common:UUID>00000000-0000-0000-0000-000000000000</common:UUID>
<name>
<baseName xml:lang="en">Electricity Mix, Foo</baseName>
<treatmentStandardsRoutes xml:lang="en">AC</treatmentStandardsRoutes>
<mixAndLocationTypes xml:lang="en">consumption mix, at consumer</mixAndLocationTypes>
<functionalUnitFlowProperties xml:lang="en">1kV - 60kV</functionalUnitFlowProperties>
</name>
<common:synonyms xml:lang="en">power grid mix</common:synonyms>
<classificationInformation>
<common:classification>
<common:class level="0">Energy carriers and technologies</common:class>
<common:class level="1">Electricity</common:class>
</common:classification>
</classificationInformation>
<common:generalComment xml:lang="en">Good overall data quality. Energy carrier mix information based on official statistical information including import/export. Detailed power plant models were used, which combine measured emissions plus calculated values for not measured emissions of e.g. organics or heavy metals. Energy carrier extraction and processing data is of sufficient to good (e.g. refinery) data quality. Inventory is partly based on primary industry data, partly on secondary literature data.</common:generalComment>
</dataSetInformation>
<quantitativeReference type="Reference flow(s)">
<referenceToReferenceFlow>63</referenceToReferenceFlow>
</quantitativeReference>
<time>
<common:referenceYear>2002</common:referenceYear>
<common:dataSetValidUntil>2010</common:dataSetValidUntil>
<common:timeRepresentativenessDescription xml:lang="en">Annual average</common:timeRepresentativenessDescription>
</time>
<geography>
...
</processDataSet>
```

4. GET Exchanges of a Process Dataset

GET operation to retrieve the list of exchanges for a specific process dataset.

Requests

Syntax

```
GET /processes/{uuid}/exchanges
```

Request Parameters

Table 4.

Name	Description
<i>direction</i>	The direction of the exchanges to be retrieved. Optional Values: in, out Default: None
<i>type</i>	The type of the exchanges to be retrieved. Optional Values: Elementary flow, Product flow, Waste flow, Other flow Default: None

Responses

Response Elements

A datasetList object containing flow objects is returned as response. See the sections "**DatasetList Response Elements**" [ServiceAPI#Response_Elements_DatasetList] [more](#) and "**Flow Response Elements**" [ServiceAPI#Response_Elements_Flow] for a detailed description.

Examples

Sample Request

```
GET /processes/0cbf76cc-0192-4617-acd3-0fdb3cecf6c7/exchanges?  
direction=in
```

Sample Response

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

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
```

```
<serviceapi:dataSetList xmlns:serviceapi="http://www.ilcd-network.org/ILCD/
ServiceAPI" xmlns:xlink="http://www.w3.org/1999/xlink"
  xmlns:flow="http://www.ilcd-network.org/ILCD/ServiceAPI/
Flow" serviceapi:totalSize="60" serviceapi:startIndex="0" serviceapi:pageSize="60">
  <flow:flow serviceapi:sourceId="ACME" xlink:href="http://localhost:8091/Node/flows/
fe0acd60-3ddc-11dd-ae5d-0050c2490048">
    <serviceapi:uuid>fe0acd60-3ddc-11dd-ae5d-0050c2490048</serviceapi:uuid>
    <serviceapi:permanentUri>http://lca.jrc.ec.europa.eu/lcainfohub/datasets/ilcd/flows/
fe0acd60-3ddc-11dd-ae5d-0050c2490048_02.00.000.xml</serviceapi:permanentUri>
    <serviceapi:dataSetVersion>02.00.000</serviceapi:dataSetVersion>
    <serviceapi:name xml:lang="en">lead</serviceapi:name>
    <flow:flowCategorization name="ilcd">
      <serviceapi:category level="0">Resources</serviceapi:category>
      <serviceapi:category level="1">Resources from ground</serviceapi:category>
      <serviceapi:category level="2">Non-renewable element resources from ground</
serviceapi:category>
    </flow:flowCategorization>
    <flow:type>Elementary flow</flow:type>
    <flow:referenceFlowProperty xlink:href="">
      <flow:name xml:lang="de">Formaldehyd</flow:name>
      <flow:defaultUnit>kg</flow:defaultUnit>
      <serviceapi:reference type="flow property data set" version="02.00.000" uri="../
flowproperties/93a60a56-a3c8-11da-a746-0800200b9a66_02.00.000.xml"/>
    </flow:referenceFlowProperty>
  </flow:flow>
  <flow:flow serviceapi:sourceId="ACME" xlink:href="http://localhost:8091/Node/
flows/1729ef88-6556-11dd-ad8b-0800200c9a66">
    <serviceapi:uuid>1729ef88-6556-11dd-ad8b-0800200c9a66</serviceapi:uuid>
    <serviceapi:permanentUri>http://lca.jrc.ec.europa.eu/lcainfohub/datasets/ilcd/
flows/1729ef88-6556-11dd-ad8b-0800200c9a66_02.00.000.xml</serviceapi:permanentUri>
    <serviceapi:dataSetVersion>02.00.000</serviceapi:dataSetVersion>
    ...
  </flow:flow>
</serviceapi:dataSetList>
```

5. GET Producers or Consumers of a Flow

GET operation to identify processes that produce or consume a specific flow.

Requests

Syntax

```
GET /flows/{uuid}?version={version}/producers/  
GET /flows/{uuid}?version={version}/consumers/
```

Request Parameters

Table 5.

Name	Description
	Type: Default:

Responses

Response Elements

By default (and with proper access permissions), the full ILCD-formatted dataset is returned as HTML representation (if not otherwise specified). See the section "**Response Elements**" [ServiceAPI#response_elements] for response elements in overview.

Examples

Sample Request

Sample Response

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

6. GET Digital File of a Source Dataset

GET operation to retrieve the digital file attachment for a specific source dataset.

Requests

Syntax

```
GET /sources/{uuid}/{filename}
```

The filename must be URL encoded.

```
GET /sources/{uuid}/digitalfile
```

The latter variant will retrieve the first digital file entry for the specified dataset.

Request Parameters

none

Responses

The digital file.

The returned MIME type will be `image/*` for images and `application/pdf` for files that carry a `.pdf` extension.

Examples

Sample Request

```
GET /sources/0a34866e-ce75-48c8-82e6-0080739e7154/100512%20System%20boundaries%20diagram%20-%20with%20reuse.jpg
```

Sample Response

```
HTTP/1.1 200 OK
Content-Type: image/jpg
```

(the image)

Sample Request

```
GET /sources/cb1c5d4a-50ed-4d7b-828b-6fcd560ee17b/digitalfile
```

Sample Response

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

(the PDF document)

7. POST Datasets

Requests

Syntax

```
POST /
```

Request Parameters

Table 6.

Name	Description
	Type: String Default: None

Responses

Response Elements

Table 7.

Name	Description
	Type: Ancestors:

Examples

Sample Request

```
POST /
```

Sample Response

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

8. GET Process Datasets (Query)

Requests

Syntax

```
GET /
```

Request Parameters

Table 8.

Name	Description
	Type: String Default: None

Responses

Response Elements

Table 9.

Name	Description
	Type: Ancestors:

Examples

Sample Request

```
GET /
```

Sample Response

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

9. GET Datastocks

GET operation that returns a list of all datastocks.

Requests

Syntax

```
GET /datastocks
```

Request Parameters

None.

Responses

Response Elements

Table 10.

Name	Description
<i>dataStockList</i> (datastock)	The container element for the list of data stock objects. Type: Container Ancestors: none.
<i>dataStock</i> (datastock)	The container element for the data stock object. Type: Container may occur multiple times Ancestors: dataStockList
<i>@root</i> (datastock)	Indicates whether the data stock is a root data stock. Type: Boolean Ancestors: dataStock
<i>shortName</i>	The short name (handle) of the data stock. Type: String Ancestors: dataStock
<i>name</i>	The name of the data stock. Type: String Multilang may occur multiple times Ancestors: dataStock
<i>description</i>	A description for the data stock.

Name	Description
(datastock)	Type: String Multilang may occur multiple times Ancestors: dataStock

Examples

Sample Request

```
GET /datastocks
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Content-Type: application/xml
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<dataStockList xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:schemaLocation="http://www.ilcd-network.org/ILCD/
ServiceAPI/DataStock ../schemas/ILCD_Service_API_DataStocks.xsd"
  xmlns="http://www.ilcd-network.org/ILCD/ServiceAPI/
DataStock" xmlns:ds="http://www.ilcd-network.org/ILCD/ServiceAPI/
DataStock" xmlns:serviceapi="http://www.ilcd-network.org/ILCD/
ServiceAPI">
  <dataStock ds:root="true">
    <serviceapi:shortName>default</serviceapi:shortName>
    <serviceapi:name xml:lang="en">Default Root Data Stock</
serviceapi:name>
    <serviceapi:name xml:lang="de">deutscher Name</
serviceapi:name>
    <description xml:lang="en">description</description>
    <description xml:lang="de">deutsche Beschreibung</description>
  </dataStock>
  <dataStock>
    <serviceapi:shortName>other</serviceapi:shortName>
    <serviceapi:name xml:lang="en">Other, Non-Root Data Stock</
serviceapi:name>
    <description xml:lang="en">other data</description>
  </dataStock>
</dataStockList>
```

10. GET Datasets from a Data Stock

Basic GET operations that return a list of datasets from a specific data stock. Applies to all dataset types.

Requests

Syntax

```
GET /datastocks/{datastock-uuid}/processes
GET /datastocks/{datastock-uuid}/flows
GET /datastocks/{datastock-uuid}/flowproperties
GET /datastocks/{datastock-uuid}/unitgroups
GET /datastocks/{datastock-uuid}/sources
GET /datastocks/{datastock-uuid}/contacts
GET /datastocks/{datastock-uuid}/lciamethods
```

Request Parameters

All request parameters as for the basic GET Datasets operation are supported. See section **Request Parameters for GET Datasets** [ServiceAPI#GET_Datasets_Request_Parameters] for the full list.

Responses

Response Elements

The response returned is a list of dataset overview objects, wrapped in a dataSetList object. See the section **"DataSetList Response Elements"** [ServiceAPI#Response_Elements_DatasetList] for a detailed description.

Examples

Sample Request

```
GET
/datastocks/aca74e60-146e-11e2-892e-0800200c9a66/processes
```

Sample Response

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

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<serviceapi:dataSetList xmlns:serviceapi="http://www.ilcd-
network.org/ILCD/ServiceAPI" xmlns:xlink="http://www.w3.org/1999/
xlink" xmlns:process="http://www.ilcd-network.org/ILCD/ServiceAPI/
Process" serviceapi:totalSize="4" serviceapi:startIndex="0" serviceapi:pageSize="500">
  <process:process serviceapi:sourceId="ACME" xlink:href="http://lci.acme.com/DB/
processes/0a1b40db-5645-4db8-a887-eb09300b7b74">
    <serviceapi:uuid>0a1b40db-5645-4db8-a887-eb09300b7b74</serviceapi:uuid>
    <serviceapi:permanentUri>http://lca.jrc.ec.europa.eu/lcainfohub/datasets/elcd/
processes/0a1b40db-5645-4db8-a887-eb09300b7b74.xml</serviceapi:permanentUri>
```

```

    <serviceapi:dataSetVersion>03.00.000</serviceapi:dataSetVersion>
    <serviceapi:name xml:lang="en">Electricity Mix/AC/consumption mix, at consumer;1kV -
60kV</serviceapi:name>
    <serviceapi:classification name="ilcd">
      <serviceapi:class level="0">Energy carriers and technologies</serviceapi:class>
      <serviceapi:class level="1">Electricity</serviceapi:class>
    </serviceapi:classification>
    <process:type>LCI result</process:type>
    <process:location>EU-27</process:location>
    <process:time>
      <process:referenceYear>2002</process:referenceYear>
      <process:validUntil>2010</process:validUntil>
    </process:time>
    <process:parameterized>>false</process:parameterized>
    <process:hasResults>>false</process:hasResults>
    <process:lciMethodInformation>
      <process:methodPrinciple>Attributional</process:methodPrinciple>
      <process:approach>Allocation - mass</process:approach>
      <process:approach>Allocation - market value</process:approach>
      <process:approach>Allocation - exergetic content</process:approach>
      <process:approach>Allocation - net calorific value</process:approach>
    </process:lciMethodInformation>
    <process:complianceSystem name="ILCD Data Network - Entry-level">
      <serviceapi:reference type="source data set" version="00.00.000" uri="../../sources/
d92a1a12-2545-49e2-a585-55c259997756.xml"/>
      <process:overallCompliance>Not compliant</process:overallCompliance>
      <process:nomenclatureCompliance>Fully compliant</process:nomenclatureCompliance>
      <process:methodologicalCompliance>Fully compliant</
process:methodologicalCompliance>
      <process:reviewCompliance>Not compliant</process:reviewCompliance>
      <process:documentationCompliance>Not compliant</process:documentationCompliance>
      <process:qualityCompliance>Not defined</process:qualityCompliance>
    </process:complianceSystem>
    <process:accessInformation/>
  </process:process>
</serviceapi:dataSetList>

```

11. Authentication

Login

In order to perform certain operations, authentication may be required. This GET operation performs authentication against the application, setting a session cookie if successful.

Requests

Syntax

```
GET /authenticate/login
```

Request Parameters

Table 11.

Name	Description
<i>userName</i>	The username to authenticate with Type: String Default: None
<i>password</i>	The password to authenticate with Type: String Default: None

Responses

Response Elements

None

Examples

Sample Request

```
GET /authenticate/login?username=foo&password=bar
```

Sample Response if Login Successful

```
HTTP/1.1 200 OK  
Content-Type: text/plain
```

```
Login successful
```

Sample Response if Already Logged In

```
HTTP/1.1 200 OK  
Content-Type: text/plain
```

You are already logged in as a user

Sample Response if Wrong User Name or Password

```
HTTP/1.1 200 OK
Content-Type: text/plain
```

incorrect password or user name

Sample Response if User Name or Password Missing in Request

```
HTTP/1.1 200 OK
Content-Type: text/plain
```

user name and password must have a value

Logout

With this GET operation, the session for a currently authenticated user can be closed.

Requests

Syntax

```
GET /authentication/logout
```

Request Parameters

none

Responses

Response Elements

None.

Examples

Sample Request

```
GET /authentication/logout
```

Sample Response if authenticated

```
HTTP/1.1 200 OK
Content-Type: text/plain
```

successfully logged out

Sample Response if not authenticated

```
HTTP/1.1 200 OK
Content-Type: text/plain
```

currently not authenticated

Status

With this GET operation, the current authentication status (authenticated or not) can be retrieved, as well the user name and any associated roles if authenticated.

Requests

Syntax

GET /authentication/status

Request Parameters

none

Responses

Response Elements

Table 12.

Name	Description
<i>authInfo</i>	Contains the elements that describe the authentication status. Type: Container Ancestors: None
<i>authenticated</i>	Indicates whether the session is currently authenticated or not. Type: Boolean Ancestors: authInfo
<i>userName</i>	The username for the current session Type: String Ancestors: authInfo
<i>role</i>	One entry for each role associated for the current session Type: String may occur multiple times Ancestors: authInfo

Examples

Sample Request

GET /authentication/status

Sample Response if authenticated

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

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<authInfo xmlns="http://www.ilcd-network.org/ILCD/ServiceAPI">
  <authenticated>true</authenticated>
  <userName>admin</userName>
  <role>READ</role>
  <role>EXPORT</role>
  <role>CHECKOUT</role>
  <role>CHECKIN</role>
  <role>RELEASE</role>
  <role>DELETE</role>
  <role>MANAGE_USER</role>
  <role>ADMIN</role>
  <role>SUPER_ADMIN</role>
</authInfo>
```

Sample Response if not authenticated

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

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<authInfo xmlns="http://www.ilcd-network.org/ILCD/ServiceAPI">
  <authenticated>false</authenticated>
</authInfo>
```

12. Node Information

This GET operation retrieves information about the node.

Requests

Syntax

```
GET /nodeinfo
```

Request Parameters

None.

Responses

Response Elements

Table 13.

Name	Description
<i>nodeInfo</i>	Contains the elements with the node information. Type: Container Ancestors: None.
<i>nodeID</i>	The ID of the node. Type: String (no spaces allowed) Ancestors: nodeInfo
<i>name</i>	The full name of the node Type: String Ancestors: nodeInfo
<i>operator</i>	The person or entity operating this node Type: String Ancestors: nodeInfo
<i>description</i>	A description of the node Type: String Ancestors: nodeInfo
<i>baseURL</i>	The base URL of the node's service interface. Type: String Ancestors: nodeInfo

Name	Description
<i>administrativeContact</i>	The element carrying information about the administrative contact for the node. Type: String Ancestors: nodeInfo
<i>centralContactPoint</i>	The central contact point Type: String Ancestors: nodeInfo.centralContactPoint
<i>email</i>	The email address Type: String Ancestors: nodeInfo.centralContactPoint
<i>phone</i>	The phone number Type: String Ancestors: nodeInfo.centralContactPoint
<i>www</i>	The www address Type: String Ancestors: nodeInfo.centralContactPoint

Examples

Sample Request

```
GET /nodeinfo
```

Sample Response

```
HTTP/1.1 200 OK
```

```
Content-Type: application/xml
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<nodeInfo xmlns="http://www.ilcd-network.org/ILCD/ServiceAPI/
NodeInfo" xmlns:contact="http://www.ilcd-network.org/ILCD/ServiceAPI/
Contact">
  <nodeID>ACME</nodeID>
  <name>ACME Public LCI Database</name>
  <operator>ACME Inc.</operator>
  <description xml:lang="en">Free Text Description</description>
  <baseURL>http://lci.acme.com/DB</baseURL>
  <administrativeContact>
    <contact:centralContactPoint>ACME Inc. Worldwide
Headquarters</contact:centralContactPoint>
    <contact:email>info@acme.com</contact:email>
    <contact:phone>+49 721 555 4242</contact:phone>
    <contact:www>www.acme.com</contact:www>
  </administrativeContact>
</nodeInfo>
```

```
</administrativeContact>  
</nodeInfo>
```

13. Response Elements

DatasetList Response Elements

Table 14.

Name	Description
<i>dataSetList</i>	The container element for the list of dataset objects. Type: Container Ancestors: None
<i>@sourceId</i>	Node ID of the originating node. Type: String Ancestors: dataSetList
<i>@totalSize</i>	Total size of the result set, i.e. number of contained dataset objects. Type: Integer Ancestors: dataSetList
<i>@startIndex</i>	The index of the first item in this list in relation to the entire result set. Type: Integer Ancestors: dataSetList
<i>@pageSize</i>	The page size (number of items) for this list. Type: Integer Ancestors: dataSetList
<i>process</i> (process)	A process dataset object. See section "Process Response Elements" [ServiceAPI#response_elements] for a detailed description. Type: Container optional, may occur multiple times Ancestors: dataSetList
<i>flow</i> (flow)	A flow dataset object. See section "Flow Response Elements" [ServiceAPI#Response_Elements_Flow] for a detailed description. Type: Container optional, may occur multiple times Ancestors: dataSetList
<i>flowProperty</i> (flowproperty)	A flow property dataset object. See section "FlowProperty Response Elements" [ServiceAPI#Response_Elements_FlowProperty] for a detailed description. Type: Container optional, may occur multiple times

Name	Description
	Ancestors: dataSetList
<i>unitGroup</i> (unitgroup)	<p>A unit group dataset object. See section "UnitGroup Response Elements" [ServiceAPI#Response_Elements_UnitGroup] for a detailed description.</p> <p>Type: Container</p> <p>optional, may occur multiple times</p> <p>Ancestors: dataSetList</p>
<i>contact</i> (contact)	<p>A source dataset object. See section "Source Response Elements" [ServiceAPI#Response_Elements_Source] for a detailed description.</p> <p>Type: Container</p> <p>optional, may occur multiple times</p> <p>Ancestors: dataSetList</p>
<i>contact</i> (contact)	<p>A contact dataset object. See section "Contact Response Elements" [ServiceAPI#Response_Elements_Contact] for a detailed description.</p> <p>Type: Container</p> <p>optional, may occur multiple times</p> <p>Ancestors: dataSetList</p>
<i>lciamethod</i> (lciamethod)	<p>An LCIA method dataset object. See section "LCIAMethod Response Elements" [ServiceAPI#Response_Elements_LCIAMethod] for a detailed description.</p> <p>Type: Container</p> <p>optional, may occur multiple times</p> <p>Ancestors: dataSetList</p>

Process Response Elements

Table 15.

Name	Description
<i>process</i> (process)	<description here> Type: String Ancestors: None
<i>@accessRestricted</i>	<description here> Type: String Ancestors: process
<i>uuid</i>	<description here> Type: String Ancestors: process
<i>permanentUri</i>	<description here> Type: String Ancestors: process
<i>dataSetVersion</i>	<description here> Type: String Ancestors: process
<i>name</i>	<description here> Type: String Multilang Ancestors: process
<i>classification</i>	<description here> Type: String Ancestors: process
<i>class</i>	<description here> Type: String may occur multiple times Ancestors: process.classification
<i>@level</i>	<description here> Type: String Ancestors: process.classification.class
<i>generalComment</i>	<description here>

Name	Description
	Type: String Multilang Ancestors: process
<i>synonyms</i>	<description here> Type: String Multilang may occur multiple times Ancestors: process
<i>type</i> (process)	<description here> Type: String Ancestors: process
<i>quantitativeReference</i> (process)	<description here> Type: String Ancestors: process
<i>referenceFlow</i> (process)	<description here> Type: String Ancestors: process.quantitativeReference
<i>name</i> (process)	<description here> Type: String Multilang Ancestors: process.quantitativeReference.referenceFlow
<i>meanValue</i> (process)	<description here> Type: String Ancestors: process.quantitativeReference.referenceFlow
<i>reference</i>	<description here> Type: String Ancestors: process.quantitativeReference.referenceFlow
<i>@type</i>	<description here> Type: String Ancestors: process.quantitativeReference.referenceFlow.reference
<i>@refObjectId</i>	<description here> Type: String Ancestors: process.quantitativeReference.referenceFlow.reference
<i>shortDescription</i>	<description here>

Name	Description
	Type: String Multilang Ancestors: process.quantitativeReference.referenceFlow.reference
<i>functionalUnit</i> (process)	<description here> Type: String Multilang Ancestors: process.quantitativeReference
<i>location</i> (process)	<description here> Type: String Ancestors: process
<i>time</i> (process)	<description here> Type: String Ancestors: process
<i>referenceYear</i> (process)	<description here> Type: String Ancestors: process.time
<i>validUntil</i> (process)	<description here> Type: String Ancestors: process.time
<i>parameterized</i> (process)	<description here> Type: String Ancestors: process
<i>hasResults</i> (process)	<description here> Type: String Ancestors: process
<i>containsProductModel</i> (process)	<description here> Type: String Ancestors: process
<i>lciMethodInformation</i> (process)	<description here> Type: String Ancestors: process
<i>methodPrinciple</i> (process)	<description here> Type: String

Name	Description
	Ancestors: process.lciMethodInformation
<i>approach</i> (process)	<description here> Type: String may occur multiple times Ancestors: process.lciMethodInformation
<i>completenessProduct-Model</i> (process)	<description here> Type: String Ancestors: process
<i>complianceSystem</i> (process)	<description here> Type: String Ancestors: process
@name	<description here> Type: String Ancestors: process.complianceSystem
<i>overallCompliance</i> (process)	<description here> Type: String Ancestors: process.complianceSystem
<i>review</i> (process)	<description here> Type: String Ancestors: process
@type	<description here> Type: String Ancestors: process.review
<i>scope</i> (process)	<description here> Type: String Ancestors: process.review
@name	<description here> Type: String Ancestors: process.review.scope
<i>method</i> (process)	<description here> Type: String

Name	Description
	Ancestors: process.review.scope
@name	<description here> Type: String Ancestors: process.review.scope.method
dataQualityIndicators (process)	<description here> Type: String Ancestors: process.review
dataQualityIndicator (process)	<description here> Type: String Ancestors: process.review.dataQualityIndicators
@name	<description here> Type: String Ancestors: process.review.dataQualityIndicators.dataQualityIndicator
@value	<description here> Type: String Ancestors: process.review.dataQualityIndicators.dataQualityIndicator
reviewDetails (process)	<description here> Type: String Multilang Ancestors: process.review
overallQuality (process)	<description here> Type: String Ancestors: process
useAdvice (process)	<description here> Type: String Multilang Ancestors: process
accessInformation (process)	<description here> Type: String Ancestors: process
copyright (process)	<description here> Type: String Ancestors: process.accessInformation

Name	Description
<i>licenseType</i> (process)	<description here> Type: String Ancestors: process.accessInformation
<i>useRestrictions</i> (process)	<description here> Type: String Multilang Ancestors: process.accessInformation
<i>format</i> (process)	<description here> Type: String Ancestors: process
<i>ownership</i> (process)	<description here> Type: String Ancestors: process
<i>@type</i>	<description here> Type: String Ancestors: process.ownership
<i>@refObjectId</i>	<description here> Type: String Ancestors: process.ownership
<i>shortDescription</i>	<description here> Type: String Multilang Ancestors: process.ownership

Flow Response Elements

Table 16.

Name	Description
<i>flow</i> (flow)	<description here> Type: String Ancestors: None
<i>uuid</i>	<description here> Type: String Ancestors: flow
<i>permanentUri</i>	<description here> Type: String Ancestors: flow
<i>dataSetVersion</i>	<description here> Type: String Ancestors: flow
<i>name</i>	<description here> Type: String Multilang Ancestors: flow
<i>generalComment</i>	<description here> Type: String Multilang Ancestors: flow
<i>synonyms</i>	<description here> Type: String Multilang may occur multiple times Ancestors: flow
<i>flowCategorization</i> (flow)	<description here> Type: String Ancestors: flow
<i>category</i>	<description here> Type: String may occur multiple times

Name	Description
	Ancestors: flow.flowCategorization
<i>@level</i>	<description here> Type: String Ancestors: flow.flowCategorization.category
<i>type</i> (flow)	<description here> Type: String Ancestors: flow
<i>casNumber</i> (flow)	<description here> Type: String Ancestors: flow
<i>sumFormula</i> (flow)	<description here> Type: String Ancestors: flow
<i>referenceFlowProperty</i> (flow)	<description here> Type: String Ancestors: flow
<i>@href</i> ()	<description here> Type: String Ancestors: flow.referenceFlowProperty
<i>name</i> (flow)	<description here> Type: String Multilang Ancestors: flow.referenceFlowProperty
<i>defaultUnit</i> (flow)	<description here> Type: String Ancestors: flow.referenceFlowProperty
<i>reference</i>	<description here> Type: String Ancestors: flow.referenceFlowProperty
<i>@type</i>	<description here> Type: String Ancestors: flow.referenceFlowProperty.reference

Name	Description
<i>@refObjectId</i>	<description here> Type: String Ancestors: flow.referenceFlowProperty.reference
<i>shortDescription</i>	<description here> Type: String Multilang Ancestors: flow.referenceFlowProperty.reference

FlowProperty Response Elements

Table 17.

Name	Description
<i>flowProperty</i> (flow)	<description here> Type: String Ancestors: None
<i>uuid</i>	<description here> Type: String Ancestors: flowProperty
<i>permanentUri</i>	<description here> Type: String Ancestors: flowProperty
<i>dataSetVersion</i>	<description here> Type: String Ancestors: flowProperty
<i>name</i>	<description here> Type: String Multilang Ancestors: flowProperty
<i>generalComment</i>	<description here> Type: String Multilang Ancestors: flowProperty
<i>synonyms</i>	<description here> Type: String Multilang may occur multiple times Ancestors: flowProperty
<i>unitGroup</i> (flow)	<description here> Type: String Ancestors: flowProperty
<i>name</i> (flow)	<description here> Type: String Multilang Ancestors: flowProperty.unitGroup
<i>defaultUnit</i>	<description here>

Name	Description
(flow)	Type: String Ancestors: flowProperty.unitGroup
<i>reference</i>	<description here> Type: String Ancestors: flowProperty.unitGroup
<i>@type</i>	<description here> Type: String Ancestors: flowProperty.unitGroup.reference
<i>@refObjectId</i>	<description here> Type: String Ancestors: flowProperty.unitGroup.reference
<i>shortDescription</i>	<description here> Type: String Multilang Ancestors: flowProperty.unitGroup.reference

UnitGroup Response Elements

Table 18.

Name	Description
<i>unitGroup</i> (unitgroup)	<description here> Type: String Ancestors: None
<i>uuid</i>	<description here> Type: String Ancestors: unitGroup
<i>permanentUri</i>	<description here> Type: String Ancestors: unitGroup
<i>dataSetVersion</i>	<description here> Type: String Ancestors: unitGroup
<i>name</i>	<description here> Type: String Multilang Ancestors: unitGroup
<i>generalComment</i>	<description here> Type: String Multilang Ancestors: unitGroup
<i>referenceUnit</i> (unitgroup)	<description here> Type: String Ancestors: unitGroup

Source Response Elements

Table 19.

Name	Description
<i>source</i> (source)	<description here> Type: String Ancestors: None
<i>uuid</i>	<description here> Type: String Ancestors: source
<i>permanentUri</i>	<description here> Type: String Ancestors: source
<i>dataSetVersion</i>	<description here> Type: String Ancestors: source
<i>name</i>	<description here> Type: String Multilang may occur multiple times Ancestors: source
<i>generalComment</i>	<description here> Type: String Multilang Ancestors: source
<i>citation</i> (source)	<description here> Type: String Multilang Ancestors: source
<i>publicationType</i> (source)	<description here> Type: String Ancestors: source
<i>file</i> (source)	<description here> Type: String Ancestors: source
<i>@type</i>	<description here>

Name	Description
	Type: String Ancestors: source.file
<i>@href</i> ()	<description here> Type: String Ancestors: source.file
<i>shortDescription</i>	<description here> Type: String Multilang Ancestors: source.file
<i>belongsTo</i> (source)	<description here> Type: String Ancestors: source
<i>@type</i>	<description here> Type: String Ancestors: source.belongsTo
<i>@refObjectId</i>	<description here> Type: String Ancestors: source.belongsTo
<i>shortDescription</i>	<description here> Type: String Multilang Ancestors: source.belongsTo

Contact Response Elements

Table 20.

Name	Description
<i>contact</i> (contact)	<description here> Type: String Ancestors: None
<i>@sourceId</i>	<description here> Type: String Ancestors: contact
<i>uuid</i>	<description here> Type: String Ancestors: contact
<i>permanentUri</i>	<description here> Type: String Ancestors: contact
<i>dataSetVersion</i>	<description here> Type: String Ancestors: contact
<i>name</i>	<description here> Type: String Multilang Ancestors: contact
<i>classification</i>	<description here> Type: String Ancestors: contact
<i>class</i>	<description here> Type: String may occur multiple times Ancestors: contact.classification
<i>@level</i>	<description here> Type: String Ancestors: contact.classification.class
<i>generalComment</i>	<description here>

Name	Description
	Type: String Multilang Ancestors: contact
<i>centralContactPoint</i> (contact)	<description here> Type: String Ancestors: contact
<i>phone</i> (contact)	<description here> Type: String Ancestors: contact
<i>fax</i> (contact)	<description here> Type: String Ancestors: contact
<i>email</i> (contact)	<description here> Type: String Ancestors: contact
<i>www</i> (contact)	<description here> Type: String Ancestors: contact

LCIAMethod Response Elements

Table 21.

Name	Description
<i>LCIAMethod</i> (lciamethod)	<description here> Type: String Ancestors: None
<i>uuid</i>	<description here> Type: String Ancestors: LCIAMethod
<i>permanentUri</i>	<description here> Type: String Ancestors: LCIAMethod
<i>dataSetVersion</i>	<description here> Type: String Ancestors: LCIAMethod
<i>name</i>	<description here> Type: String Multilang Ancestors: LCIAMethod
<i>classification</i>	<description here> Type: String Ancestors: LCIAMethod
<i>class</i>	<description here> Type: String may occur multiple times Ancestors: LCIAMethod.classification
<i>@level</i>	<description here> Type: String Ancestors: LCIAMethod.classification.class
<i>generalComment</i>	<description here> Type: String Multilang Ancestors: LCIAMethod
<i>type</i>	<description here>

Name	Description
(lciamethod)	Type: String Ancestors: LCIAMethod
<i>methodology</i> (lciamethod)	<description here> Type: String may occur multiple times Ancestors: LCIAMethod
<i>impactCategory</i> (lciamethod)	<description here> Type: String Ancestors: LCIAMethod
<i>areaOfProtection</i> (lciamethod)	<description here> Type: String Ancestors: LCIAMethod
<i>impactIndicator</i> (lciamethod)	<description here> Type: String Ancestors: LCIAMethod
<i>time</i> (lciamethod)	<description here> Type: String Ancestors: LCIAMethod
<i>referenceYear</i> (lciamethod)	<description here> Type: String Multilang Ancestors: LCIAMethod.time
<i>duration</i> (lciamethod)	<description here> Type: String Multilang Ancestors: LCIAMethod.time