
ILOSTAT SDMX Gateway

Dissemination API Reference Guide



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Table of Contents

Document changes since last version	ii
I Data and metadata dissemination	3
I.1 Description	3
I.1.1 Overview	3
I.1.2 URL format.....	3
I.2 Structural metadata	7
I.2.1 Common query string parameters	7
I.2.2 Agency scheme	7
I.2.3 Concept scheme	7
I.2.4 Code lists	7
I.2.5 Data structure definitions	10
I.2.6 Data flows	11
I.3 XML Validation Schema.....	12
I.4 Data and metadata dissemination.....	12
I.4.1 Selection of a dataflow	12
I.4.2 Filtering.....	13
I.4.3 Query string parameters	14
I.4.4 Attributes and descriptive metadata	15

Document changes since last version

Version	Date	Author	Comment
2.2	2017-08-22	E. Greising	<ul style="list-style-type: none">* New codelist for getting valid classification variants for a given classification type* New codelist for getting valid classification variants for a given DSD* MET_T30 attribute has been defined as enumerated by the codelists CL_CURRENCY

I Data and metadata dissemination

I.1 Description

I.1.1 Overview

The dissemination service is a partial implementation of the standard SDMX RESTful API, as defined in the [SDMX Standards: Section 7 – Guidelines for the use of Web services](#). This API defines a set of HyperText Transfer Protocol (HTTP) resources which give access to:

- Structural metadata (code lists, concepts, definition of data structures, etc.)
- Data and informational metadata (values, notes)

I.1.2 URL format

The defined resources are all accessible through HTTP GET requests, using a Web browser or any HTTP-enabled software component. Each resource is associated to a Uniform Resource Locator (URL), as summarized in the picture next page.

From a technical point of view, the Base URL is the deployment path of the Java servlet that implements the SDMX RESTful interface. The SDMX connector is currently deployed under the following Base URLs:

- Development/Integration testing: <http://www.ilo.org/ilostat/sdmx-test/ws/rest>
- Production/public service: <http://www.ilo.org/ilostat/sdmx/ws/rest>

Structural metadata queries:

.../resource/agencyID/resourceID/version/itemID?queryStringParameters

Resource: The type of metadata to be returned.

Valid values: datastructure, conceptscheme, codelist, dataflow.

Not implemented queries: metadatastructure, categoryscheme, agency scheme, hierarchical codelist, organisationscheme, organisationunitscheme, process, reporting taxonomy, structure, data providerscheme, data consumerscheme, metadataflow, provision agreement, structureset, categorisation, content constraint, attachment constraint.

agencyID: Agency maintaining the artefact (e.g.: ILO) Default: ILO

resourceID: Artefact ID (e.g.: CL_FREQ) Default: all

version: Artefact version (e.g.: 1.0) Default: latest
itemID: ID of the Item to be returned (e.g.: Q). Valid for Item schemes only.
 Default: all

queryStringParameters:

detail: Desired amount of information to be returned.
 Valid values: allstubs, referencestubs, full. Default: full
References: References to be returned with the artefact.
 Valid values: none, children, descendants, any type of resource.
 Default: none
 Not implemented: parents, parentsandsiblings, all

Data queries:

.../resource/flowRef/key/providerRef?queryStringParameters

Resource: Type of query. Valid value: data. Not implemented: metadata
flowRef: Dataflow ref (e.g. ILO,DF_MIG_EMP_TEMP_SEX_AGE_MIG_NB,latest)
key: Key of the series to be returned (e.g: KI.FRA.2854.A.EAP_DWAF_RT).
 Wildcarding (e.g: STI.ESP..Q) and ORing (e.g: YI.KHI+JPN..A) is supported.
providerRef: Data provider (e.g.: ILO) Default: all

queryStringParameters:

startPeriod: Start period (inclusive). ISO8601 (e.g. 2014-01) or SDMX reporting period (e.g. 2014-Q3)
endPeriod: End period (inclusive). ISO8601 (e.g. 2014-01-01) or SDMX reporting period (e.g. 2014-M10).

If dates are written in ISO8601 format (with dashes, i.e. YYYY-MM-DD), every point-in-time which reference period is entirely comprised between *startPeriod* and *endPeriod* (inclusive) will be included in the query response.

firstNObservations: Maximum number of observations starting from the first observation
lastNObservations: Maximum number of observations counting back from the most recent observation
dimensionAtObservation: Id for the dimension attached at the observation level.
 Default: TIME_PERIOD
detail: Desired amount of information to be returned.
 Valid values: serieskeyonly, dataonly, nodata, full.
 Default: full

Not implemented:

updatedAfter: Last time the query was performed. Used to retrieve deltas.
 Must be percent-encoded
 (e.g.: 2009-05-15T14%3A15%3A00%2B01%3A00)
includeHistory: Whether to return vintages. Default: false

Message format:

Following the specification of the SDMX 2.1 RESTful Web Service, the message format should be specified through the *Accept* HTTP header.

Valid formats in this implementations are:

- *SDMX-ML Generic Data:* application/vnd.sdmx.genericdata+xml;version=2.x
- *SDMX-ML StructureSpecific Data* application/vnd.sdmx.structurespecificdata+xml;version=2.1
- *SDMX-JSON* application/vnd.sdmx.data+json;version=1.0.0-wd
- *SDMX-ML Structure* application/vnd.sdmx.structure+xml;version=2.x

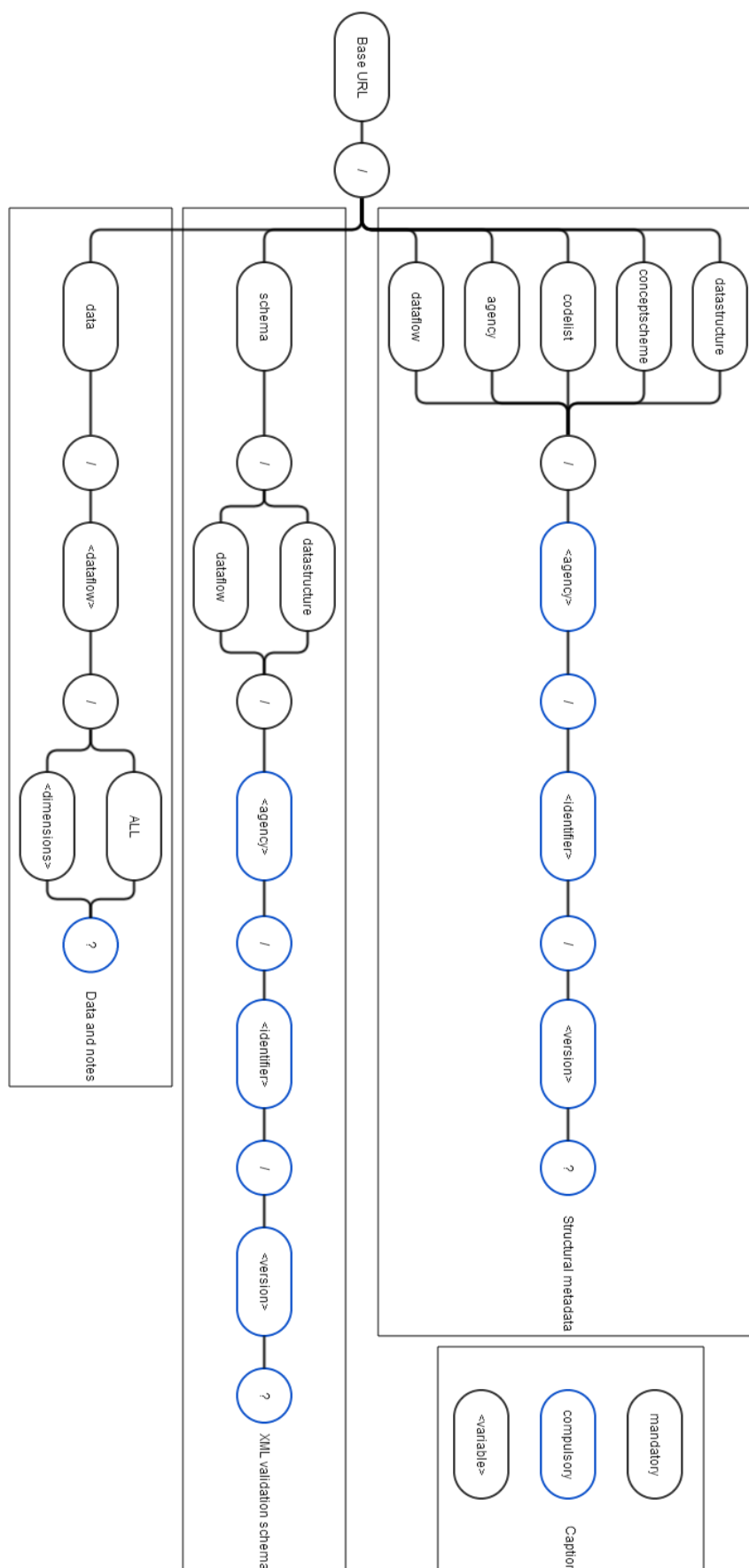
For *Generic Data* and *Structure* messages, « version= » parameter can be 2.0 or 2.1.

The *format* parameter, an ILO extension to the standard URL, supersedes the *Accept* header value and allows selecting the message format from the URL.

The valid options are:

- *generic_2_0* will deliver a message in *Generic Version 2.0* format (This is the default format)
- *generic_2_1* will deliver a message in *Generic Time Series Data Version 2.1* format
- *compact_2_1* will deliver a message in *Structure Specific Time Series Data Version 2.1* format
- *json* will deliver a message in *json* format (Valid only for data messages).

In case no *Accept* value is provided neither *format=* parameter is specified in the URL, the default message format is *SDMX-ML Generic Version 2.0*



I.2 Structural metadata

I.2.1 Common query string parameters

Each URL is composed of a mandatory path and an optional query string, respectively the parts of the URL before and after the question mark (“?”) sign. The parameters allowed in the query string of a structure query are defined at paragraph 4.3.2.2 of the SDMX standard, section 7.

In the ILO implementation, the `detail` parameter is not mandatory, defaulting to `full`. Furthermore, in this version the `references` parameter is restricted to the values `none`, `children` and `descendants`, since the cross-referencing of parent structures was not yet implemented in the underlying library at the time it was developed.

The `format` parameter allows selecting the message format requested. The valid options are:

- `generic_2_0` will deliver a message in *Generic Version 2.0* format (This is the default format)
- `generic_2_1` will deliver a message in *Generic Time Series Data Version 2.1* format
- `compact_2_1` will deliver a message in *Structure Specific Time Series Data Version 2.1* format

I.2.2 Agency scheme

The `agency` resource gives access to the agency scheme. The ILO implementation currently defines only the ILO agency. The `identifier` and `version` variables are ignored, the agency scheme is thus accessible under `/agency/ILO`

I.2.3 Concept scheme

The `conceptscheme` resource gives access to the concept scheme. The ILO implementation defines the following concept schemes:

- `CS_ILOSTAT`: defines the concepts common to the whole ILOSTAT information model and that are not included in the following two concept schemes.
- `CS_CLASSIF_TYPE`: defines the concepts used as classifications (indicator-bound dimensions) in the ILOSTAT information model
- `CS_NOTE_TYPE`: defines the concepts used as notes (descriptive metadata presented as Table-level or value-level attributes) in the ILOSTAT information model
- `CS_DISSEM`: defines those concepts that are only relevant for dissemination purposes and can be discarded in data collection/data reporting.

The `version` variable is ignored (defaulting to `latest` or `1.0`).

I.2.4 Code lists

The `codelist` resource gives access to the code lists used to represent the coded dimensions and attributes (i.e. classifications and coded notes). All the code lists include `Code`, `Name` and `Description` elements (when available) and some additional fields in the form of annotations that provide useful information for dissemination and/or collection purposes. (e.g. “Sort” gives an order

of prevalence of the item; “Default” indicates if certain attribute should be taken into account in a collection process or not)

The ILO implementation defines the following code lists:

- Classification code lists:
 - One general list per classification type (as found in the `T_CLY_CLASSIF_TYPE` table in ILOSTAT metadata subsystem), accessible under `/codelist/ILO/CL_<CLY_CODE>`. It includes the description of the type and codes and descriptions for all the classifications items of all classifications versions of this type. (e.g. `.../codelist/ILO/CL_ECO`). This code lists include a virtual classification item code of the form `_z` which description is “Not applicable” to be assigned to all classifications not belonging to a certain indicator in a Dataflow based in the generic DSD. (See I.2.6 below)
 - One per classification version (as found in the `T_CLV_CLASSIF_VERSION` table in ILOSTAT metadata subsystem), accessible under `/codelist/ILO/CL_<CLV_CODE>`. It includes codes and descriptions for the classifications items of this version. (e.g. `.../codelist/ILO/CL_ECO_ISIC4`)

Classifications’ code lists include the following annotations:

- `Sort`: The sort/prevalence order.
- `Display_Mode`: Indicates the default presentation for the categories, whether it is `CODE`, `LABEL` or `CODE_LABEL`.
- For the different variants (versions) of classifications, the following codelists are also available:
 - The resource `/codelist/ILO/CL_CLASSIF_<CLY_CODE>` will deliver a code list which items will be all classifications versions of this type (e.g. `.../codelist/ILO/CL_CLASSIF_ECO`).
 - The query `/codelist/ILO/CL_CLASSIFDSD_<DSD_ID>` returns a message including several codelists, one for each breakdown in the DSD which items will be the configured versions for these classifications (e.g. `.../codelist/ILO/CL_CLASSIFDSD_YI_ALL_EMP_TEMP_SEX_AGE_NB`).

The following annotations have been included for each item:

- `Sort`: The sort/prevalence order.
- `Display_Mode`: Indicates the suggested presentation for this note type, whether it is as `CODE` (codes only), `LABEL` (labels only) or `CODE_LABEL` (both).
- `IS_DISSEM (Y/N)`: Indicates if this version should be considered in case of dissemination.
- `IS_DEFAULT_DISSEM (Y/N)`: Indicates that this version is the suggested default for dissemination.
- `IS_DISSEM_BULK (Y/N)`: Indicates if this version is included in files for bulk download.
- `IS_DEFAULT (Y/N)`: Indicates if this version is the default one for data collection.

- `IS_XLS_QUEST` (Y/N): Indicates if this version is included in the collection process of ILOSTAT (via Excel questionnaire).
- Indicator code lists: These code lists are constrained by collection. They are accessible under `/codelist/ILO/CL_INDICATOR_<COLLECTION_CODE>`. This query is particularly useful for querying the list of indicators belonging to a collection.
- Subject code lists:
 - One general list (as found in the `T_SUB_SUBJECT` table in ILOSTAT metadata subsystem), accessible under `/codelist/ILO/CL_SUBJECT`. It includes codes and descriptions for all the subjects in the information model.
 - One per indicator which includes the list of subjects this indicator is related to. It is accessible under `/codelist/ILO/CL_SUBJECT_<INDICATOR_CODE>`
 - One per collection which includes the list of subjects each indicator in the collection is related to. It is accessible under `/codelist/ILO/CL_SUBJECT_<COLLECTION_CODE>`
- Notes code lists:
 - One general list per note type (as found in the `T_NTY_NOTE_TYPE` table in ILOSTAT metadata subsystem), accessible under `/codelist/ILO/CL_NOTE_<NTY_CODE>`
 - Special constrained code lists for notes applicable to a source type (`.../codelist/ILO/CL_NOTE_<SRC>`) or a Topic (`.../codelist/ILO/CL_NOTE_<TOP>`).
 - The notes applicable to an Indicator (`.../codelist/ILO/CL_NOTE_<IND>`) are the union of those applicable to its allowed types of source, its topic and the indicator itself. *(To be implemented in next version)*

Notes' code lists include the following annotations:

- `Sort`: The sort/prevalence order.
- `Default` (Y/N): Indicates if this note should be considered in a collection process.
- `Display_Mode`: Indicates the suggested presentation for this note type, whether it is as `META` (metadata), `FOOT` (footnote) or `ALL` (both).
- `Note_Group`: Indicates the group to which this note type belongs. Possible values are: `SRC_NOTE` (Source), `IND_NOTE` (indicator) or `CLA_NOTE` (classification).
- The Survey code lists:
 - One general list for all surveys, accessible under `/codelist/ILO/CL_SURVEY`
 - One per country restricted to the surveys related to this country, accessible under `/codelist/ILO/CL_SURVEY_<COU_ISO3_CODE>`

Survey code lists include the following annotations:

- `Sort`: The sort/prevalence order.
- `SourceType`: Indicates the type of survey by means of the source acronym in all languages available.
- Country code list: Accessible through `/codelist/ILO/CL_COUNTRY`, it will provide the country code according to the ISO-3166 ALPHA3 standard and the name in the three official languages. The alphabetical sort order in each language is given as the annotation `Sort`. The annotation `Group` is set to "Y" if this item represents a country group and `Parent` indicates which group it belongs to (only for groups, "N" for countries). All the codes for items

representing groups of countries are defined in the open space “X__” of the ISO-3166 standard using numbers. X01 has been assigned to “World”, and numbers have been assigned to code Income level categories as defined by the World Bank and ILO Geographical regions Africa, Americas, Arab States, Asia and the Pacific and Europe, and its sub-divisions, respectively.

- Common dimensions and attributes: for the representation of indicator-invariant dimensions (frequency, collection, represented variable, etc.) and attributes (time format, value status, etc.)

The version variable is ignored (defaulting to latest or 1.0). If the identifier variable is not specified, all existing code lists in the information model will be returned - i.e. /codelist/ILO/

However, to query for one specific item in a scheme, a version must be specified in the URL, and it will default to latest or 1.0. e.g. /codelist/ILO/CL_COUNTRY/1/X01.

To get all the code lists related to an indicator definition use the DSD query with the references=children Or references=descendants parameter. (See I.2.5)

I.2.5 Data structure definitions

The datastructure resource gives access to the Data Structure Definitions (DSD) which describes the data flows used to collect or disseminate data. In the ILO implementation, attributes within the same DSD are used to convey descriptive metadata (notes).

Each DSD is identified by the {collection; country; indicator} triplet, where:

- collection stands for the business code of a collection (i.e. CL_COLLECTION Code values or T_COL_COLLECTION.COL_CODE in ILOSTAT metadata subsystem)
- country stands for the ISO 3166-1 alpha-3 code of a country (i.e. CL_COUNTRY Code values or T_COU_COUNTRY.COU_ISO3_CODE in ILOSTAT metadata subsystem), or ALL for the generic, dissemination DSD valid for all countries for one specific indicator.
- indicator stands for the business code of an indicator (i.e. CL_INDICATOR Code values or T_IND_INDICATOR.IND_CODE in ILOSTAT metadata subsystem). The keyword ALL is allowed to generate a generic DSD for the country with all the dimensions collapsed into a single hypercube, including all classifications used by every indicator. Including the TOPIC code instead of the indicator, a DSD for the Topic will be generated by collapsing in a single hypercube all the valid combinations of dimensions and attributes according to the indicators defined in ILOSTAT. Similarly, the REPRESENTED_VARIABLE code can be used to obtain the DSD for this Represented Variable.

The resource /datastructure/ILO/<COLLECTION_CODE>_ALL_ALL?references=children can be used to get all code lists in one single query.

- The keyword MULTI generates a multi-indicator collection DSD for a given country. It can also be combined with the “Topic-DSD” and “Represented Variable-DSD” features. This is useful for querying individual table structures per indicator.

Under this scheme, the following resources are valid:

- /datastructure/ILO/YI_MEX_EMP_TEMP_SEX_AGE_NB: country specific DSD, for the yearly collection of the “Employment by Sex and Age” indicator for Mexico

- `/datastructure/ILO/YI_MEX_EMP_TEMP_SEX_AGE_NB?references=descendants`: same DSD, with full references to the code lists and concepts embedded.
- `/datastructure/ILO/YI_ALL_EMP_MULTI?references=descendants`: a single xml message with multiple DSDs corresponding to all the indicators in the topic EMP, including all referenced code lists and concepts.
- `/datastructure/ILO/YI_ALL_UNE_TUNE_SEX_GEO_NB`: generic DSD, for the dissemination of the “Unemployment by Sex and Geographical coverage” indicator
- `/datastructure/ILO/YI_MEX_ALL`: country specific generic DSD for Mexico, including all indicators in the Yearly Indicators (YI) collection (200+ as of writing) collapsed in a single hypercube of 19 dimensions: Collection, Country, Frequency, Survey, Represented Variable, 13 classification breakdowns and Time.
- `/datastructure/ILO/YI_MEX_MULTI`: country specific multiple DSD for Mexico, including all indicators in the Yearly Indicators (YI) collection (200+ as of writing) as independent Key families into a single xml file.

I.2.6 Data flows

The `dataflow` resource gives access to the data flows used to collect or disseminate data. In the ILO implementation, one dataflow is defined for each DSD, identified by `DF_<DSD_ID>`. The default behaviour is the same as when querying DSDs, either for one indicator, grouping by Topic or Represented variable or using the keywords “ALL” or “MULTI”. (See I.2.5)

Under this scheme, the query `.../dataflow/ILO` will return a message including all the dissemination dataflows (i.e. indicators) with data available, so it is the best way of discovering data availability. For simplification, the dataflows included in the response to this query are those representing indicators and the generics by collection (`<col>_ALL_ALL`).

Similarly to the `datastructure` resource query, querying a dataflow based in a generic ALL indicators’ flow reference like in the following example:

```
.../dataflow/ILO/DF_YI_MEX_ALL/<filters>?<parameters>
```

will return a single dataflow corresponding to the country specific generic DSD for Mexico, including all indicators in the Yearly Indicators (YI) collection (200+ as of writing) collapsed in a single hypercube.

On the other hand, the query `.../dataflow/ILO/DF_YI_MEX_MULTI/<filters>?<parameters>` will generate a message including all the valid DF for Mexico corresponding to indicators in the YI collection with data available. In other words, the API’s behaviour is the same as specifying “MULTI” for DSDs, but constraining the result by data availability, since the main intention of the API is data dissemination.

“Individual” dataflows can also be queried; the following URL gives access to the dataflow for yearly indicators, France, Employment by Sex and Age:

```
.../dataflow/ILO/DF_YI_FRA_EMP_TEMP_SEX_AGE_NB/<filters>?<parameters>.
```

As explained for DSDs above, under this logic, the following resources are valid dataflows:

- `/dataflow/ILO/DF_YI_MEX_EMP_TEMP_SEX_AGE_NB`: country specific, for the yearly collection of the “Employment by Sex and Age” indicator for Mexico

- `/dataflow/ILO/DF_YI_MEX_EMP_TEMP_SEX_AGE_NB?references=descendants`: same dataflow, with full references to the code lists, concepts and data structures embedded.
- `/dataflow/ILO/DF_YI_ALL_EMP?references=descendants`: a xml message with a dataflow making use of the generic DSD for the all the indicators in the topic EMP, including all referenced code lists, concepts and datastructure.
- `/dataflow/ILO/DF_YI_ALL_EMP_MULTI?references=descendants`: a single xml message with multiple dataflows corresponding to all the indicators in the topic EMP, including all referenced code lists, concepts and respective datastructures.
- `/dataflow/ILO/DF_YI_ALL_UNE_TUNE_SEX_GEO_NB`: generic dataflow, for the dissemination of the “Unemployment by Sex and Geographical coverage” indicator
- `/dataflow/ILO/DF_YI_MEX_ALL`: country specific generic dataflow for Mexico, colapsing all indicators in the Yearly Indicators (YI) collection in a single hypercube.
- `/dataflow/ILO/DF_YI_MEX_MULTI`: country specific multiple dataflow for Mexico, including all indicators in the Yearly Indicators (YI) collection with data available.

I.3 XML Validation Schema

The `schema` URL space gives access to XML Schema files that can be used to validate data flows in SDMX-ML files.

I.4 Data and metadata dissemination

The `data` URL space gives access to the disseminated data and metadata. The URL scheme allows:

- The selection of a given dataflow
- The optional filtering of data/metadata across dimensions
- Optional query string parameters

The `format` parameter allows selecting the message format requested. The valid options are:

- `generic_2_0` will deliver a message in *Generic Version 2.0* format (This is the default format)
- `generic_2_1` will deliver a message in *Generic Time Series Data Version 2.1* format
- `compact_2_1` will deliver a message in *Structure Specific Time Series Data Version 2.1* format
- `json` will deliver a message in *json* format (Valid only for data messages).

I.4.1 Selection of a dataflow

The `dataflow` variable of the URL scheme is of the form `<agency_id>,<dataflow_id>,<version>`. In the ILO implementation, `agency_id` is always `ILO` and `version` can be omitted.

So in order to get data from the yearly collection of the Employment by Sex and Age indicator for all countries, the dataflow identifier is: `ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB`.

It should be noted that, when querying for data using the “generic” dataflows (i.e. those with “ALL” in the indicator portion of the id, or referring to a topic or represented variable), data is formatted

according to the generic hypercube including all the breakdowns in the indicators referenced and thus, certain “key” combinations may be invalid (do not exist in any indicator). All the classification dimensions of the generic hypercube not corresponding to a certain key family (i.e. a valid indicator) will be filled with the global “Not applicable” code `_z` (See I.2.4 above). Please take into account that this type of queries in a big collection like “YT” or “STT” can be very time consuming.

I.4.2 Filtering

The next component of the URL is called the key in the SDMX specification. It is a dot-separated list of values for the dimensions, in the order defined by the DSD related to the dataflow. An omitted dimension is wild carded; the logical “or” operator is supported using the “+” character.

The `ALL` keyword wildcards all dimensions, allowing to get all the data for a given DSD.

Following on the previous example, the DSD for Employment by Sex and Age¹ defines the following dimensions, most general to most specific: `COLLECTION`, `COUNTRY`, `FREQ`, `SURVEY`, `REPRESENTED_VARIABLE`, and afterwards the classifications involved in the indicator like `CLASSIF_SEX`, `CLASSIF_AGE`, etc. in the order given in the DSD.

Any filter can be specified either explicitly (by providing a value or expression) or omitted by just adding the separator dot to its right. It is not necessary to put all the dots for all the dimensions; the dots to the right of the last filtered dimension can be omitted and will be wildcarded.

One particular use case is the ability to select data for one specific classification version: all the classification item’s codes for this version can be implicitly specified by entering the prefix that identifies that version codes followed by an asterisk (*) to wildcard the classification item codes (i.e. `<CLA>_<CLV>*` or `AGE_5YRBANDS*`) in the proper dimension position to fetch data only for this classification version.

Similarly, all data from the indicators belonging to one Topic can be obtained by specifying `<TOP>*`, e.g. `EMP*` (see example below).

The characters “M”, “Q” and “A” in the `FREQ` dimension can be used to filter data points with Monthly, Quarterly and Annual time reference periods.

It is important to note that, while dimension codes and in particular classification item codes, can be “ORed” with the “+”, a wildcarded code in such expression will be ignored.

Examples:

- `/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/ALL:` fetch all data for the yearly collection
- `/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/.....:` idem (all dimensions wildcarded)
- `/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/.MEX+ESP:` fetch data for México and Spain, with all other dimensions wildcarded.
- `/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/.....SEX_T.AGE_5YRBANDS_TOTAL:` filter on the “total” classification items (same information as in the multi-country report of the ILOSTAT website)

¹An Indicator is defined as a Represented variable broken-down by none, one or more classifications. The Represented variable code is composed by the Topic (i.e. EMP), the variant (i.e. TEMP for Total EMPloyment) and the Type of measure (i.e. NB for NumBer, RT for RaTe, etc.). The indicator code is obtained by inserting the Classification Types codes (i.e. SEX & AGE) after the variant code: `EMP_TEMP_SEX_AGE_NB`.

- `/data/ILO,DF_STI_ALL_EMP_TEMP_SEX_AGE_NB/.DEU+FRA+GBR+ITA.M....: fetch monthly data only for Germany, France, the United Kingdom and Italy.`
- `/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/YI.FRA.A.1142..SEX_F.AGE_5YRBANDS_15-19+AGE_5YRBANDS_60-64: fetch data for France, survey 1142, for female workers, ages 15-19 and 60-64.`
- `/data/ILO,DF_YI_ESP_UNE_TUNE_SEX_AGE_NB/.....AGE_5YRBANDS_Y00-04+AGE_5YRBANDS_Y05-09+AGE_5YRBANDS_Y10-14+AGE_5YRBANDS_Y15-19+AGE_5YRBANDS_Y20-24+AGE_5YRBANDS_Y25-29+AGE_5YRBANDS_Y30-34+AGE_5YRBANDS_Y35-39+AGE_5YRBANDS_Y40-44+AGE_5YRBANDS_Y45-49+AGE_5YRBANDS_Y50-54+AGE_5YRBANDS_Y55-59+AGE_5YRBANDS_Y60-64+AGE_5YRBANDS_YGE65+AGE_5YRBANDS_TOTAL: fetch data for Spain for 5-year age bands classification version..`
- `/data/ILO,DF_YI_ESP_UNE_TUNE_SEX_AGE_NB/.....AGE_5YRBANDS*: The same as above example.`
- `/data/ILO,DF_YI_AUT_ALL/....EMP_TEMP_NB: fetch data for all indicators based on the represented variable Total Employment Level (EMP_TEMP_NB) for Austria. Note that the filtering of the represented variable is only meaningful for an ALL-indicators type dataflow.`
- `/data/ILO,DF_YI_AUT_ALL/....EMP*: fetch data for all indicators belonging to the topic Employment (EMP) for Austria. Note that this particular case of filtering of the represented variable is only meaningful for an ALL-indicators type dataflow as well.`

1.4.3 Query string parameters

The standard SDMX REST interface defines a number of query string parameters that can be used to further tailor the data flow retrieved. These parameters are to be specified after a “?” and concatenated with “&”. The ILO implementation interprets a reduced set of these parameters, as described below:

- `startPeriod`: the starting date for the period for which results should be supplied (inclusive)
- `endPeriod`: the ending date for the period for which results should be supplied (inclusive)

Accepted formats: ISO8601 (e.g. 2014-01) or SDMX reporting period (e.g. 2014-Q3)

If dates are written in ISO8601 format (with dashes, i.e. YYYY-MM-DD), every point-in-time which reference period is entirely comprised between `startPeriod` and `endPeriod` (inclusive) will be included in the query response.

- `firstNObservations`: includes data for the first N time points.
- `lastNObservations`: includes data for the last N time points.
- `detail`: the desired amount of information to be returned; must be one of:
 - `full`: default value, return everything (data, annotations, attributes)
 - `dataonly`: values only (no attributes)
 - `serieskeyonly`: can be used for performance reasons to fetch the series (with specified dimensions) matching a given query
 - `nodata`: only attributes and annotations
- `format`: The message format. Valid options are:

- generic_2_0 will deliver a message in *Generic Version 2.0* format (This is the default format)
- generic_2_1 will deliver a message in *Generic Time Series Data Version 2.1* format
- compact_2_1 will deliver a message in *Structure Specific Time Series Data Version 2.1* format
- json will deliver a message in *json* format (Valid only for data messages).

So, going further on the previous examples, the following request is possible:
/data/ILO,DF_YI_ALL_EMP_TEMP_SEX_AGE_NB/YI.FRA.A.1142..SEX_T.AGE_5YRBANDS_TOTAL?startPeriod=2009-01-01&endPeriod=2009-12-31&detail=dataonly&format=json: fetch the data point for France, survey 1142, total classifications, year 2009 in a json data message.

I.4.4 Attributes and descriptive metadata

For each observation value there will be a set of attributes describing the data point. These attributes include certain characteristics of the measured dimension like Unit of measure, Unit multiplier, Currency, Time format, etc. and useful information for presentation purposes like the default number of decimal positions and the suggested sort order for the indicators.

Two particular attributes provide data structure information: the INDICATOR that provides the indicator code and SUBJECT1, SUBJECT2, SUBJECT3 which refer to up to 3 subjects the indicator belongs to.

The descriptive metadata in ILOSTAT is coded and will appear as attributes associated to each observation value. There are three types of metadata which are recognized by the name of the attributes:

- VALUE_STATUS is a flag associated to the observation value, and there will be only one per observation.
- MET_<Note type> holds descriptive metadata and will probably be repeating in all the data points for the table defined by the main dimensions (COLLECTION, COUNTRY, FREQ, SURVEY and REPRESENTED_VARIABLE) plus TIME.
- OVN_<Note type> holds a “footnote”. It is attached to one observation and denotes certain exception for that particular data point.