

API SDMX 2.1 - data filtering

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This page documents more advanced features for data queries. It is recommended to read first the page [API data query](#).

This is the SDMX 2.1 REST request for data:

```
https://<api_base_uri>/sdmx/2.1/<resource>/<flowRef>/<key>?<parameters>
```

Each section of this page discusses further the filters that can be set in this syntax definition.

SDMX 2.1 - REST - Data filtering on dimension

Request

```
https://<api_base_uri>/sdmx/2.1/<resource>/<flowRef>/<key>
```

The **key** is constructed as a dot ('.') separated list of dimension filtered values.

To build the key:

- Get the [list of dataflows](#) to identify a relevant dataflow.
- Then [download the data structure with references resolution for children](#) for the relevant dataflow and check the list of dimensions.
- Each dimension supports values set by the [codelist definition](#).
- For example, the [data structure definition for NAMA_10_GDP](#) lists 4 dimensions, in this order:
 - **FREQ** with values set by codelist **FREQ**
 - **UNIT** with values set by codelist **UNIT**
 - **NA_ITEM** with values set by codelist **NA_ITEM**
 - **GEO** with values set by codelist **GEO**
- For [NAMA_10_GDP](#) the key [FREQ].[UNIT].[NA_ITEM].[GEO] in the exact order of dimensions set by the data structure definition can be for instance A.CP_MEUR.B1GQ.LU, where:

Position	1	2	3	4
Dimension	FREQ	UNIT	NA_ITEM	GEO
Key value	A	CP_MEUR	B1GQ	LU
Meaning	Data aggregated annually	Current prices, million euro	Gross domestic product at market prices	Luxembourg

Dimensions which should not be filtered are left empty in the query. For [NAMA_10_GDP](#) the key without filter on dimension **FREQ** can be .CP_MEUR.B1GQ.LU

Logical conjunction is created using the plus '+' character. For [NAMA_10_GDP](#) the key can be A.CP_MEUR.B1GQ.BE+LU

Examples

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP/A.CP_MEUR.B1GQ.LU

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP/.CP_MEUR.B1GQ.LU

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP/A.CP_MEUR.B1GQ.BE+LU

SDMX 2.1 - REST - Data filtering on time

This allows filtering data observations within a time series on start and end dates.

Request

```
https://<api_base_uri>/sdmx/2.1/<resource>/<flowRef>/<key>?startPeriod=value&endPeriod=value
```

The start and end of the time period in the filter are determined as startPeriod and endPeriod. Following time periods are supported:

Period	Format
Annual	YYYY-A1 or YYYY
Semester	YYYY-S[1-2]
Quarter	YYYY-Q[1-4]

Monthly	YYYY-M[01-12] or YYYY-[01-12]
Weekly	YYYY-W[01-53]
Daily	YYYY-D[001-366]
Year interval	YYYY/P[01-99]Y

as illustrated by

Filtering on NAMA_10_GDP annual observations from 2012 to 2015

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?startPeriod=2012&endPeriod=2015

Same, combined with dimension key filtering

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP/A.CP_MEUR.B1GQ.LU?startPeriod=2012&endPeriod=2015

Filtering on NAMQ_10_GDP quarterly observations from 2015 Q2 to 2015 Q3, combined with dimension key filtering

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMQ_10_GDP/Q.CP_MEUR.SCA.B1GQ.LU?startPeriod=2015-Q2&endPeriod=2016-Q2

Filtering on IRT_EURYLD_M monthly observations from 2015 month 02 to 2016 month 06, combined with dimension key filtering

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/IRT_EURYLD_M/M.YCIF_RT.Y17.GBA_AAA.EA?startPeriod=2015-02&endPeriod=2016-06

SDMX 2.1 - REST - Data filtering on first N and last N observations

This allows filtering data observations within a time series to limit the number of observations returned.

Request

https://<api_base_uri>/sdmx/2.1/<resource>/<flowRef>/<key>?firstNObservations=<value>&lastNObservations=<value>

1. This filter may be applied to data which has been filtered by dimension and / or time.
2. First N Observations return the first N observations in the corresponding series
3. Last N Observations return the last N observations in the corresponding series
4. Both definitions may be applied e.g. to return the first and last observations in a series.
5. If the filter is wrong, then a response is returned with no observation results.

Filtering on NAMA_10_GDP for the last 5 annual observations

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?lastNObservations=5

Filtering on NAMA_10_GDP for the first 5 annual observations

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?firstNObservations=5

Filtering on NAMA_10_GDP for the first 5 and last 5 annual observations

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?firstNObservations=5&lastNObservations=5

Filtering on NAMA_10_GDP for the last 5 annual observations, combined with dimension key filtering

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP/CP_MEUR.B1GQ.LU?lastNObservations=5

SDMX 2.1 - REST - Data details

Request

https://<api_base_uri>/sdmx/2.1/<resource>/<flowRef>/<key>?details=value

as illustrated by

NAMA_10_GDP with data only

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?detail=dataonly

NAMA_10_GDP with series keys only

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?detail=serieskeyonly

NAMA_10_GDP with no data

https://ec.europa.eu/eurostat/api/dissemination/sdmx/2.1/data/NAMA_10_GDP?detail=nodata