

**INFO**Online

**Service Manual**

**XML download**



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# 1 Introduction

## 1.1 About this document

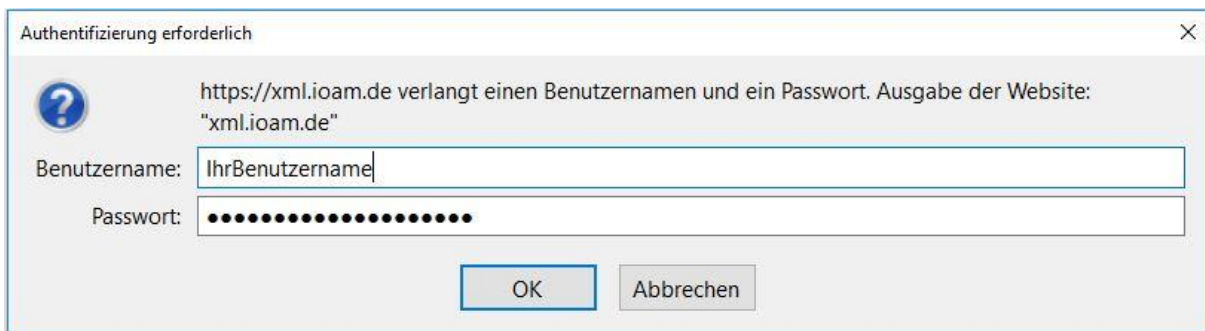
This document describes the technical details of the **XML download** service. Below the data availability, the different access options as well as the different formats and their output are described.

This SZMnG measurement system service offered by **INFOnline GmbH** is **fee-based**. Further contractual and organisational information on the **XML download** service can be found in the document ["INFOnline Service description XML download"](#).

## 2 Service portfolio

### 2.1 Data interface

The access to the site measurement data is carried out by a web portal with the following URL: <https://xml.ioam.de/xml.php>. The access to the data is gained via download after the HTTP authentication. The data transmission will be encrypted by SSL.



The screenshot shows a standard Windows-style authentication dialog box. The title bar reads 'Authentifizierung erforderlich' with a close button (X) on the right. The main area contains a question mark icon on the left and the following text: 'https://xml.ioam.de verlangt einen Benutzernamen und ein Passwort. Ausgabe der Website: "xml.ioam.de"'. Below this text are two input fields: 'Benutzername:' with the placeholder text 'IhrBenutzername' and 'Passwort:' with a masked password represented by 12 black dots. At the bottom of the dialog are two buttons: 'OK' and 'Abbrechen'.

You will receive a setup email with the specific URL as well as the access data that you need for the data retrieval. There will be separate logins with particular passwords for every site.

The measurement data can be found in UTF-8 encoded XML text files without BOM (Byte Order Mark).

## 2.2 Naming structure of XML files

Below you will find an explanation of the naming structures of the possible data aggregations for manual download.

### 2.2.1 Hourly data

This XML file contains the aggregation data on an hourly basis at the date given.

*< site ID >-hour-< starting time of the aggregation in UTC (Timestamp)>-< end time of aggregation in UTC (Timestamp )>*

The data on an hourly basis constitute the smallest period under review that is available and are to be considered **provisional**. **Real-time data is not provided.**

### 2.2.2 Daily data

This XML file contains the aggregation data on a daily basis at the date given

*< site ID >-day-< starting time of the aggregation in UTC (Timestamp)>-< end time of aggregation in UTC (Timestamp )>*

**This data is only available after two days**, since it is **aggregated** before it is finally made available. For further restrictions on the availability of measurement data in XML downloads, see chapter 2.4 *Data availability*.

## 2.3 XML download parameters

The query of the measurement data via the XML download can be adjusted using various parameters. These refer to the aggregation type hour/day and the period in which the data is listed in the XML file. Please refer to chapter 2.4 *Data availability* for the various restrictions on the output of the data.

The following parameters can be used to supplement the URL "<https://xml.ioam.de/xml.php>" using the "?" character (for the first parameter) to define the content of the XML file. Each additional parameter must be followed by an "&" character.

- date – date of the request period, alternatively use of {start&end}
- start – start date of the request period, can only be used in conjunction with {end}.
- end – end date of the request period, can only be used in conjunction with {start}
- aggr – aggregation of the request, only hour {hour} or day {day} possible

If individual parameters are not set, the XML file is delivered with default values. For more information, refer to the following description of the parameters.

### 2.3.1 Date parameter

The parameter {date} restricts the available measurement data to a specific date. In the following example, an extract of the output of the date parameter is illustrated in addition to the URL.

URL: <https://xml.ioam.de/xml.php?date=2017-09-01&aggr=day>

This restriction can also be extended to individual hours in the "hour" aggregation.

URL: <https://xml.ioam.de/xml.php?date=2017-09-01-15:00&aggr=hour>

Sample output can be viewed in chapter 2.6 *Example XML download*.

### 2.3.2 start&end parameter

The parameters {start} and {end} can only be used in combination and, in contrast to the parameter {date}, limit a time period. The parameters "start&end" can be used both with the aggregation "day" and with the aggregation "hour". The measurement values requested in this way are subject to the rules for data availability (chapter 2.4 *Data availability*).

**{Start} = start date of the values for the request**

**{End} = finish date of the values for the request**

URL: <https://xml.ioam.de/xml.php?start=2017-09-01&end=2017-09-05&aggr=day>

The output period can also be extended by specifying a time so that a concrete period can be delivered to the exact hour. However, this restriction can only be used in combination with the data aggregation "hour".

URL: <https://xml.ioam.de/xml.php?start=2017-09-04-12:00&end=2017-09-05-13:00&aggr=hour>

### 2.3.3 aggr parameter

The parameter "aggr" defines the aggregation of the data. The measurement data can be delivered either as hourly data or as daily data. For data on an hourly basis, the value "hour" must be set for the parameter. If this parameter is not set, hour data is provided for the previous hour.

URL: <https://xml.ioam.de/xml.php?date=2017-09-01-15:00&aggr=hour>

The daily aggregation of the measured data is controlled by the value "day" of the variable "aggr".

URL: <https://xml.ioam.de/xml.php?start=2017-09-01&end=2017-09-05&aggr=day>

**Please pay attention to the respective restrictions of data availability in "Chapter 2.4 *Data availability*".**

## 2.4 Data availability

The data in the XML download can be retrieved **dynamically**. However, this retrieval is subject to certain availabilities, so that the determined data is available with high performance.

- **All data** are only available in **time format UTC!**
- **Hourly data:** „aggr=hour“

Hourly data will be hold ready for retrieval for **three days** back at most. In case you require data outside of these limitations, one of the error messages listed below is displayed.

- **Daily data** : „aggr=day“

Daily data can be retrieved up to **179 days** back. The aggregation of the daily data is only possible two days retroactively to the current date (*e.g. on 06.10. the daily data from 04.10. is available!*)

Data can be requested for a maximum of **seven consecutive days**. If a longer period is selected, one of the error messages listed below will be displayed.

### 2.4.1 Error messages

- **Error messages for invalid period** “<error>...</error>“

If data are not available due to the selection of an invalid period, the following values can occur within the dimension <error>:

- *unkown error*
- *date(XXX) too old*
- *start(XXX) greater than end(XXX)*
- *start(XXX) older than max. allowed value (XXX)*
- *start(XXX) too old*
- *too much days (XXX/YYYY)*
- *end(XXX) too young*

Example output for the error message “*start(XXX) greater than end(XXX)*“



```
<error>  
  start(2017-10-24-10:00) greater than end(2017-10-06-11:00)  
</error>
```

- **Error messages for unavailable data**

If data cannot be made available for other reasons, the value "**missing data**" is output in the XML document in the individual dimensions of the different measured values (2.5.2 *Measurement data types in the XML file*).

#### NOTE

- Hourly data is calculated promptly. Therefore they do **not** consider the **offline use of apps**.
- Please note that hourly data are provisional data. In the daily aggregations, the measurement data are fully aggregated. These are the final measurement data.
- Daily data is recalculated with a delay of two days. They contain the figures for the offline use of an app. **Up-to-date data** is only available on an hourly basis.
- A direct comparison of hourly and daily data is therefore not possible, neither is a simple addition of hourly data to daily data or to data of other temporal aggregation levels.

## 2.5 Description of the XML data

All **times** are given in **UTC!**

### 2.5.1 Description of the data formats

The requested data in the XML file contains various measurement data and information from a site. This data is output for the specified period and data aggregation. The particular measuring data elements are set up consistently right under the root <szmng>...</szmng> and basically look like this:

```
<dim_Messdatentyp date="YYYY-MM-DD HH:MM" aggr="day"|"hour">
  [<Aggregationskategorie>ABC</Aggregationskategorie>]
  <Messdatenzahl gesamt>X</Messdaten gesamt>
  [<Messdatenzahl Inland>Y</Messdaten Inland>]
  [<Messdatenzahl Ausland>Z</Messdaten Ausland>]
</dim_Messdatentyp>
```

#### 2.5.1.1 <dim\_Messdatentyp> ... </dim\_Messdatentyp>

This element node specifies the data type of the measurement data within this node. The following measurement data types are available:

- Agents
- Clients
- PIs (per Code)
- Sessions
- URLs

Further information can be found in section 2.5.2 *Measurement data types*.

#### 2.5.1.2 `date="YYYY-MM-DD HH:MM"`

The `{date}` attribute specifies the time of the measurement data given within the node. If the data are requested on an hourly basis, the time is always "00:00:00".

#### 2.5.1.3 `aggr= „day“ | „hour“`

The `{aggr}` attribute specifies the aggregation of the data within the node. The aggregation depends on the request for the data using the URL and is identical for all measurement data types in the XML file.

#### 2.5.1.4 `<Aggregationskategorie>...</Aggregationskategorie>`

This element is only available for measurement data types that are aggregated via another category in addition to a number (for example, "PIs per code"). The category name is individual depending on the aggregation characteristic (example: `<code> ... </code>`).

#### 2.5.1.5 `[<Messdatenzahl>...</Messdatenzahl>]`

The number of measured data is given in the form of three values: The total value for the node as well as individual values for "Inland" and "Abroad". The name of the sub-element is based on the measurement data type. The following example is obtained for the sessions of one day:

```
<sessions>63526</sessions> (total number)
```

```
<sessionsinland>53061</sessionsinland>
```

```
<sessionsausland>10465</sessionsausland>
```

## 2.5.2 Measurement data types in the XML file

The requested XML file always contains the identical measurement data types. If there are **no values** for the selected aggregation period, these nodes are listed without values.

Exampel (no errors):

```
<dim_errors/>
```

The available measurement data types are described in more detail below.

### NOTE

- **All times are given in UTC!**
- A **hit** is a registered request from the measuring system to the SZMnG measuring pixel in stationary or mobile websites or apps.
- **PI** ("Page Impression") is a hit that, according to IVW guidelines, is to be classified as PI-relevant.
- **Action** is a hit that is registered in an app by the measurement system after a supporting event has been triggered. Actions can be, but do not have to be PI-relevant.
- Measurement data elements for aggregation via **error code types** do not contain sub-elements with partial information on access from inland and abroad (see below).

### 2.5.2.1 Agents –Number of visits per browser type

This measurement data type displays the number of visits per dedicated browser type in the selected aggregation period.

#### Example:

```
<dim_agents date="2017-09-20 00:00:00" aggr="day">  
  <agent>Chrome (Android)</agent>  
  <sessions>2348</sessions>  
  <sessionsinland>2005</sessionsinland>  
  <sessionsausland>343</sessionsausland>  
</dim_agents>
```

#### Reference:

For every browser type, a separate node is created for each requested time period.

#### Possible aggregation:

Hourly and daily values

### 2.5.2.2 Clients – Number of clients

This measurement data type displays the number of identified clients for the requested aggregation period.

#### Example:

```
<dim_clients date="2017-09-20 00:00:00" aggr="day">  
  <clients>60280</clients>  
  <clientsinland>50341</clientsinland>  
  <clientsausland>9939</clientsausland>  
</dim_clients>
```

#### Reference:

For the specified time period, one node is created per time unit (day or hour) to output the clients.

#### Possible aggregation:

Hourly and daily values

### 2.5.2.3 Error – Hits per error code

This measurement data type contains the hits that occur in the aggregation period for a dedicated error code type. A large part of the hits listed here are not PI-relevant and can only be requested for hourly data.

#### Example:

```
<dim_errors date="2017-09-20 19:00" aggr="hour">  
  <error>A1</error>  
  <hits>1</hits>  
</dim_errors>
```

#### Reference:

For each error code, a node is created for the requested aggregation period.

#### Possible aggregation:

Hourly values only

#### 2.5.2.4 Events – Actions per event type

This measurement data type gives the number of actions in the aggregation period that occur on a dedicated event type. The measurement data type is only filled for apps. Some of the counted actions are not PI-relevant.

For Web and MEW offers, this is always empty.

#### Example:

```
<dim_events date="2017-09-12 00:00:00"aggr="day">  
  <event>application-enterforeground</event>  
  <hits>42</hits>  
  <hitsinland>40</hitsinland>  
  <hitsausland>2</hitsausland>  
</dim_events>
```

#### Reference:

A separate node for each aggregation period is listed for each event type with counted actions.

#### Possible aggregation:

Hourly and daily values



### 2.5.2.5 PIs – PIs per code

This measurement data type provides the PIs for the requested aggregation period per dedicated code.

#### Example:

```
<dim_pis date="2017-09-20 00:00:00" aggr="day">  
  <code>code123456</code>  
  <pis>35</pis>  
  <pisinland>29</pisinland>  
  <pisausland>6</pisausland>  
</dim_pis>
```

#### Reference:

A separate node is created for each code per time period.

#### Possible aggregation:

Hourly and daily values

### 2.5.2.6 Sessions – number of Visits

This measurement data type displays the total number of visits for the requested aggregation period.

#### Example:

```
<dim_sessions date="2017-09-20 00:00:00" aggr="day">  
  <sessions>63526</sessions>  
  <sessionsinland>53061</sessionsinland>  
  <sessionsausland>10465</sessionsausland>  
</dim_sessions>
```

#### Reference:

A separate node is created for each requested aggregation period.

#### Possible aggregation:

Hourly and daily values

### 2.5.2.7 URLs – Number of hits per URL

This measurement data type displays the number of PIs per URL that were received in the aggregation period Traffic. The counted hits are PI-relevant and can be regarded as full PIs.

#### Example:

```
<dim_urls date="2016-04-12 00:00:00" aggr="hour">  
  <url>www.infonline.de</url>  
  <hits>21</hits>  
  <hitsinland>20</hitsinland>  
  <hitsausland>1</hitsausland>  
</dim_urls>
```

#### Reference:

A separate node is created per time interval for each URL visited during the aggregation period.

#### Possible aggregation:

Hourly and daily values

### 2.5.3 Error codes

The following table describes the error codes that can occur in the "Number of hits per error code type" measurement data element:

Status/Error code	Meaning
OK	No error (when no error (Ex) occurs, notifications (Nx) are possible)
N1	No UUID found in ae or mi
N3	uuid found, ie set (app measurement)
N4	No i00 cookie set
N5	Cookie renewed due to a lower version number
N6	mi found, ie is set (hybrid measurement)
N7	Is found, ie set (iPhone hack)
N8	no id found, use hash
N9	no id found, use hash and JavaScript fingerprint
N10	LSO not accessible
N11	Error in aid.io
N12	Marking for IPv6 (preparation for IPv6)
N13	Code type was missing in the pageview, then it will be set to CP and the standard Leercode will be set (JS functionality)
N14	Cookie was damaged, has been reset
A1	Referrer not included on whitelist (write data set to filtered DWH)
A2	Error in clientresolving (write data set to filtered DWH)
A3	Session could not be resolved
A4	checksum in data set is not correct
A6	NoScript was used but was not activated (write data set to filtered DWH)
A7	Call for an app was filtered because of an IVW correction

A8	Call for a MEW within an app (hybrid) was filtered because of an IVW correction
<b>Status/Error code</b>	<b>Meaning</b>
A9	Call for a MEW was filtered because of an IVW correction
A10	Device delivers data from the future via library
A11	JSON in data set (ae or mi) could not be processed. Defective JSON object
A12	Flash pixel (fp)
A13	Newsletter pixel (np)
A14	Test pixel

## 2.6 Example XML download

### Example (Period):

URL: <https://xml.ioam.de/xml.php?start=2017-05-07&end=2017-05-12&aggr=day>

Extract from the XML file:

```
▼<dim_sessions date="2017-05-07 00:00:00" aggr="day">
  <sessions>86504</sessions>
  <sessionsinland>76192</sessionsinland>
  <sessionsausland>10312</sessionsausland>
</dim_sessions>
▼<dim_sessions date="2017-05-08 00:00:00" aggr="day">
  <sessions>92207</sessions>
  <sessionsinland>78089</sessionsinland>
  <sessionsausland>14118</sessionsausland>
</dim_sessions>
▼<dim_sessions date="2017-05-09 00:00:00" aggr="day">
  <sessions>124774</sessions>
  <sessionsinland>104599</sessionsinland>
  <sessionsausland>20175</sessionsausland>
</dim_sessions>
▼<dim_sessions date="2017-05-10 00:00:00" aggr="day">
  <sessions>135359</sessions>
  <sessionsinland>114596</sessionsinland>
  <sessionsausland>20763</sessionsausland>
</dim_sessions>
▼<dim_sessions date="2017-05-11 00:00:00" aggr="day">
  <sessions>100499</sessions>
  <sessionsinland>84507</sessionsinland>
  <sessionsausland>15992</sessionsausland>
</dim_sessions>
▼<dim_sessions date="2017-05-12 00:00:00" aggr="day">
  <sessions>108693</sessions>
  <sessionsinland>93184</sessionsinland>
  <sessionsausland>15509</sessionsausland>
</dim_sessions>
```

**Example (Date with daily data):**

URL: <https://xml.ioam.de/xml.php?date=2017-12-12&aggr=day>

Extract from the XML file:

```
<dim_agents date="2017-12-12 00:00:00" aggr="day">
  <agent>Android Browser (Android)</agent>
  <sessions>153</sessions>
  <sessionsinland>131</sessionsinland>
  <sessionsausland>22</sessionsausland>
</dim_agents>
<dim_agents date="2017-12-12 00:00:00" aggr="day">
  <agent>Chrome (Android)</agent>
  <sessions>3064</sessions>
  <sessionsinland>2750</sessionsinland>
  <sessionsausland>314</sessionsausland>
</dim_agents>
<dim_agents date="2017-12-12 00:00:00" aggr="day">
  <agent>Chrome (Linux)</agent>
  <sessions>261</sessions>
  <sessionsinland>215</sessionsinland>
  <sessionsausland>46</sessionsausland>
</dim_agents>
```

**Example (aggregation hour with time):**

URL: <https://xml.ioam.de/xml.php?date=2017-12-12&aggr=day>

Extract from the XML file:

```
<dim_sessions date="2018-01-28 11:00:00" aggr="hour">
  <sessions>9</sessions>
  <sessionsinland>4</sessionsinland>
  <sessionsausland>5</sessionsausland>
</dim_sessions>
<dim_urls date="2018-01-28 10:00:00" aggr="hour">
  <url>idas.infonline.de</url>
  <hits>25</hits>
  <hitsinland>13</hitsinland>
  <hitsausland>12</hitsausland>
</dim_urls>
```

## 3 Contact

You can contact the Service & Support team any working day between 9 a.m. and 6 p.m. by

Telephone: [+49 \(0\) 228 / 410 29 – 77](tel:+49(0)2284102977)

e-mail for organisational queries: [service@INFOonline.de](mailto:service@INFOonline.de)

e-mail for technical queries: [support@INFOonline.de](mailto:support@INFOonline.de)

