

UTD Air Quality Download Guide

16. January 2015, Peter Kjeld. Last update: 08. November 2016

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Update: 08. March 2015, Station altitude has been added in all 3 formats. For the CSV format it has been added as the last column. The unit is meter.

Update: 28. July 2015: Added sample on use of time in from- and to-date.

Update: 03. March 2016: Added parameter 'qoute_output_values'

Update: 10. March 2016: Added format CSV2.

Update: 30. March 2016: Added note on case sensitive parameters

Update 08. November 2016: Asynchrony request

Summary

This short guide explains how to download up-to-date (UTD) air quality data provided by EEA. For more details on air quality and data source we refer to <http://www.eionet.europa.eu/aqportal>

Service level

The download service provides access to UTD air quality data reported to EEA on hourly basis from EEA member countries. Depending on the member country a delay of hours are expected from the measurement is taken until it is available in the download service. The delay is normally somewhere between 1 and 6 hours but it can take longer depending on the infrastructure setup in the specific country. The current status of delivery can be found in this dashboard:

https://tableau.discomap.eea.europa.eu/t/Aironline/views/Airquality_E2a_monitoring/DashboardE2a?:embed=y&:showShareOptions=true&:display_count=no&:showVizHome=no

The data offered via this service are provide as delivered by the member countries to EEA and not verified. EEA are not responsible for the quality or the correctness of the data. We encourage our data providers to redeliver data as soon as they identify problematic data (e.g. when measurement equipment fails). If data are redelivered because of wrong data, they might be redelivered as non-data (non-data are not deleted but the measurement value is set to - 999 and the validity flag set to invalid).

The download service is open accessible, though we do require users to request a token from EEA. The service will only work when a valid token is used. Please contact Peter.Kjeld@eea.europa.eu to request a token. In case of problems using the download service please use the same contact point.

The download service is monitored by EEA in normal office hours, following the EEA calendar.

How-to use the service

The download tool offers a number of parameters which can be used in any combination. In order to avoid overload on the database, we have set a limit of 50.000 records to be downloaded in one process. In case this limit is reached, there is no warning but only the first 50.000 records are included. To avoid this problem, we recommend to be as specific in your request as possible, e.g. last 24 hours of O3 data.

Synchronous or asynchronous request

Until October 2016 the download service only supported synchronous requests, meaning a request was sent, our server would process the request and return the result. This had some limitations and if the pressure was too high on the server or the request too demanding we would end up with a timeout in the webserver. To overcome this we have added the possibility to make an asynchronous request where a request is sent to the server, the job is added

to a queue and a response is returned to the requester. The response is not the requested data, but an URL where the data will be available when ready. Initially the URL will not be valid, but as soon as the job has been processed the data can be downloaded from this URL. It is the responsibility of the requester to check when the data are ready, e.g. by checking the URL every 10 minutes. The data package is available for 24 hours before it is deleted.

By default the download service works synchronously (as before October 2016). To switch to the asynchronous service add the parameter 'RunAsync=True' to the request.

Recommendation: We strongly recommend moving to asynchronous download.

See 'Asynchronous CSV request' under Samples to learn how to use the asynchronous download.

Parameters

Please note that the parameters are case sensitive. If not used as below they are ignored.

Name	Syntax	Description
UserToken	{GUID}	To use the service, you need a token from EEA. The service will verify if the token is valid, if not valid no data are returned. Example (invalid token); UserToken=6I8B1126-6576-423D-B7HA-3C519AG1232F
FromDate	yyyy-MM-dd hh:mm	Use FromDate and ToDate to make a filter based on the end datetime on measurements. If ToDate is omitted it will be replaced by 9999-01-01 in order to get a valid time extent. Leave blank if not used. Example; FromDate=2014-11-01&ToDate=2014-11-11 To include specific hour, this will work (from 00:00 to 12:00): FromDate=2014-11-01 +00%3A00&ToDate=2014-11-11+12%3A00
ToDate	yyyy-MM-dd hh:mm	Se FromDate
Countrycode	2-digit code	Provides a filter based on countrycodes. If more than one code, separate by comma. Leave blank if not used. Example; Countrycode=de,ie,es
InsertedSinceDate	yyyy-MM-dd hh:mm	To filter data based on when the values were processed and inserted into the EEA database. Normally used along with the UpdatedSinceDate, but both can be used independently. A useful filter if it is required to get new or updated data since last download. Leave blank if not used. Example; InsertedSinceDate=2014-11-10&UpdatedSinceDate=2014-11-10
UpdatedSinceDate	yyyy-MM-dd hh:mm	Se InsertedSinceDate
Pollutant		To filter specific pollutants, separate each pollutant by comma. The name of the pollutant should be the notation of the pollutant as given in: http://dd.eionet.europa.eu/vocabulary/aq/pollutant/view Example; Pollutant=O3,PM10,SO2
NameSpace	Inspire namespace	To filter one specific namespace (only one namespace can be given). The namespace should be the one used

		by the member states in e-Reporting. Example; Namespace=DK.NERI.AQ
Format	XML CSV CSV_OzoneWeb CSV2	The tool can provide three different dataformats; XML, CSV, CSV_OzoneWeb or CSV2. The CSV2 format is the same as CSV except the unit have been added (last column). The CSV_Ozoneweb match the old download format provided by OzoneWeb (http://air.discomap.eea.europa.eu/ArcGIS/rest/services/ExtractData/Air/GPServer/NRTAirData/execute). Example; Format=CSV_OzoneWeb
Quote_output_values	Yes No	Defines if the output values are quoted or not. Default value 'No'. Example; Quote_output_values=Yes
RunAsync	True False	Defines if the download service should work synchronously (True) or asynchronously (False). Default value 'False' Example; RunAsync=True

Web interface

For manual download this web page can be used to fill in the relevant parameters and execute the download job

<http://discomap.eea.europa.eu/map/fme/AirQualityUTDExport.htm>

Samples

To access the download service directly via a script, the get statements could look like below.

Important: None of the samples below work unless you add your token; &UserToken=<your token>

XML streaming:

Filter; all PM10 measurements between 2014-11-10 and 2014-11-11

<http://fme.discomap.eea.europa.eu/fmedatastreaming/AirQuality/AirQualityUTDExport.fmw?FromDate=2014-11-10&ToDate=2014-11-11&Countrycode=&InsertedSinceDate=&UpdatedSinceDate=&Pollutant=PM10&Namespace=&Format=XML>

CSV streaming:

Filter; all PM10 measurements between 2014-11-10 00:00 and 2014-11-11 00:00

<http://fme.discomap.eea.europa.eu/fmedatastreaming/AirQuality/AirQualityUTDExport.fmw?FromDate=2014-11-10&ToDate=2014-11-11&Countrycode=&InsertedSinceDate=&UpdatedSinceDate=&Pollutant=PM10&Namespace=&Format=CSV>

Asynchronous CSV request:

Filter; all PM10 measurements between 2014-11-10 00:00 and 2014-11-11 00:00

<http://fme.discomap.eea.europa.eu/fmedatastreaming/AirQuality/AirQualityUTDExport.fmw?FromDate=2014-11-10&ToDate=2014-11-11&Countrycode=&InsertedSinceDate=&UpdatedSinceDate=&Pollutant=PM10&Namespace=&Format=CSV&RunAsync=True>

This request return a XML like below. The ResultURL:

```
<?xml version="1.0" encoding="UTF-8"?>
<AirqualityUTDExport>
<RunAsync>
<JobSubmittTime>2016-11-08T11:58:42</JobSubmittTime>
<JobSubmittStatus>Success</JobSubmitStatus>
<ResultURL>https://ereporting.blob.core.windows.net/aqtest0/05a49d53-fd49-4960-b7ba-a0ae83e748f9.zip</ResultURL>
<ResultURLExpirationDate>2016-11-09T11:58:42</ResultURLExpirationDate>
</RunAsync>
</AirqualityUTDExport>
```

Initially the ResultURL will not be valid, and this response will be returned:

```
<?xml version="1.0" encoding="utf-8"?>
<Error>
<Code>BlobNotFound</Code>
<Message>The specified blob does not exist. RequestId:43d77e56-0001-0019-3aaf-390234000000 Time:2016-11-08T10:59:52.0340348Z</Message>
</Error>
```

After some minutes (depending on the load on our infrastructure), the URL will be valid

Data coverage

We are monitoring the data delivery from our member states and do our best to ensure a good coverage, but there are some variation due to the fact that we rely on many different systems having to deliver data to EEA. To see the current status on data delivery and which countries are delivering data and what they deliver, we refer to this report:

https://tableau.discomap.eea.europa.eu/t/Aironline/views/Airquality_E2a_monitoring/DashboardE2a?:embed=y&:showShareOptions=true&:display_count=no&:showVizHome=no

Feedback

In case of problems using this service, please contact peter.kjeld@eea.europa.eu