Aeroqual Cloud/Connect API

# Aeroqual Cloud Server

<https://cloud.aeroqual.com>

# Aeroqual Connect

http://{IP address of instrument}

# Process

1. Log in (POST /api/account/login) and get authentication token in cookie
2. If required fetch list of accessible instrument serial numbers (GET /api/instrument)
3. If required fetch details of instrument (GET /api/instrument/*serial*)
4. Download required data (GET /api/data/*serial*)

# API Reference

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| Log In | |
| *Description* | Log in to API – must be performed before sending any other API request.  On success, use the contents of the “Set-Cookie” header as the “Cookie” header for all subsequent API requests. |
| *Method* | POST |
| *URL* | /api/account/login |
| *Content-Type* | Form (application/x-www-form-urlencoded) |
| *Content* | UserName=*Username*&Password=*Password* |
| *Response Code* | 200 on success  401 on authentication failure |
| *Response Content* | N/A |
| *Example Request* | POST /api/account/login HTTP/1.1  Host: cloud.aeroqual.com  Content-Type: application/x-www-form-urlencoded  Content-Length: 27  UserName=user&Password=pass |
| *Example Response* | HTTP/1.1 200 OK  Date: Wed, 13 Jul 2016 21:48:12 GMT  Server: Apache/2.2.22 (Ubuntu)  X-AspNet-Version: 4.0.30319  Content-Length: 0  Expires: -1  Pragma: no-cache  Cache-Control: no-cache  Set-Cookie: .MONOAUTH=EybJBHnvQ19o6YvEvvZYfoAfqFADAgkkHa273dC0EIM1WBrUQdjRupoZ/lrngALCWBSynQM6FKTxQoU/93hmHVyGjR75MgdMNno74y/gojPK025BmgNgYVhFQpIai5oI; path=/; expires=Tue, 13 Jul 2066 08:10:01 GMT  Vary: Accept-Encoding  Content-Type: text/html |

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| Get list of instruments | |
| *Description* | Fetch list of accessible instrument serial numbers.  List is returned in the form of a JSON string array. |
| *Method* | GET |
| *URL* | /api/instrument |
| *Content-Type* | N/A |
| *Content* | N/A |
| *Response Code* | 200 on success  401 if not yet authenticated  403 if user does not have permission to access this API |
| *Response Content* | List of accessible instrument serial numbers in JSON string array |
| *Example Request* | GET [/api/instrument HTTP/1.1](http://cloudbeta.aeroqual.com/api/instrument)  Host: cloudbeta.aeroqual.com  Content-Length: 0  Cookie: .MONOAUTH=EybJBHnvQ19o6YvEvvZYfoAfqFADAgkkHa273dC0EIM1WBrUQdjRupoZ/lrngALCWBSynQM6FKTxQoU/93hmHVyGjR75MgdMNno74y/gojPK025BmgNgYVhFQpIai5oI; |
| *Example Response* | HTTP/1.1 200 OK  Date: Wed, 13 Jul 2016 21:56:34 GMT  Server: Apache/2.2.22 (Ubuntu)  X-AspNet-Version: 4.0.30319  Content-Length: 23  Expires: -1  Pragma: no-cache  Cache-Control: no-cache  Set-Cookie: ASP.NET\_SessionId=25E809DE0CB7F2F3C5392651; path=/  Vary: Accept-Encoding  Content-Type: application/json; charset=utf-8  ["TEST-006","TEST-008"] |

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| Get instrument details | |
| *Description* | Fetch specific instrument details including name, network, organisation, time zone, and sensor details. |
| *Method* | GET |
| *URL* | /api/instrument/*serial* |
| *Content-Type* | N/A |
| *Content* | N/A |
| *Response Code* | 200 on success  401 if not yet authenticated  403 if user does not have permission to access this API  404 if serial number does not exist or is not accessible |
| *Response Content* | Instrument details in JSON format. |
| *Example Request* | GET [/api/instrument/TEST-006 HTTP/1.1](http://cloudbeta.aeroqual.com/api/instrument/TEST-006)  Host: cloud.aeroqual.com  Content-Length: 0  Cookie: .MONOAUTH=EybJBHnvQ19o6YvEvvZYfoAfqFADAgkkHa273dC0EIM1WBrUQdjRupoZ/lrngALCWBSynQM6FKTxQoU/93hmHVyGjR75MgdMNno74y/gojPK025BmgNgYVhFQpIai5oI; |
| *Example Response* | HTTP/1.1 200 OK  Cache-Control: no-cache  Pragma: no-cache  Content-Type: application/json; charset=utf-8  Expires: -1  Server: Microsoft-IIS/8.5  Set-Cookie: ASP.NET\_SessionId=v2lf2eewvutvdi4pv3kgqbm5; path=/; HttpOnly  X-AspNet-Version: 4.0.30319  X-Powered-By: ASP.NET  Date: Fri, 19 Aug 2016 21:54:56 GMT  Content-Length: 190  {"serial":"TEST-006","name":"DS V1.3","organisation":"Aeroqual","network":"R&D","timeZone":"(UTC+12:00) Auckland, Wellington","sensors":[{"name":"PM10","units":"µg/m³","decimalPlaces":2}]} |

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| Get Data | |
| *Description* | Fetch instrument data.  serial = serial number of instrument  start time = date/time of beginning of required data period (inclusive) – in instrument local time zone, format *yyyy*-*mm*-*dd*T*hh*:*mm*:*ss*  end time = date/time of end of required data period (not inclusive)  averaging period = period in minutes to average data – minimum *1* minute  include journal = (optional) whether to include journal entries – *true* or *false* |
| *Method* | GET |
| *URL* | /api/data/*serial*?from=*start time*&to=*end time*&averagingperiod=*averaging period*&includejournal=*include journal* |
| *Content-Type* | N/A |
| *Content* | N/A |
| *Response Code* | 200 on success  400 if parameter error, error message supplied in JSON string  401 if not yet authenticated  403 if user does not have permission to access this API  404 if serial number does not exist or is not accessible |
| *Response Content* | Instrument data in JSON format. |
| *Example Request* | GET [/api/data/TEST-006?from=2016-01-01T00:00:00&to=2016-01-02T00:00:00&averagingperiod=60](http://cloudbeta.aeroqual.com/api/data/TEST-006?from=2016-01-01+00:00:00&to=2016-01-02+00:00:00&averagingperiod=60)&includejournal=false HTTP/1.1  Host: cloud.aeroqual.com  Content-Length: 0  Cookie: .MONOAUTH=EybJBHnvQ19o6YvEvvZYfoAfqFADAgkkHa273dC0EIM1WBrUQdjRupoZ/lrngALCWBSynQM6FKTxQoU/93hmHVyGjR75MgdMNno74y/gojPK025BmgNgYVhFQpIai5oI; |
| *Example Response* | HTTP/1.1 200 OK  Date: Wed, 13 Jul 2016 22:08:40 GMT  Server: Apache/2.2.22 (Ubuntu)  X-AspNet-Version: 4.0.30319  Content-Length: 1489  Expires: -1  Pragma: no-cache  Cache-Control: no-cache  Set-Cookie: ASP.NET\_SessionId=22D2ED4960888ABD6F0C1AAB; path=/  Vary: Accept-Encoding  Content-Type: application/json; charset=utf-8  {"serial":"TEST-006","name":"DS V1.3","organisation":"Aeroqual","network":"R&D","from":"2016-01-01T00:00:00","to":"2016-01-02T00:00:00","averagingPeriod":60,"timeZone":"(UTC+12:00) Auckland, Wellington","summerTimeAdjusted":true,"data":[{"Time":"2016-01-01T00:00:00","PM10":7.6513667106628418},{"Time":"2016-01-01T01:00:00","PM10":8.0489788055419922},{"Time":"2016-01-01T02:00:00","PM10":8.1776847839355469},{"Time":"2016-01-01T03:00:00","PM10":8.7529449462890625},{"Time":"2016-01-01T04:00:00","PM10":6.8064250946044922},{"Time":"2016-01-01T05:00:00","PM10":6.3162732124328613},{"Time":"2016-01-01T06:00:00","PM10":6.48232364654541},{"Time":"2016-01-01T08:00:00","PM10":6.2884984016418457},{"Time":"2016-01-01T09:00:00","PM10":4.7766218185424805},{"Time":"2016-01-01T10:00:00","PM10":2.6303682327270508},{"Time":"2016-01-01T11:00:00","PM10":1.3892650604248047},{"Time":"2016-01-01T12:00:00","PM10":1.5628399848937988},{"Time":"2016-01-01T13:00:00","PM10":1.6737300157546997},{"Time":"2016-01-01T14:00:00","PM10":1.3285499811172485},{"Time":"2016-01-01T15:00:00","PM10":0.94565802812576294},{"Time":"2016-01-01T16:00:00","PM10":1.0260108709335327},{"Time":"2016-01-01T17:00:00","PM10":0.79877299070358276},{"Time":"2016-01-01T18:00:00","PM10":1.1768513917922974},{"Time":"2016-01-01T20:00:00","PM10":1.4422817230224609},{"Time":"2016-01-01T21:00:00","PM10":1.9605566263198853},{"Time":"2016-01-01T22:00:00","PM10":4.897125244140625},{"Time":"2016-01-01T23:00:00","PM10":4.31338357925415}]} |