Contents

EOS CLOUD EXPORT

Last updated on February 10, 2021

This document explains the export api's to extract data from EOS cloud database server. There are three standard formats → xml using field labels, json and csv using camel case synonym labels and the csv export that is a file which can be saved.

Most exports are restricted to a maximum of 1000 records to prevent 'queries from hell' and archival interval data details (10 minutes) may be only available for the previous three-month period. Summary hourly, daily, monthly data is not restricted except for the maximum record restriction. Weekly exports are defaulted for the last 52 weeks. Full data sets are available by special requests, contact the systems administrator.

The record order is normally ascending using UTC time (WE_DATE_TIME) so that charts appear correct when they are produced from the export. Other groupings may be present when it makes sense➔ordered by station, device, sensor for example.

locDate, weDate and weTime values are based on local times of the station.

Use the flags 'IsActive' and 'online' from stations list export to determine current state of a station. Only active stations will have data available for export and 'online' indicates that the station is presently feeding data to the cloud site.

Use 'hasxxxx' from station list to determine which measurements are available for the station.

A '---' in field values indicates that no reading was available.

The client account must be 'activated' for the ability to export data and may be restricted to only a specific set of stations. Contact the systems administrator for details. A username/password will be provided.

If executing from a web page or cron job script, the authorization can be handled via php curl by populating the $url with the export URL that is required and supplying the $username/$password provided.
Example:

```
<?php

function get_eosexport($url,$username,$password){
        $ch = curl_init();
        curl_setopt($ch, CURLOPT_URL, $url);
        curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
        curl_setopt($ch, CURLOPT_USERPWD, "$username:$password");
        curl_setopt($ch, CURLOPT_HTTPAUTH, CURLAUTH_BASIC);
        $return = curl_exec($ch);
        curl_close($ch);
        echo $return;
}
?>
```

Client System

Station List

Retrieves a list of station details associated with a client account. Would be used to gather details to execute additional queries. The stationLink field is used to uniquely identify a station. A set of stations (one or more) would be associated to a client account. The unique ID for the client is provided by the administrator. The return also has some current weather details.

stations.php has two parameters:

ID = {client id}
Format = {1 for xml, 2 for json, 3 for csv / default=1}

Example:
https://server1.eosweather.ca/export/stations.php?ID=4e34d9e9-6f4e-11ea-bea1-000d3af32a59

XML Structure:

```
<Client ID="0605b424-dbd8-11e9-ac6a-000d3af32a59">
    <Station>
      <stationLink>b8880312-b877-11e9-ab73-000d3af32a59</stationLink>
      <brokerName>soldier.cloudmqtt.com</brokerName>
      <stationName>Bayers Lake Office</stationName>
      <heading>0.0</heading>
      <sog>0.0</sog>
      <latitude>44.636730</latitude>
      <longitude>-63.664760</longitude>
      <altitude>20</altitude>
      <isActive>Yes</isActive>
      <hasTemp>Yes</hasTemp>
      <hasWind>Yes</hasWind>
      <hasPressure>Yes</hasPressure>
      <hasRain>Yes</hasRain>
      <hasSolar>Yes</hasSolar>
      <hasNode>Yes</hasNode>
      <hasTide>No</hasTide>
      <hasGPS>No</hasGPS>
      <hasChannel>No</hasChannel>
      <timeZone>-4:00</timeZone>
      <online>No</online>
      <windSpeed>11.9</windSpeed>
      <windDir>WNW</windDir>
      <temp>-4.5</temp>
      <humidity>52</humidity>
      <bar>997.6</bar>
      <cloudy>7.0</cloudy>
      <tide>---</tide>
      <rise>---</rise>
      <lastArchive>2021-02-10 17:50:00</lastArchive>
    </Station>
</Client>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station List",
   "clientLink": "4e34d9e9-6f4e-11ea-bea1-000d3af32a59",
   "description": "Stations for this client",
   "items": [
    {
     "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
     "brokerName": "soldier.cloudmqtt.com",
     "stationName": "Bayers Lake Office",
     "heading": "0.0",
     "sog": "0.0",
     "latitude": "44.636730",
     "longitude": "-63.664760",
     "altitude": "20",
     "isActive": "Yes",
     "hasTemp": "Yes",
     "hasWind": "Yes",
     "hasPressure": "Yes",
     "hasRain": "Yes",
     "hasSolar": "Yes",
     "hasNode": "Yes",
     "hasTide": "No",
     "hasGPS": "No",
     "hasChannel": "No",
     "timeZone": "-4:00",
     "online": "Yes",
     "windSpeed": "14.5",
     "windDir": "WNW",
     "temp": "1.2",
     "humidity": "85",
     "bar": "995.6",
     "cloudy": "0",
     "tide": "---",
     "rise": "---",
     "lastArchive": "2021-02-06 22:10:00"
} ] } ] }
```

Core Module

Extract the stationLink for each station to be used for the following scripts to extract climate details.

Last Archive Reading

Would be used to retrieve the last archive interval readings from a station.

archivereading.php has two parameters:

ID = {stationLink}

Format = {1 for xml, 2 for json, 3 for csv / default=1} *optional*

Example:

https://server1.eosweather.ca/export/archivereading.php?ID=b8880312-b877-11e9-ab73-000d3af32a59&format=2

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
    <Archive>
      <stationLink>b8880312-b877-11e9-ab73-000d3af32a59</stationLink>
      <weDate>2021-02-10</weDate>
      <weTime>13:50:00</weTime>
      <UTC>2021-02-10 17:50:00</UTC>
      <temp>-4.5</temp>
      <tempHi>-4.4</tempHi>
      <tempLow>-4.6</tempLow>
      <humidity>52</humidity>
      <dewpoint>-12.8</dewpoint>
      <windSpeed>11.9</windSpeed>
      <windDir>WNW</windDir>
      <windAngle>295</windAngle>
      <windRun>1.98</windRun>
      <windHi>29.0</windHi>
      <windChill>-9.2</windChill>
      <heatIndex>---</heatIndex>
      <bar>997.6</bar>
      <rain>0.00</rain>
      <rainRate>0.0</rainRate>
      <solarRad>424.1</solarRad>
      <solarRadHi>431.0</solarRadHi>
      <solarEnergy>6.08</solarEnergy>
      <solarMax>452.0</solarMax>
      <solarUV>0.0</solarUV>
      <cloudy>7.0</cloudy>
      <heatDD>0.158</heatDD>
      <coolDD>0.000</coolDD>
      <voltsBattery>0.0</voltsBattery>
      <voltsSource>13.8</voltsSource>
      <tempBoard>70.8</tempBoard>
      <arcInt>00:10:00</arcInt>
    </Archive>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Weather Details",
   "items": [
    {
     "WeDate": "2021-02-07",
     "WeTime": "12:30:00",
     "UTC": "2021-02-07 16:30:00",
     "temp": "-1.7",
     "tempHi": "-1.6",
     "tempLow": "-1.7",
     "humidity": "59",
     "dewPoint": "-8.6",
     "windSpeed": "0.0",
     "windHi": "0.0",
     "windDir": "SSW",
     "windAngle": "220",
     "windRun": "0.00",
     "windChill": "-1.7",
     "heatIndex": "---",
     "bar": "1004.9",
     "rain": "0.00",
     "rainRate": "0.0",
     "solarRad": "138.4",
     "solarRadHi": "147.0",
     "solarEnergy": "1.99",
     "solarMax": "529.0",
     "solarUV": "0.0",
     "cloudy": "74.0",
     "coolDD": "0.000",
     "heatDD": "0.139",
     "voltsBattery": "0.0",
     "voltsSource": "12.5",
     "tempBoard": "119.3",
     "arcInt": "00:10:00"
} ] } ] }
```

Almanac Data

Moon and daily solar parameters are calculated by the station based on its latitude and longitudinal position. A daily record is generated and sent once a day by the station.

almanac.php has four parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml, 2 for json, 3 for csv / default=1} *optional*

Example:
https://server1.eosweather.ca/export/almanac.php?ID=7d4f236e-8eaa-11e4-ab9e-e0db5520e508&format=1&period=1&end=2021-02-06

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
        <Almanac_Day>
          <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
          <weDate>2021-02-19</weDate>
          <sunRise>07:11:41</sunRise>
          <sunSet>17:46:33</sunSet>
          <solarMax>596</solarMax>
          <solarAltitude>33</solarAltitude>
          <dayLength>10.58</dayLength>
          <moonIndex>6</moonIndex>
          <moonPhase>in its first quarter (increasing to full)</moonPhase>
          <moonFullness>45</moonFullness>
          <tides>00:12 High 160.0 / 07:07 Low 70.0 / 13:01 High 140.0 / 19:07 Low 70.0</tides>
          <lastArchive>2021-02-19 04:00:36</lastArchive>
        </Almanac_Day>
</Station>
```

JSON Structure:

```
{
 "almanacExport": [
  {
   "title": "Almanac Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Almanac for this station",
   "items": [
    {
     "weDate": "2021-02-04",
     "sunRise": "07:31:58",
     "sunSet": "17:24:45",
     "solarMax": "513",
     "solarAltitude": "28",
     "dayLength": "9.88",
     "moonIndex": "17",
     "moonPhase": "waning gibbous (decreasing from full)",
     "moonFullness": "57",
     "tides": "04:04 Low 50.0 \/ 09:09 High 180.0 \/ 16:04 Low 30.0 \/ 22:10 High 180.0",
     "lastArchive": "2021-02-04 04:00:12"} ] } ] }
```

Archive Data

The fine details with a normal 10 minute interval. Could be used to produce charts for daily or weekly periods.

archive.php has four parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml, 2 for json, 3 for csv / default=1} *optional*

Example:
https://server1.eosweather.ca/export/archive.php?ID=7d4f236e-8eaa-11e4-ab9e-e0db5520e508

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
    <Archive>
      <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
      <weDate>2021-02-19</weDate>
      <weTime>00:00:00</weTime>
      <UTC>2021-02-19 04:00:00</UTC>
      <tempOut>-7.9</tempOut>
      <tempHi>-7.8</tempHi>
      <tempLow>-8.0</tempLow>
      <humidity>87</humidity>
      <dewpoint>-9.6</dewpoint>
      <windSpeed>0.0</windSpeed>
      <windDir>NNE</windDir>
      <windAngle>20</windAngle>
      <windRun>0.00</windRun>
      <windHi>0.0</windHi>
      <windChill>-7.9</windChill>
      <heatIndex>---</heatIndex>
      <bar>1026.5</bar>
      <rain>0.00</rain>
      <rainRate>0.0</rainRate>
      <solarRad>0.0</solarRad>
      <solarRadHi>0.0</solarRadHi>
      <solarEnergy>0.00</solarEnergy>
      <solarMax>null</solarMax>
      <solarUV>0.0</solarUV>
      <cloudy>null</cloudy>
      <heatDD>0.182</heatDD>
      <coolDD>0.000</coolDD>
      <voltsBattery>12.8</voltsBattery>
      <voltsSource>24.0</voltsSource>
      <tempBoard>100.5</tempBoard>
      <arcInt>00:10:00</arcInt>
    </Archive>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Weather Details",
   "items": [
    {
     "WeDate": "2021-02-07",
     "WeTime": "00:00:00",
     "UTC": "2021-02-07 04:00:00",
     "temp": "-0.6",
     "tempHi": "-0.5",
     "tempLow": "-0.8",
     "humidity": "90",
     "dewpoint": "-2.0",
     "windSpeed": "10.1",
     "windHi": "26.1",
     "windDir": "SW",
     "windAngle": "220",
     "windRun": "1.68",
     "windChill": "-4.0",
     "heatIndex": "---",
     "bar": "1000.5",
     "rain": "0.00",
     "rainRate": "0.0",
     "solarRad": "0.0",
     "solarRadHi": "0.0",
     "solarEnergy": "0.00",
     "solarMax": "0",
     "solarUV": "0.0",
     "cloudy": "0",
     "coolDD": "0.000",
     "heatDD": "0.131",
     "voltsBattery": "0.0",
     "voltsSource": "12.5",
     "tempBoard": "119.3",
     "arcInt": "00:10:00"
} ] } ] }
```

Day Archive Data

A summary of that day's readings. Could be used for a long period where granularity is by day. The default is to return todays summary only. The date is based on local time at the station.

dayarchive.php has four parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/dayarchive.php?ID=7d4f236e-8eaa-11e4-ab9e-e0db5520e508&format=2

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
    <Day_Archive>
      <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
      <weDate>2021-02-19</weDate>
      <weYear>2021</weYear>
      <weMonth>2</weMonth>
      <weWeek>7</weWeek>
      <tempAverage>-5.9</tempAverage>
      <tempMax>-1.8</tempMax>
      <tempMin>-8.0</tempMin>
      <heatDD>14.4</heatDD>
      <coolDD>0.0</coolDD>
      <rainTotal>0.0</rainTotal>
      <windAverage>2.9</windAverage>
      <windHi>16.1</windHi>
      <windRun>42.2</windRun>
      <barMax>1026.5</barMax>
      <barMin>1020.2</barMin>
      <solarEnergy>211.1</solarEnergy>
      <solarMax>746.2</solarMax>
      <tempNight>-7.9</tempNight>
      <tempSunrise>-7.4</tempSunrise>
      <tempNoon>-2.0</tempNoon>
      <tempSunset>-2.0</tempSunset>
      <tideMax>140.1</tideMax>
      <tideMin>29.2</tideMin>
      <lastArchive>2021-02-19 18:11:06</lastArchive>
    </Day_Archive>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Weather Days",
   "items": [
    {
     "weDate": "2021-02-06",
     "weYear": "2021",
     "weMonth": "2",
     "weWeek": "5",
     "tempAverage": "3.5",
     "tempMax": "7.9",
     "tempMin": "-2.2",
     "heatDD": "14.8",
     "coolDD": "0.0",
     "windAverage": "8.3",
     "windHi": "53.8",
     "windRun": "201.4",
     "barMax": "1001.1",
     "barMin": "987.9",
     "rainTotal": "148.0",
     "solarEnergy": "278.9",
     "solarMax": "564.7",
     "tempNight": "2.1",
     "tempSunise": "5.7",
     "tempNoon": "6.3",
     "tempSunset": "1.8",
     "tideMax": "0.0",
     "tideMin": "0.0",
     "lastArchive": "2021-02-07 06:00:09"
} ] } ] }
```

Week Archive Data

A weekly summary of archive data which returns up to the last 52 weeks by default. Order is descending with last record first.

weekarchive.php has two parameters:

ID = {stationLink}
period = {# additional weeks / default=52} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/weekarchive.php?ID=b8880312-b877-11e9-ab73-000d3af32a59&period=1&format=2

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
        <weekArchive>
                <weYear>2021</weYear>
                <weWeek>6</weWeek>
                <tempAverage>-5.5</tempAverage>
                <tempMax>-0.6</tempMax>
                <tempMin>-12.3</tempMin>
                <heatDD>41.4</heatDD>
                <coolDD>0.0</coolDD>
                <rainTotal>0.0</rainTotal>
                <windAverage>12.7</windAverage>
                <windHigh>65.0</windHigh>
                <windRun>548.0</windRun>
                <barMax>1010.0</barMax>
                <barMin>976.7</barMin>
                <solarEnergy>351.6</solarEnergy>
                <solarMax>482.5</solarMax>
                <lastArchive>2021-02-14 23:53:02</lastArchive>
        </weekArchive>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Weather Weeks",
   "items": [
    {
     "weYear": "2020",
     "weWeek": "13",
     "tempAverage": "2.2",
     "tempMax": "12.9",
     "tempMin": "-2.9",
     "heatDD": "56.6",
     "coolDD": "0.0",
     "windAverage": "9.1",
     "windHi": "46.6",
     "windRun": "701.3",
     "barMin": "1009.9",
     "barMax": "981.4",
     "rain": "50.8",
     "solarEnergy": "988.9",
     "solarMax": "671.7",
     "lastArchive": "2020-04-10 06:00:03"
} ] } ] }
```

Month Archive Data

A monthly summary for entire period the station has been active. Order is descending by year and month, last record first.

montharchive.php has two parameters:

ID = {stationLink}
period = {# additional months / default=1000} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/montharchive.php?ID=7d4f236e-8eaa-11e4-ab9e-e0db5520e508&period=2&format=1

XML Structure:

```
<Station ID="30f51a9d-2110-11ea-a2b1-000d3af32a59">
    <monthArchive>
      <weYear>2021</weYear>
      <weMonth>2</weMonth>
      <tempAverage>-2.5</tempAverage>
      <tempMax>11.3</tempMax>
      <tempMin>-12.8</tempMin>
      <heatDD>402.9</heatDD>
      <coolDD>0.0</coolDD>
      <rainTotal>155.2</rainTotal>
      <windAverage>5.6</windAverage>
      <windHigh>74.2</windHigh>
      <windRun>2597.1</windRun>
      <barMax>1028.0</barMax>
      <barMin>986.5</barMin>
      <solarEnergy>3600.1</solarEnergy>
      <solarMax>746.2</solarMax>
      <lastArchive>2021-02-20 15:55:01</lastArchive>
    </monthArchive>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Station Data",
   "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
   "description": "Weather Months",
   "items": [
    {
     "weYear": "2020",
     "weMonth": "3",
     "tempMean": "1.7",
     "tempMax": "12.9",
     "tempMin": "-2.9",
     "heatDD": "91.6",
     "coolDD": "0.0",
     "windSpeed": "9.0",
     "windHigh": "46.6",
     "windRun": "1119.1",
     "barMax": "1009.9",
     "barMin": "981.4",
     "rain": "50.8",
     "solarEng": "1283.2",
     "solarMax": "671.7",
     "lastMod": "2020-04-10 06:00:02"
} ] } ] }
```


Year Archive Data

At the end of each year the archive details are transferred to a stand-alone database and purged from the main weather database. They can still be retrieved using this script format where the year is substituted in the XXXX call. It will only produce a csv file format.

archiveXXXX.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional, use 365 for entire year*
end = {end date in Y-m-d example 2020-12-31 is 31-Dec-2020/ default is today} *optional*

Tide Module

Tidal Last Reading

The last data record received for the associated station with TIDE = predicted, RISE = actual reading above datum.

tidereading.php has three parameters:

ID = {stationLink}
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/tidereading.php?ID=d127f9e2-3633-11ea-a2b1-000d3af32a59&format=2

XML Structure:

```
<Station ID="d127f9e2-3633-11ea-a2b1-000d3af32a59">
        <tideData>
                <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
                <locDate>2021-02-21 08:00:00</locDate>
                <UTC>2021-02-21 12:00:00</UTC>
                <tide>71.0</tide>
                <rise>62.6</rise>
                <tideDiff>-8.4</tideDiff>
        </tideData>
</Station>
```

JSON Structure:

```
{
 "tideExport": [
  {
   "title": "Tide Data",
   "stationLink": "d127f9e2-3633-11ea-a2b1-000d3af32a59",
   "description": "Tidal levels for this station",
   "items": [
    {
     "locDate": "2021-02-06 13:00:00",
     "UTC": "2021-02-06 17:00:00",
     "tide": "107.0",
     "rise": "129.5",
     "tideDiff": "22.5"
} ] } ] }
```

Tidal Archive Data

A full set of extended data records for tidal details for the associated station with TIDE = predicted, RISE = actual reading above datum.

tidearchive.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/tidearchive.php?ID=7d4f236e-8eaa-11e4-ab9e-e0db5520e508&format=1

XML Structure:

```
<Station ID="d127f9e2-3633-11ea-a2b1-000d3af32a59">
        <tideData>
        <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
                <locDate>2021-02-21 00:00:00</locDate>
                <UTC>2021-02-21 04:00:00</UTC>
                <tide>120.0</tide>
                <rise>111.8</rise>
                <tideDiff>-8.2</tideDiff>
        </tideData>
</Station>
```

JSON Structure:

```
{
 "tideExport": [
  {
   "title": "Tide Data",
   "stationLink": "d127f9e2-3633-11ea-a2b1-000d3af32a59",
   "description": "Tidal levels for this station",
   "items": [
    {
     "locDate": "2021-02-06 13:00:00",
     "UTC": "2021-02-06 17:00:00",
     "tide": "107.0",
     "rise": "129.5",
     "tideDiff": "22.5"
} ] } ] }
```

Year Tide Archive Data

At the end of each year the archive details are transferred to a stand-alone database and purged from the main weather database. They can still be retrieved using this script format where the year is substituted in the XXXX call. It will only produce a csv file format.

tidearchiveXXXX.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional, use 365 for entire year*
end = {end date in Y-m-d example 2020-12-31 is 31-Dec-2020/ default is today} *optional*

Ship Module

Ship Archive Data

A set of extended data ship records associated with this station.

shiparchive.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/shiparchive.php?ID=a9915bdb-f36b-11e9-ac6a-000d3af32a59&period=4&format=2

XML Structure:

```
<Station ID="a9915bdb-f36b-11e9-ac6a-000d3af32a59">
        <ShipData>
                <weDate>2021-02-16</weDate>
                <weTime>00:00:00</weTime>
                <UTC>2021-02-16 04:00:00</UTC>
                <latitude>46.28311166666667</latitude>
                <longitude>-60.15229833333333</longitude>
                <sog>16.3</sog>
                <cog>32</cog>
                <pitch>-0.6</pitch>
                <roll>0.2</roll>
                <stbdRpm>127.0</stbdRpm>
                <portRPM>127.0</portRPM>
                <flow>945.0</flow>
                <flowRate>103.0</flowRate>
        </ShipData>
</Station>
```

JSON Structure:


```
{
 "shipExport": [
  {
   "title": "Ship Data",
   "stationLink": "a9915bdb-f36b-11e9-ac6a-000d3af32a59",
   "description": "Ship Data for this station",
   "items": [
    {
     "weDate": "2021-02-06",
     "weTime": "12:40:00",
     "UTC": "2021-02-06 16:40:00",
     "latitude": "46.20957333333334",
     "longitude": "-60.242783333333335",
     "sog": "3.0",
     "cog": "144",
     "pitch": "-0.7",
     "roll": "0.3",
     "stbdRPM": "148.0",
     "portRPM": "147.0",
     "flow": "174.0",
     "flowRate": "0.0"
} ] } ] }
```

Ship Archive by Date

A summary set of daily ship records associated with this station. By default returns just todays summary.

shipbydate.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/shipbydate.php?ID=a9915bdb-f36b-11e9-ac6a-000d3af32a59&period=4&format=1

XML Structure:

```
<Station ID="a9915bdb-f36b-11e9-ac6a-000d3af32a59">
        <shipDate>
                <weDate>2021-02-16</weDate>
                <weYear>2021</weYear>
                <weMonth>2</weMonth>
                <weWeek>7</weWeek>
                <sogAverage>27.4</sogAverage>
                <pitchMax>0.4</pitchMax>
                <pitchMin>-3.0</pitchMin>
                <rollMax>0.5</rollMax>
                <rollMin>0.0</rollMin>
                <flowAverage>24035.2</flowAverage>
                <flowMax>11635.0</flowMax>
                <flowRateAverage>112.9</flowRateAverage>
                <lastArchive>2021-02-16 23:51:01</lastArchive>
        </shipDate>
</Station>
```

JSON Structure:

```
{
  "stationExport": [
    {
      "title": "Ship Date",
      "stationLink": "a9915bdb-f36b-11e9-ac6a-000d3af32a59",
      "description": "Ship details by days",
      "items": [
        {
          "weDate": "2021-02-10",
          "weYear": "2021",
          "weMonth": "2",
          "weWeek": "6",
          "sogAverage": "30.0",
          "pitchMax": "0.8",
          "pitchMin": "-1.1",
```

```
        "rollMax": "1.0",
        "rollMin": "-0.1",
        "flowAverage": "15447.6",
        "flowMax": "15897.0",
        "flowRateAverage": "134.6",
        "lastArchive": "2021-02-10 23:51:01"
      } ] } ] }
```


Ship Archive by Week

A set of extended weekly ship records associated with this station. The order is descending in this export, latest record first for the last 52 weeks.

shipbyweek.php has three parameters:

ID = {stationLink}
period = {# additional weeks / default=52} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/shipbyweek.php?ID=a9915bdb-f36b-11e9-ac6a-000d3af32a59&period=1&format=1

XML Structure:


```
<Station ID="a9915bdb-f36b-11e9-ac6a-000d3af32a59">
        <shipWeek>
                <weYear>2021</weYear>
                <weWeek>7</weWeek>
                <sogAverage>27.7</sogAverage>
                <pitchMax>1.5</pitchMax>
                <pitchMin>-4.3</pitchMin>
                <rollMax>0.9</rollMax>
                <rollMin>-0.4</rollMin>
                <flowAverage>136620.4</flowAverage>
                <flowMax>18951.0</flowMax>
                <flowRateAverage>118.7</flowRateAverage>
                <lastArchive>2021-02-20 19:52:02</lastArchive>
        </shipWeek>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Ship Week",
   "stationLink": "a9915bdb-f36b-11e9-ac6a-000d3af32a59",
   "description": "Ship details by week",
   "items": [
    {
     "weYear": "2021",
     "weWeek": "2",
     "sogAverage": "30.0",
     "pitchMax": "0.8",
     "pitchMin": "-1.1",
     "rollMax": "1.0",
     "rollMin": "-0.1",
     "flowAverage": "15447.6",
     "flowMax": "15897.0",
     "flowRateAverage": "134.6",
     "lastArchive": "2021-02-10 23:51:01"
    } ] } ] }
```

Ship Archive by Month

A set of extended monthly ship records associated with this station. The order is descending in this export, latest record first with all summary records returned by default.

shipbymonth.php has three parameters:

ID = {stationLink}
period = {# additional months / default=1000} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/shipbymonth.php?ID=a9915bdb-f36b-11e9-ac6a-000d3af32a59&period=1&format=1

XML Structure:

```
<Station ID="a9915bdb-f36b-11e9-ac6a-000d3af32a59">
        <shipMonth>
                <weYear>2021</weYear>
                <weMonth>2</weMonth>
                <sogAverage>28.4</sogAverage>
                <pitchMax>1.7</pitchMax>
                <pitchMin>-4.3</pitchMin>
                <rollMax>1.6</rollMax>
                <rollMin>-0.4</rollMin>
                <flowAverage>343341.6</flowAverage>
                <flowMax>18951.0</flowMax>
                <flowRateAverage>123.1</flowRateAverage>
                <lastArchive>2021-02-20 19:56:01</lastArchive>
        </shipMonth>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Ship Month",
   "stationLink": "a9915bdb-f36b-11e9-ac6a-000d3af32a59",
   "description": "Ship details by month",
   "items": [
    {
     "weYear": "2021",
     "weMonth": "2",
     "sogAverage": "30.0",
     "pitchMax": "0.8",
     "pitchMin": "-1.1",
     "rollMax": "1.0",
     "rollMin": "-0.1",
     "flowAverage": "15447.6",
     "flowMax": "15897.0",
     "flowRateAverage": "134.6",
     "lastArchive": "2021-02-10 23:51:01"
    } ] } ] }
```


Year Ship Archive Data

At the end of each year the archive details are transferred to a stand-alone database and purged from the main weather database. They can still be retrieved using this script format where the year is substituted in the XXXX call. It will only produce a csv file format.

shiparchiveXXXX.php has three parameters:

ID = {stationLink}
period = {# additional days / default=0} *optional, use 365 for entire year*
end = {end date in Y-m-d example 2020-12-31 is 31-Dec-2020/ default is today} *optional*

eSense Module

Station Device List

A list of eSense remote devices associated with a station. A station may have 1 to many devices and a device would have 1 to 20 sensors. The data comes in randomly and is available, but a data summary of hours is produced to match up with core data archive times that match. One record per hour.

devicelist.php has two parameters:

ID = {stationLink}
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicelist.php?ID=f9fc2057-9a72-11e9-82e0-000d3af32a59&format=2

XML Structure:

```
<Station ID="f9fc2057-9a72-11e9-82e0-000d3af32a59">
        <Device>
           <deviceLink>21e694e2-19f3-11eb-bc91-000d3af32a59</deviceLink>
           <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
           <deviceId>00:12:4b:00:1e:1d:da:0c</deviceId>
           <deviceName>Scan Reach</deviceName>
           <cloudName>Device1</cloudName>
           <latitude>44.5367090</latitude>
           <longitude>-63.7908461</longitude>
           <altitude>2</altitude>
           <sleep>1800</sleep>
        </Device>
</Station>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Device List",
   "stationLink": "f9fc2057-9a72-11e9-82e0-000d3af32a59",
   "description": "eSense devices for this station",
   "items": [
    {
     "deviceLink": "27f2de1d-6ec8-11ea-bea1-000d3af32a59",
     "deviceId": "node1",
     "deviceName": "Field 1",
     "cloudName": "Node1",
     "latitude": "44.5367090",
     "longitude": "-63.7908461",
     "altitude": "",
     "sleep": "1800"} ] } ] }
```

Device Sensor List

A list of sensors associated with an eSense device. The device id is a unique value assigned to the remote device, which may be the mac address. Device link is a unique value assigned by the database to link the device to the associated station.

sensorlist.php has two parameters:

ID = {deviceID} OR LINK = {deviceLink}
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/sensorlist.php?LINK=27f2de1d-6ec8-11ea-bea1-000d3af32a59&format=2

https://server1.eosweather.ca/export/sensorlist.php?ID=00:12:4b:00:1e:1d:da:0c&format=1

Returns a list of sensor(s) records for this device.

XML Structure:

```
<Device ID="27f2de1d-6ec8-11ea-bea1-000d3af32a59">
        <Sensor>
          <sensorLink>b542adc1-6ec9-11ea-bea1-000d3af32a59</sensorLink>
          <sensorId>1</sensorId>
          <idName>Sensor2</idName>
          <sensorName>Soil Temp</sensorName>
          <sensorType>SI709</sensorType>
          <sensorUnits>Celsius</sensorUnits>
        </Sensor>
</Device>
```

JSON Structure:

```
{
 "stationExport": [
  {
   "title": "Sensor List",
   "deviceLink": "27f2de1d-6ec8-11ea-bea1-000d3af32a59",
   "description": "Sensors for this device",
   "items": [
    {
     "sensorLink": "b542adc1-6ec9-11ea-bea1-000d3af32a59",
     "Id": "1",
     "idName": "Sensor2",
     "sensorName": "Soil Temp",
     "sensorType": "SI709",
     "sensorUnits": "Celcius"
}]}]}
```

Last Device Reading

The last message sent by a device with sensor parameters and data. A record for each active sensor is returned. You can filter for a specific sensor if necessary.

devicereading.php has two parameters:

ID = {deviceLink}
sensor = {sensor id number /default= all} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicereading.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&sensor=2&format=1

XML Structure:

```
<Device ID="bdc225e6-a28a-11ea-a172-000d3af32a59">
	<Archive>
		<stationLink>b8880312-b877-11e9-ab73-000d3af32a59</stationLink>
		<deviceLink>bdc225e6-a28a-11ea-a172-000d3af32a59</deviceLink>
		<weDate>2021-02-06 05:00:00</weDate>
		<deviceName>Greenhouse</deviceName>
		<sensorId>2</sensorId>
		<sensorName>Solar Voltage</sensorName>
		<sensorType>Solar</sensorType>
		<sensorUnits>Volts</sensorUnits>
		<sensorValue>10.000</sensorValue>
	</Archive>
</Device>
```

JSON Structure:

```
{
 "stationExport": [
  {
   "title": "Device Data",
   "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
   "description": "Device Reading",
   "items": [
    {
     "weDate": "2021-02-06 05:00:00",
     "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
     "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
     "sensorId": "2",
     "sensorName": "Battery",
     "sensorType": "Battery",
     "sensorUnits": "Volts",
     "sensorValue": "12.000"
}]}]}
```

Device Archive

A set of archived records for this station device readings for all sensors, gathered by hour. A device has a possible set of 20 sensor data points. The weDate/weHour is based on UTC, not local time.

devicearchive.php has four parameters:

ID = {deviceLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicearchive.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&period=7&format=2

XML Structure:

```
<Device ID="21e694e2-19f3-11eb-bc91-000d3af32a59">
        <Archive>
                <deviceLink>21e694e2-19f3-11eb-bc91-000d3af32a59</deviceLink>
                <weDate>2021-02-08</weDate>
                <weHour>14</weHour>
                <S0>0.000</S0>
                <S1>0.000</S1>
                <S2>120.000</S2>
                <S3>18.500</S3>
                <S4>0.000</S4>
                <S5>0.000</S5>
                <S6>0.000</S6>
                <S7>0.000</S7>
                <S8>0.000</S8>
                <S9>0.000</S9>
                <S10>0.000</S10>
                <S11>0.000</S11>
                <S12>0.000</S12>
                <S13>0.000</S13>
                <S14>0.000</S14>
                <S15>0.000</S15>
                <S16>0.000</S16>
                <S17>0.000</S17>
                <S18>0.000</S18>
                <S19>0.000</S19>
                <S20>0.000</S20>
        </Archive>
</Device>
```

JSON Structure:


```
{
  "stationExport": [
    {
      "title": "Device Archive Data",
      "deviceLink": "21e694e2-19f3-11eb-bc91-000d3af32a59",
      "description": "Device Weather Details",
      "items": [
        {
          "deviceLink": "21e694e2-19f3-11eb-bc91-000d3af32a59",
          "weDate": "2021-02-08",
          "weHour": "14",
          "S0": "0.000",
          "S1": "0.000",
          "S2": "120.000",
          "S3": "18.500",
          "S4": "0.000",
          "S5": "0.000",
          "S6": "0.000",
          "S7": "0.000",
          "S8": "0.000",
          "S9": "9.000",
          "S10": "0.000",
          "S11": "0.000",
          "S12": "0.000",
          "S13": "0.000",
          "S14": "0.000",
          "S15": "0.000",
          "S16": "0.000",
          "S17": "0.000",
          "S18": "0.000",
          "S19": "0.000",
          "S20": "0.000"}]}]}
```

Device by Hour

A set of archived records recorded by the station or device **with core data**. A record is generated for each activated sensor and can be filtered for a specific sensor using the sensor id. The weDate/ weTime is based on local time of the station. The sensor value is an average of the records received during this hour period. No record is generated if no device feed occurred.

devicebyhour.php has five parameters:

ST = {stationLink} or ID = {deviceLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
sensor = {sensor id number /default=all} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicebyhour.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59

XML Structure:

```
<Device ID="bdc225e6-a28a-11ea-a172-000d3af32a59">
   <Archive>
         <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
         <deviceLink>21e694e2-19f3-11eb-bc91-000d3af32a59</deviceLink>
         <sensorLink>ddafa23b-19f3-11eb-bc91-000d3af32a59</sensorLink>
         <sensorName>Wind Speed</sensorName>
         <sensorId>1</sensorId>
         <sensorType>Wind</sensorType>
         <sensorUnits>Kph</sensorUnits>
         <sensorValue>0.000</sensorValue>
         <weDate>2021-02-08</weDate>
         <weTime>10:00:00</weTime>
         <UTC>2021-02-08 14:00:00</UTC>
         <temp>-3.2</temp>
         <tempHi>-3.1</tempHi>
         <tempLow>-3.2</tempLow>
         <humidity>100</humidity>
         <dewpoint>-3.2</dewpoint>
         <thw>-3.2</thw>
         <thws>-3.2</thws>
         <windSpeed>6.2</windSpeed>
         <windDir>ENE</windDir>
         <windAngle>70</windAngle>
         <windRun>1.03</windRun>
         <windHi>14.0</windHi>
         <windChill>-5.8</windChill>
         <heatIndex>---</heatIndex>
         <bar>1006.5</bar>
         <rain>0.00</rain>
```

```
            <rainRate>0.0</rainRate>
            <solarRad>160.2</solarRad>
            <solarRadHi>170.0</solarRadHi>
            <solarEnergy>2.30</solarEnergy>
            <solarMax>353.0</solarMax>
            <solarUV>0.0</solarUV>
            <cloudy>55.0</cloudy>
            <heatDD>0.149</heatDD>
            <coolDD>0.000</coolDD>
            <voltsBattery>12.8</voltsBattery>
            <voltsSource>24.1</voltsSource>
            <tempBoard>133.3</tempBoard>
            <arcInt>00:10:00</arcInt>
    </Archive>
</Device>
```

JSON Structure:


```
{
  "stationExport": [
    {
      "title": "Device Archive Data",
      "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
      "description": "Device Weather Details",
      "items": [
        {
          "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
          "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
          "sensorLink": "a5f93758-a2ad-11ea-a172-000d3af32a59",
          "sensorName": "Battery",
          "sensorId": "0",
          "sensorType": "Battery",
          "sensorUnits": "Volts",
          "sensorValue": "12.000",
          "weDate": "2021-02-06",
          "weTime": "01:00:00",
          "UTC": "2021-02-06 05:00:00",
          "arcInt": "00:10:00",
          "temp": "2.5",
          "tempHi": "2.5",
          "tempLow": "2.5",
          "thw": "2.5",
          "thws": "2.5",
          "humidity": "68",
          "dewpoint": "-2.7",
          "windSpeed": "6.0",
          "windHi": "21.9",
          "windDir": "ESE",
          "windRun": "1.00",
          "windChill": "2.5",
          "heatIndex": "---",
```

```
        "bar": "994.2",
        "rain": "6.00",
        "rainRate": "32.9",
        "solarRad": "0.0",
        "solarRadHi": "0.0",
        "solarEnergy": "0.00",
        "solarMax": "0",
        "solarUv": "0.0",
        "cloudy": "0",
        "coolDD": "0.000",
        "heatDD": "0.110",
        "voltsBattery": "12",
        "voltsSource": "24",
        "tempBoard": "110"
} ] } ] }
```

Device by period

A set of summary records for this station, gathered by the hour, week, month with average (fields S#), minimum (min#), maximum (max#) for each possible sensor reading. Summaries by week and month are in descending order.

devicebydate.php has four parameters:

ID = {deviceLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicebydate.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&period=7&format=2

devicebyweek.php has three parameters:

ID = {deviceLink}
period = {# additional weeks / default=52} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicebyweek.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&format=2

devicebymonth.php has three parameters:

ID = {deviceLink}
period = {# additional months / default=1000} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/devicebymonth.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&format=2

Depending on the export period used the return will have either a {weYear}, {weHour}, {weWeek} or {weMonth} field values.

XML Structure:

```
<Device ID="21e694e2-19f3-11eb-bc91-000d3af32a59">
    <Archive>
        <deviceLink>21e694e2-19f3-11eb-bc91-000d3af32a59</deviceLink>
        <weDate>2021-02-08</weDate>
        <S0>0.000</S0>
        <S1>0.000</S1>
        <S2>120.000</S2>
        <S3>18.703</S3>
        <S4>0.000</S4>
        <S5>0.000</S5>
        <S6>0.000</S6>
        <S7>0.000</S7>
        <S8>0.000</S8>
```

<S9>0.000</S9>
<S10>0.000</S10>
<S11>0.000</S11>
<S12>0.000</S12>
<S13>0.000</S13>
<S14>0.000</S14>
<S15>0.000</S15>
<S16>0.000</S16>
<S17>0.000</S17>
<S18>0.000</S18>
<S19>0.000</S19>
<S20>0.000</S20>
<min0>0.000</min0>
<min1>0.000</min1>
<min2>120.000</min2>
<min3>0.000</min3>
<min4>0.000</min4>
<min5>0.000</min5>
<min6>0.000</min6>
<min7>0.000</min7>
<min8>0.000</min8>
<min9>0.000</min9>
<min10>0.000</min10>
<min11>0.000</min11>
<min12>0.000</min12>
<min13>0.000</min13>
<min14>0.000</min14>
<min15>0.000</min15>
<min16>0.000</min16>
<min17>0.000</min17>
<min18>0.000</min18>
<min19>0.000</min19>
<min20>0.000</min20>
<max0>0.000</max0>
<max1>0.000</max1>
<max2>120.000</max2>
<max3>20.000</max3>
<max4>0.000</max4>
<max5>0.000</max5>
<max6>0.000</max6>
<max7>0.000</max7>
<max8>0.000</max8>
<max9>0.000</max9>
<max10>0.000</max10>
<max11>0.000</max11>
<max12>0.000</max12>
<max13>0.000</max13>
<max14>0.000</max14>
<max15>0.000</max15>
<max16>0.000</max16>
<max17>0.000</max17>
<max18>0.000</max18>
<max19>0.000</max19>

```
                <max20>0.000</max20>
            </Archive>
</Device>
```

JSON Structure:


```
{
  "stationExport": [
    {
      "title": "Device Archive Data",
      "deviceLink": "21e694e2-19f3-11eb-bc91-000d3af32a59",
      "description": "Device Weather Details",
      "items": [
        {
          "deviceLink": "21e694e2-19f3-11eb-bc91-000d3af32a59",
          "weDate": "2021-02-08",
          "S0": "0.000",
          "S1": "0.000",
          "S2": "120.000",
          "S3": "18.703",
          "S4": "0.000",
          "S5": "0.000",
          "S6": "0.000",
          "S7": "0.000",
          "S8": "0.000",
          "S9": "0.000",
          "S10": "0.000",
          "S11": "0.000",
          "S12": "0.000",
          "S13": "0.000",
          "S14": "0.000",
          "S15": "0.000",
          "S16": "0.000",
          "S17": "0.000",
          "S18": "0.000",
          "S19": "0.000",
          "S20": "0.000",
          "min0": "0.000",
          "min1": "0.000",
          "min2": "120.000",
          "min3": "0.000",
          "min4": "0.000",
          "min5": "0.000",
          "min6": "0.000",
          "min7": "0.000",
          "min8": "0.000",
          "min9": "0.000",
          "min10": "0.000",
          "min11": "0.000",
          "min12": "0.000",
          "min13": "0.000",
          "min14": "0.000",
          "min15": "0.000",
```

```
        "min16": "0.000",
        "min17": "0.000",
        "min18": "0.000",
        "min19": "0.000",
        "min20": "0.000",
        "max0": "0.000",
        "max1": "0.000",
        "max2": "120.000",
        "max3": "20.000",
        "max4": "0.000",
        "max5": "0.000",
        "max6": "0.000",
        "max7": "0.000",
        "max8": "0.000",
        "max9": "0.000",
        "max10": "0.000",
        "max11": "0.000",
        "max12": "0.000",
        "max13": "0.000",
        "max14": "0.000",
        "max15": "0.000",
        "max16": "0.000",
        "max17": "0.000",
        "max18": "0.000",
        "max19": "0.000",
        "max20": "0.000"
      }]}]}
```

Sensor by Date

A set of summary records recorded by the station or device. A record is generated for each activated sensor with average, minimum and maximum values for each date. It can be filtered for a specific sensor using the sensor id.

sensorbydate.php has five parameters:

ST = {stationLink} or ID = {deviceLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
sensor = {sensor id number /default=all} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/sensorbydate.php?ID=21e694e2-19f3-11eb-bc91-000d3af32a59&format=1&end=2021-02-09

XML Structure:

```
<Device ID="bdc225e6-a28a-11ea-a172-000d3af32a59">
        <sensorDate>
                <weDate>2021-02-09</weDate>
                <stationLink>7d4f236e-8eaa-11e4-ab9e-e0db5520e508</stationLink>
                <deviceLink>21e694e2-19f3-11eb-bc91-000d3af32a59</deviceLink>
                <deviceName>Scan Reach</deviceName>
                <sensorId>1</sensorId>
                <sensorName>Wind Speed</sensorName>
                <sensorType>Wind</sensorType>
                <sensorUnits>Kph</sensorUnits>
                <sensorMin>0.000</sensorMin>
                <sensorAverage>0.000</sensorAverage>
                <sensorMax>0.000</sensorMax>
        </sensorDate>
</Device>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Device Data",
   "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
   "description": "Device readings summary by date",
   "items": [
    {
     "weDate": "2021-02-06",
     "stationLink": "b8880312-b877-11e9-ab73-000d3af32a59",
     "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
    "deviceName": "Scan Reach",
     "sensorId": "1",
     "sensorName": "Battery",
     "sensorType": "Battery",
     "sensorUnits": "Volts",
     "sensorMin": "12.000",
     "sensorAverage": "12.000",
     "sensorMax": "12.000"} ] } ] }
```

Gateway Archive Data

A set of backend transfer details showing signal strength for a device.

gatewayarchive.php has four parameters:

ID = {deviceLink}
period = {# additional days / default=0} *optional*
end = {end date in Y-m-d example 2020-06-05 is 5-Jun-2020/ default is today} *optional*
format = {1 for xml,2 for json, 3 for csv /default=1} *optional*

Example:
https://server1.eosweather.ca/export/gatewayarchive.php?ID=bdc225e6-a28a-11ea-a172-000d3af32a59
Returns todays data in xml format.

https://server1.eosweather.ca/export/gatewayarchive.php?ID=bdc225e6-a28a-11ea-a172-000d3af32a59&end=2020-06-06&period=1
Returns data ending on 2020-06-06 23:59:59 for the previous period in days, in this case all records for 2020-06-06 and 2020-06-05.

A set of detail records for this devices gateway feed from TNN network.

XML Structure:

```
<Device ID="bdc225e6-a28a-11ea-a172-000d3af32a59">
    <Gateway_Data>
        <recid>1</recid>
        <sent>2020-06-05 12:14:36</UTC>
        <deviceLink>bdc225e6-a28a-11ea-a172-000d3af32a59</deviceLink>
        <device_id>henk</device_id>
        <gtw_id>eui-58a0cbfffe8015f5</gtw_id>
        <frequency>904.9</frequency>
        <data_rate>SF7BW125</data_rate>
        <channel>0</channel>
        <rssi>-79</rssi>
        <snr>9.75</snr>
        <counter>2798</counter>
    </Gateway_Data>
</Device>
```

JSON Structure:


```
{
 "stationExport": [
  {
   "title": "Gateway Data",
   "devieLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
   "description": "Gateway Details",
   "items": [
    {
     "sent": "2020-06-05 12:14:36",
     "deviceLink": "bdc225e6-a28a-11ea-a172-000d3af32a59",
     "device_id": "henk",
     "gtw_id": "eui-58a0cbfffe8015f5",
     "frequency": "904.9",
     "data_rate": "SF7BW125",
     "channel": "0",
     "rssi": "-79",
     "snr": "9.75",
     "counter": "2798"
} ] } ] }
```