DataPoint API resources

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- Location-specific data
- Textual data
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Overview

All DataPoint resources have a base URL of http://datapoint.metoffice.gov.uk/public/data/ and must be requested with your API key as a query in the format:

http://datapoint.metoffice.gov.uk/public/data/resource?key=APIkey

For example, to get a three-hourly five-day forecast for Dunkeswel Aerodrome:


You will need to register for DataPoint and use your own API key.

Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

Both XML and JSON are human readable and parsers available for many languages.

Location-specific data

This includes forecasts for approximately 5,000 sites and observations for approximately 140 sites across the UK. Forecasts are provided for the next five days and observations for the past 24 hours.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
<th>Approx. size (kB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>val/wxfcs/all/datatype/sitelist</td>
<td>Returns a list of locations (also known as sites) for which results are available for the daily and three-hourly forecast data feeds. You can use this to find the ID of the site that you are interested in.</td>
<td>400</td>
</tr>
<tr>
<td>val/wxfcs/all/datatype/capabilities</td>
<td>Returns the time steps available for the daily or three-hourly UK forecast data feed. You can use this data feed to check that the time step you are interested in is available before querying the relevant web service to get the data.</td>
<td>2</td>
</tr>
<tr>
<td>val/wxfcs/all/datatype/locationId</td>
<td>Returns a forecast for the next five days including today. Forecast time steps are either daily (separate day and night), or every three-hours. Updated hourly.</td>
<td>4</td>
</tr>
<tr>
<td>val/wxobs/all/datatype/sitelist</td>
<td>Returns a list of locations (also known as sites) for which results are available for the hourly observations data feed. You can use this to find the ID of the site that you are interested in.</td>
<td>9</td>
</tr>
<tr>
<td>val/wxobs/all/datatype/capabilities</td>
<td>Returns a summary of available time steps for the UK observations data feed. You can use this data feed to check that the time step you are interested in is available before querying the relevant web service to get the data. Updated hourly.</td>
<td>0.8</td>
</tr>
<tr>
<td>val/wxobs/all/datatype/locationId</td>
<td>Returns hourly weather observations for the last 24 hours.</td>
<td>2</td>
</tr>
</tbody>
</table>
Supported *locationId* values for location-specific data:

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>number</td>
<td>A numbered location ID e.g. Dunkeswel Aerodrome = 3840. The list of location IDs available for a datafeed can be fetched using the sitelist resource for that datafeed.</td>
</tr>
<tr>
<td>all</td>
<td>The location all can be used to fetch the data for all locations available in a datafeed. This will <strong>significantly increase the size of the returned data</strong>. Consider using the time query to restrict the data to a specific time step.</td>
</tr>
</tbody>
</table>

### Textual data

Including national and regional UK forecasts for the next five days and a national outlook to out to 15 and 30 days ahead.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
<th>Approx. size (kB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>txt/wxobs/ukextremes/datatype/capabilities</td>
<td>Returns when the regional extremes observations data feed was last updated, and the period it covers.</td>
<td>0.1</td>
</tr>
<tr>
<td>txt/wxobs/ukextremes/datatype/latest</td>
<td>Returns the regional observed extremes of weather across the UK for the day of issue. Updated daily.</td>
<td>9</td>
</tr>
<tr>
<td>txt/wxfcs/nationalpark/datatype/sitelist</td>
<td>Returns a list of locations the National Park forecast data feed provides data for. You can use this to find the ID of the site that you are interested in.</td>
<td>0.5</td>
</tr>
<tr>
<td>txt/wxfcs/nationalpark/datatype/capabilities</td>
<td>Returns when the data for each of the National Park forecasts was updated. You can use this to check when the forecasts have updated rather than fetching the National Park forecasts repeatedly.</td>
<td>2</td>
</tr>
<tr>
<td>txt/wxfcs/nationalpark/datatype/locationId</td>
<td>Returns a text forecast for a National Park. Updated twice daily, early morning and early afternoon.</td>
<td>0.8</td>
</tr>
<tr>
<td>txt/wxfcs/regionalforecast/datatype/sitelist</td>
<td>Returns a list of locations the regional forecast data feed provides data for. You can use this to find the ID of the site that you are interested in.</td>
<td>0.6</td>
</tr>
<tr>
<td>txt/wxfcs/regionalforecast/datatype/capabilities</td>
<td>Returns when the regional forecast was updated. You can use this to check when the forecasts have updated rather than fetching the regional forecasts repeatedly.</td>
<td>0.1</td>
</tr>
<tr>
<td>txt/wxfcs/regionalforecast/datatype/locationId</td>
<td>Returns regional forecast text. Updated twice daily, AM and PM, normally early morning and early afternoon.</td>
<td>3</td>
</tr>
<tr>
<td>txt/wxfcs/mountainarea/datatype/sitelist</td>
<td>Returns a list of locations the mountain area forecast data feed provides data for. You can use this to find the ID of the site that you are interested in.</td>
<td>0.3</td>
</tr>
<tr>
<td>txt/wxfcs/mountainarea/datatype/capabilities</td>
<td>Returns the forecast creation dates, valid from and to dates, and the general risk for each mountain area.</td>
<td>2</td>
</tr>
<tr>
<td>txt/wxfcs/mountainarea/datatype/locationId</td>
<td>Returns a mountain area forecast covering</td>
<td>4</td>
</tr>
</tbody>
</table>
the four day period after its issue date. Updated at least, once a day but may be updated more often.

Supported locationId values for textual data:

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>number</td>
<td>A numbered location ID e.g. South West England = 513. The list of location IDs available for a datafeed can be fetched using the sitelist resource for that datafeed.</td>
</tr>
<tr>
<td>all</td>
<td>The location all can be used to fetch the data for all locations only in the nationalpark datafeed.</td>
</tr>
</tbody>
</table>

Stand-alone imagery

Surface pressure analysis and forecast charts.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
<th>Approx. size (kB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>image/wxfcs/surfacepressure/datatype/capabilities</td>
<td>Returns when the current surface pressure charts were issued, the time steps available, and the URIs of the surface pressure synoptic analysis and forecast charts in GIF format. Update twice daily.</td>
<td>3</td>
</tr>
</tbody>
</table>

Map overlay imagery

Observation and forecast images suitable for use as overlays on maps. Includes rainfall radar and satellite imagery.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
<th>Approx. size (kB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>layer/wxfcs/all/datatype/capabilities</td>
<td>Returns when the forecast layers were issued, time steps available, and the URIs of the layers in PNG format. Update hourly.</td>
<td>3</td>
</tr>
<tr>
<td>layer/wxobs/all/datatype/capabilities</td>
<td>Returns when the observation layers were issued, time steps available, and the URIs of the layers in PNG format. Updated every 15 minutes.</td>
<td>3</td>
</tr>
</tbody>
</table>

val/wxfcs/all/datatype/sitelist

The 5,000 UK locations forecast site list data feed provides a list of the locations (also known as sites) for which results are available for the 5,000 UK locations three hourly forecast and 5,000 UK locations daily forecast data feeds. You can use this data feed to find details such as the ID of the site that you are interested in finding data for.

Resource URL

http://datapoint.metoffice.gov.uk/public/data/val/wxfcs/all/datatype/sitelist

Supported datatype values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
</table>
Example request

Fetch the list of UK forecast locations in XML.


Returns approximately 400 kB of XML.

```
1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <Locations>
3.   <Location id="3066" latitude="57.6494" longitude="-3.5606" name="Kinloss"></Location>
4.   <Location id="3080" latitude="57.077" longitude="-2.836" name="Aboyne"></Location>
5.   <Location id="3091" latitude="57.206" longitude="-2.202" name="Aberdeen Dyce"></Location>
6.   <Location id="3134" latitude="55.907" longitude="-4.533" name="Glasgow/Bishopton"></Location>
7.   <Location id="3136" latitude="55.515" longitude="-4.585" name="Prestwick Rnas"></Location>
8.   <Location id="3144" latitude="56.326" longitude="-3.729" name="Strathallan"></Location>
9.   <Location id="3162" latitude="55.311" longitude="-3.206" name="Eskdalemuir"></Location>
10.  <Location id="3212" latitude="54.614" longitude="-3.157" name="Keswick"></Location>
11.   ...
1535.  <Location id="354514" latitude="51.4102" longitude="-2.8962" name="Clevedon Beach (Beach)"></Location>
1536.  <Location id="354521" latitude="50.8388" longitude="-4.5557" name="Bude - Croklets (Beach)"></Location>
1537.  <Location id="354522" latitude="50.8316" longitude="-4.5546" name="Bude - Summerleaze (Beach)"></Location>
1538.  <Location id="354531" latitude="50.5262" longitude="-5.024" name="Treyarnon Bay (Beach)"></Location>
1539.  <Location id="354535" latitude="50.416" longitude="-5.0778" name="Newquay - Great Western (Beach)"></Location>
1540.  <Location id="354548" latitude="50.0814" longitude="-5.6937" name="Sennen Cove (Beach)"></Location>
1541.  <Location id="354551" latitude="50.1281" longitude="-5.501" name="Mounts Bay - Little Houg (Beach)"></Location>
1542.  <Location id="354553" latitude="50.1032" longitude="-5.3903" name="Praa Sands West (Beach)"></Location>
1543.  </Locations>
```

Anatomy of responses

- **Locations**
  - **Location**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>array of Location</td>
<td>The response contains a single Locations node, which in turn contains a set of Location nodes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int</td>
<td>The ID number of the location e.g. '310069'</td>
</tr>
<tr>
<td>latitude</td>
<td>float</td>
<td>The latitude of the location in decimal degrees e.g. '50.7179'</td>
</tr>
<tr>
<td>longitude</td>
<td>float</td>
<td>The longitude of the location in decimal degrees e.g. '-3.5327'</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>The name of the location e.g. 'Exeter'</td>
</tr>
</tbody>
</table>
val/wxfcs/all/datatype/capabilities

The capabilities data feed provides a summary of the timesteps for which results are available for the 5,000 UK locations daily and three hourly forecast data feed. You can use this data feed to check that the timestep you are interested in is available before querying the relevant web service to get the data. In this way you can minimise the number of redundant calls that have to be made.

Resource URL

http://datapoint.metoffice.gov.uk/public/data/val/wxfcs/all/datatype/capabilities

Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>res</td>
<td>Required</td>
<td>The temporal resolution of the data being requested. Either 3hourly or daily</td>
</tr>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

Example request

Fetch three-hourly UK forecast capabilities in XML.

http://datapoint.metoffice.gov.uk/public/data/val/wxfcs/all/xml/capabilities?
res=3hourly&key=01234567-89ab-cdef-0123-456789abcdef

Returns approximately 2 kB of XML.

```
1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <Resource dataDate="2012-11-19T14:00:00Z" res="3hourly" type="wxfcs">
3.   <TimeSteps>
4.     <TS>2012-11-19T06:00:00Z</TS>
5.     <TS>2012-11-19T09:00:00Z</TS>
6.     <TS>2012-11-19T12:00:00Z</TS>
7.     <TS>2012-11-19T15:00:00Z</TS>
8.     <TS>2012-11-19T18:00:00Z</TS>
9.     <TS>2012-11-19T21:00:00Z</TS>
10.    <TS>2012-11-20T00:00:00Z</TS>
11.    <TS>2012-11-20T03:00:00Z</TS>
12.    <TS>2012-11-20T06:00:00Z</TS>
13.    <TS>2012-11-20T09:00:00Z</TS>
14.    <TS>2012-11-20T12:00:00Z</TS>
15.    <TS>2012-11-20T15:00:00Z</TS>
16.    <TS>2012-11-20T18:00:00Z</TS>
17.    <TS>2012-11-20T21:00:00Z</TS>
18.    <TS>2012-11-21T00:00:00Z</TS>
19.    <TS>2012-11-21T03:00:00Z</TS>
20.    <TS>2012-11-21T06:00:00Z</TS>
21.    <TS>2012-11-21T09:00:00Z</TS>
22.    <TS>2012-11-21T12:00:00Z</TS>
23.    <TS>2012-11-21T15:00:00Z</TS>
24.    <TS>2012-11-21T18:00:00Z</TS>
25.    <TS>2012-11-21T21:00:00Z</TS>
26.    <TS>2012-11-22T00:00:00Z</TS>
27.    <TS>2012-11-22T03:00:00Z</TS>
28.    <TS>2012-11-22T06:00:00Z</TS>
29.    <TS>2012-11-22T09:00:00Z</TS>
30.    <TS>2012-11-22T12:00:00Z</TS>
31.    <TS>2012-11-22T15:00:00Z</TS>
```
Anatomy of responses

- **Resource**
  - **TimeSteps**
    - **TS**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>ISO 8601</td>
<td>The date and time at which the data was last updated, expressed according to the ISO 8601 combined date and time convention. e.g. '2012-11-21T15:00:00Z'</td>
</tr>
<tr>
<td>res</td>
<td>string</td>
<td>The temporal resolution of the web service for which the capabilities have been returned. This is set to the temporal resolution specified in the query. e.g. 'daily', '3hourly' or 'hourly'</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>The resource type of the web service for which the capabilities have been returned. e.g. 'wxfcsl' or 'wxobs'</td>
</tr>
<tr>
<td>TimeSteps</td>
<td>object</td>
<td>A single TimeSteps object, which contains an array of TS values.</td>
</tr>
</tbody>
</table>

**TimeSteps**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>array of ISO 8601 date</td>
<td>The value of each TS object (or each element in the TS array in the JSON representation) provides a description of a single available timestep, expressed according to the ISO 8601 combined date and time convention. e.g. '2012-11-21T06:00:00Z'</td>
</tr>
</tbody>
</table>

**val/wxfcs/all/datatype/locationId**

This provides access to daily and three hourly forecast data from the Met Office for each of the roughly 5,000 sites for which the Met Office provides data. The forecast data is provided for time steps that are three hours apart, or daily (day and night), starting with the time at which the forecast was last run, and ending approximately five days later (meaning that approximately 10 or 40 forecast timesteps are available for each site). The data provided by the web service is updated on an hourly basis, and at any given point in time the exact set of timesteps that are available can be obtained using the capabilities web service. For a full list of the 5,000 sites, call the 5,000 UK locations site list data feed.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/val/wxfcs/all/datatype/locationId

Supported **datatype** values:
### Data type Description

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Supported `locationId` values:**

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>number</code></td>
<td>A numbered location ID e.g. Dunkeswel Aerodrome = 3840. The list of location IDs available for a datafeed can be fetched using the <code>sitelist</code> resource for that datafeed.</td>
</tr>
<tr>
<td><code>all</code></td>
<td>The location <code>all</code> can be used to fetch the data for all locations available in a datafeed. This will <strong>significantly increase the size of the returned data</strong>. Consider using the <code>time</code> query to restrict the data to a specific time step.</td>
</tr>
</tbody>
</table>

### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>time</code></td>
<td>Optional</td>
<td>Returns the forecast for only a single time step rather than all available time steps. The time step must be one of the available time steps reported by the capabilities resource and expressed according to the ISO 8601 combined date and time convention. The time can be abbreviated e.g 2012-11-19T15:00:00Z is identical to 2012-11-19T15Z.</td>
</tr>
<tr>
<td><code>res</code></td>
<td>Required</td>
<td>The temporal resolution of the data being requested. Either <code>3hourly</code> or <code>daily</code>.</td>
</tr>
<tr>
<td><code>key</code></td>
<td>Required</td>
<td>Your DataPoint API key.</td>
</tr>
</tbody>
</table>

### Example request

Fetch the three-hourly forecast for Exeter.


Returns approxiamtely 4 kB of XML.

```xml
1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <SiteRep>
3.   <Wx>
4.     <Param name="F" units="C">Feels Like Temperature</Param>
5.     <Param name="G" units="mph">Wind Gust</Param>
6.     <Param name="H" units="%">Screen Relative Humidity</Param>
7.     <Param name="T" units="C">Temperature</Param>
8.     <Param name="V" units="">Visibility</Param>
9.     <Param name="D" units="compass">Wind Direction</Param>
10.    <Param name="S" units="mph">Wind Speed</Param>
11.    <Param name="U" units="">Max UV Index</Param>
12.    <Param name="W" units="">Weather Type</Param>
13.    <Param name="Pp" units="%">Precipitation Probability</Param>
14.   </Wx>
15.   <DV dataDate="2012-11-19T14:00:00Z" type="Forecast">
16.     <Location i="310069" lat="50.7179" lon="-3.5327" name="EXETER" country="ENGLAND" continent="EUROPE">
17.       <Period type="Day" value="2012-11-19Z">
18.         <Rep D="SSE" F="8" G="29" H="80" Pp="16" S="13" T="11" V="VG" W="7" U="1">540</Rep>
22.         <Rep D="SSW" F="11" G="20" H="97" Pp="14" S="7" T="12" V="GO" W="7" U="0">1260</Rep>
23.       </Period>
24.     </Location>
25.   </DV>
</SiteRep>
```
Anatomy of responses

- **SiteRep**
  - **Wx**
    - **Param**
  - **DV**
    - **Location**
    - **Period**
      - **Rep**

### SiteRep

The SiteRep object comprises a single Wx object and a single DV object.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wx</td>
<td>Wx Object</td>
<td>The Wx object comprises a number of Parm objects</td>
</tr>
<tr>
<td>DV</td>
<td>DV Object</td>
<td>The DV object comprises a set of Location objects</td>
</tr>
</tbody>
</table>

**Wx**
<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Param</td>
<td>Array of</td>
<td>A Param object contains the definition of one of the attributes in a single</td>
</tr>
<tr>
<td></td>
<td>Param</td>
<td>forecast (Rep) object</td>
</tr>
</tbody>
</table>

**Param**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>string</td>
<td>The attribute name in the Rep object. e.g. 'T'</td>
</tr>
<tr>
<td>units</td>
<td>string</td>
<td>The unit in which the attribute value is represented. e.g. 'C'</td>
</tr>
<tr>
<td>$</td>
<td>string</td>
<td>A textual description of what the corresponding attribute represents in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>corresponding Rep object. e.g. 'Temperature'</td>
</tr>
</tbody>
</table>

**DV**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>ISO 8601</td>
<td>The date and time at which the forecast was run, expressed according to the</td>
</tr>
<tr>
<td></td>
<td>date</td>
<td>ISO 8601 combined date and time convention e.g. '2012-11-21T15:00:00Z'</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>The type of data that the web service returns. e.g. 'Forecast' or 'Obs'.</td>
</tr>
</tbody>
</table>

**Location**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>int</td>
<td>The ID number of the location e.g. '310069'</td>
</tr>
<tr>
<td>lat</td>
<td>float</td>
<td>The latitude of the location in decimal degrees e.g. '50.7179'</td>
</tr>
<tr>
<td>lon</td>
<td>float</td>
<td>The longitude of the location in decimal degrees e.g. '-3.5327'</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>The name of the location e.g. 'EXETER'</td>
</tr>
<tr>
<td>country</td>
<td>string</td>
<td>The country of the location e.g. 'ENGLAND'</td>
</tr>
<tr>
<td>continent</td>
<td>string</td>
<td>The continent of the location e.g. 'EUROPE'</td>
</tr>
</tbody>
</table>

**Period**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>type</td>
<td>string</td>
<td>'Day'</td>
</tr>
<tr>
<td>value</td>
<td>ISO 8601</td>
<td>date '2012-11-21Z'</td>
</tr>
<tr>
<td>Rep</td>
<td>array of</td>
<td>A Rep object contains a single forecast</td>
</tr>
</tbody>
</table>

**Rep**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| U     | int  | The strength of the sun's ultraviolet (UV) radiation is expressed as a 'Solar UV Index', a system developed by the World Health Organization. These Met Office forecasts include the effects of:
|       |      | * the position of the sun in the sky;                                     |
|       |      | * forecast cloud cover;                                                   |
|       |      | * ozone amounts in the stratosphere.                                       |
|       |      | The solar index does not exceed 8 in the UK (8 is rare; 7 may occur on exceptional days, mostly in the two weeks around the summer solstice). Indices of 9 and 10 are common in the Mediterranean area. |
The UV Index can take the following values:

<table>
<thead>
<tr>
<th>Index</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Low exposure. No protection required. You can safely stay outside</td>
</tr>
<tr>
<td>3-5</td>
<td>Moderate exposure. Seek shade during midday hours, cover up and wear sunscreen</td>
</tr>
<tr>
<td>6-7</td>
<td>High exposure. Seek shade during midday hours, cover up and wear sunscreen</td>
</tr>
<tr>
<td>8-10</td>
<td>Very high. Avoid being outside during midday hours. Shirt, sunscreen and hat are essential</td>
</tr>
<tr>
<td>11 or over</td>
<td>Extreme. Avoid being outside during midday hours. Shirt, sunscreen and hat are essential.</td>
</tr>
</tbody>
</table>

Significant weather as a code:

<table>
<thead>
<tr>
<th>Code</th>
<th>Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>Not available</td>
</tr>
<tr>
<td>0</td>
<td>Clear night</td>
</tr>
<tr>
<td>1</td>
<td>Sunny day</td>
</tr>
<tr>
<td>2</td>
<td>Partly cloudy (night)</td>
</tr>
<tr>
<td>3</td>
<td>Partly cloudy (day)</td>
</tr>
<tr>
<td>4</td>
<td>Not used</td>
</tr>
<tr>
<td>5</td>
<td>Mist</td>
</tr>
<tr>
<td>6</td>
<td>Fog</td>
</tr>
<tr>
<td>7</td>
<td>Cloudy</td>
</tr>
<tr>
<td>8</td>
<td>Overcast</td>
</tr>
<tr>
<td>9</td>
<td>Light rain shower (night)</td>
</tr>
<tr>
<td>10</td>
<td>Light rain shower (day)</td>
</tr>
<tr>
<td>11</td>
<td>Drizzle</td>
</tr>
<tr>
<td>12</td>
<td>Light rain</td>
</tr>
<tr>
<td>13</td>
<td>Heavy rain shower (night)</td>
</tr>
<tr>
<td>14</td>
<td>Heavy rain shower (day)</td>
</tr>
<tr>
<td>15</td>
<td>Heavy rain</td>
</tr>
<tr>
<td>16</td>
<td>Sleet shower (night)</td>
</tr>
<tr>
<td>17</td>
<td>Sleet shower (day)</td>
</tr>
<tr>
<td>18</td>
<td>Sleet</td>
</tr>
<tr>
<td>19</td>
<td>Hail shower (night)</td>
</tr>
<tr>
<td>20</td>
<td>Hail shower (day)</td>
</tr>
<tr>
<td>21</td>
<td>Hail</td>
</tr>
<tr>
<td>22</td>
<td>Light snow shower (night)</td>
</tr>
<tr>
<td>23</td>
<td>Light snow shower (day)</td>
</tr>
<tr>
<td>24</td>
<td>Light snow</td>
</tr>
<tr>
<td>25</td>
<td>Heavy snow shower (night)</td>
</tr>
<tr>
<td>26</td>
<td>Heavy snow shower (day)</td>
</tr>
<tr>
<td>27</td>
<td>Heavy snow</td>
</tr>
<tr>
<td>28</td>
<td>Thunder shower (night)</td>
</tr>
<tr>
<td>29</td>
<td>Thunder shower (day)</td>
</tr>
<tr>
<td>30</td>
<td>Thunder</td>
</tr>
</tbody>
</table>
Visibility in metres or as a code:

- **UN** Unknown
- **VP** Very poor - Less than 1 km
- **PO** Poor - Between 1-4 km
- **MO** Moderate - Between 4-10 km
- **GO** Good - Between 10-20 km
- **VG** Very good - Between 20-40 km
- **EX** Excellent - More than 40 km

Temperature in degrees Celsius (°C)

Wind speed in miles per hour (mph)

Mean sea level pressure in hectopascals (hPa)

This gives the Precipitation Probability as a percentage (%)

Screen relative humidity in percent (%)

Wind gust in miles per hour (mph)

Feels like temperature in degrees Celsius (°C)

Wind direction 16-point compass direction e.g. S, SSW, SW, etc.

The number of minutes after midnight UTC on the day represented by the Period object in which the Rep object is found. For the daily forecasts this will instead be 'Day' or 'Night'.

**txt/wxobs/ukextremes/datatype/capabilities**

The regional extremes observation capabilities web service indicates when the regional extremes observations data feed was last updated, and the period it covers.

**Resource URL**


**Supported datatype values:**

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch UK extremes capabilities in XML.

http://datapoint.metoffice.gov.uk/public/data/txt/wxobs/ukextremes/xml/capabilities?key=01234567-
Anatomy of responses

UkExtremes

A UkExtremes object defines the capabilities for the regional extremes observations data feeds.

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>extremeDate</td>
<td>ISO 8601 date</td>
<td>The date of the observation.</td>
</tr>
<tr>
<td>issuedAt</td>
<td>ISO 8601 date</td>
<td>The date at which the observation was issued</td>
</tr>
</tbody>
</table>

**txt/wxobs/ukextremes/datatype/latest**

This provides access to the observed extremes of weather across the UK for the day of issue. The data provided by the web service is updated on a daily basis.

**Resource URL**


Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch UK extremes capabilities in XML.


Returns approximately 9 kB of XML.
Anatomy of responses

- UkExtremes
  - Regions
    - Region
      - Extremes
        - Extreme

**UkExtremes**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>extremeDate</td>
<td>ISO 8601 date</td>
<td>The date of the observation.</td>
</tr>
<tr>
<td>issuedAt</td>
<td>ISO 8601 date</td>
<td>The date at which the observation was issued</td>
</tr>
</tbody>
</table>

**Regions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>Array of Region</td>
<td></td>
</tr>
</tbody>
</table>

**Region**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>The short name of the region</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>The full name of the region</td>
</tr>
<tr>
<td>Extremes</td>
<td>Extremes Object</td>
<td></td>
</tr>
</tbody>
</table>

---
**Extremes**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
<td>Array of Extreme</td>
<td></td>
</tr>
</tbody>
</table>

**Extreme**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>locId</td>
<td>string</td>
<td>The location ID of the location where the extreme was observed. The location ID may not be listed in the 5,000 locations resource.</td>
</tr>
<tr>
<td>locationName</td>
<td>string</td>
<td>The full name of the location where the extreme was observed.</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>The type of the extreme. For example 'HMAXT' would represent the highest maximum temperature, and 'LMINT' would represent the lowest minimum temperature.</td>
</tr>
<tr>
<td>uom</td>
<td>string</td>
<td>The unit of measurement for the extreme</td>
</tr>
<tr>
<td>$</td>
<td>float</td>
<td>The value of the observed extreme, in units specified in the uom attribute.</td>
</tr>
</tbody>
</table>

**txt/wxfcs/nationalpark/datatype/sitelist**

The national park forecast site list data feed provides a list of the locations (also known as sites) for which results are available for the national park forecast data feed. You can use this data feed to find details such as the ID of the site that you are interested in finding data for.

**Resource URL**


Supported `datatype` values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch the list of national park regions in XML.


Returns approximately 500 B of XML.

```xml
1. <xml version="1.0" encoding="UTF-8">
2.   <Locations>
3.     <Location id="600" name="he"></Location>
4.     <Location id="601" name="gr"></Location>
5.     <Location id="602" name="st"></Location>
6.     <Location id="603" name="ta"></Location>
7.     <Location id="604" name="ni"></Location>
8.     <Location id="605" name="nw"></Location>
9.     <Location id="606" name="ne"></Location>
10.    <Location id="607" name="yh"></Location>
11.    <Location id="608" name="wm"></Location>
12.    <Location id="609" name="em"></Location>
13.    <Location id="610" name="ee"></Location>
```
Anatomy of responses

- Locations
  - Location

Locations

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>array of</td>
<td>The response contains a single Locations node, which in turn contains a set of Location nodes.</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td></td>
</tr>
</tbody>
</table>

Location

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int</td>
<td>The ID number of the location e.g. '600'</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>The short name of the location e.g. 'he'</td>
</tr>
</tbody>
</table>

**txt/wxfcs/nationalpark/datatype/capabilities**

The national park forecast capabilities data feed provides a summary of the results that are available from the national park forecasts data feed, specifying the national parks for which data are available, and the time when the forecasts were issued.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/nationalpark/datatype/capabilities

Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch the capabilities for the national park forecasts in XML.


Returns approximately 2 kB of XML.

```xml
1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <NationalParkForecasts>
3.   <NationalParkForecast IssueAt="16:00:00" IssueTime="2012-11-23T15:51:03" region="yh" regionName="North York Moors National Park"></NationalParkForecast>
4.   <NationalParkForecast IssueAt="16:00:00" IssueTime="2012-11-23T14:30:31" region="wl" regionName="Pembrokeshire Coast National Park"></NationalParkForecast>
5.   <NationalParkForecast IssueAt="04:00" IssueTime="2012-11-23T05:49:14" region="wm" regionName="Peak District National Park"></NationalParkForecast>
```
Anatomy of responses

- NationalParkForecasts
  - NationalParkForecast

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NationalParkForecast</td>
<td>array of NationalParkForecast</td>
<td></td>
</tr>
</tbody>
</table>

NationalParkForecast

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IssueAt</td>
<td>24 hour time</td>
<td>The official time of issue for the forecast e.g. '16:00:00'.</td>
</tr>
<tr>
<td>IssueTime</td>
<td>ISO 8601 date</td>
<td>The time at which the forecast was actually issued.</td>
</tr>
<tr>
<td>region</td>
<td>string</td>
<td>The short name of the region e.g. 'sw'</td>
</tr>
<tr>
<td>regionName</td>
<td>string</td>
<td>The full name of the region e.g. 'Dartmoor National Park'.</td>
</tr>
</tbody>
</table>

**txt/wxfcs/nationalpark/datatype/locationId**

This provides access to national park forecasts. The data provided is generally updated twice daily, early morning and early afternoon.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/nationalpark/datatype/locationId

Supported **datatype** values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

Supported **locationId** values:

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Description</th>
</tr>
</thead>
</table>
A numbered location ID e.g. South West England = 611. The list of location IDs available for a datafeed can be fetched using the sitelist resource for that datafeed.

The location all can be used to fetch the data for all locations available in a datafeed. This will significantly increase the size of the returned data.

Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

Example request

Fetch the national park forecasts for south west England in XML.


Returns approximately 800 B of XML.

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<NationalParkForecasts>
  <NationalParkForecast IssueAt="16:00:00" IssueTime="2012-11-23T14:30:31" Issuer="Exeter" region="sw" regionName="Dartmoor National Park" type="Afternoon">
    <Section type="Tomorrow">
      <Title>Saturday:</Title>
      <para>Rain, heavy at times throughout much of the day, accompanied by a strong wind perhaps reaching gale force at times.</para>
    </Section>
  </NationalParkForecast>
  <NationalParkForecast IssueAt="16:00:00" IssueTime="2012-11-23T14:30:31" Issuer="Exeter" region="sw" regionName="Exmoor National Park" type="Afternoon">
    <Section type="Tomorrow">
      <Title>Saturday:</Title>
      <para>Dry, bright start but rain, heavy at times moving across the park during the day. Windy with gales in places.</para>
    </Section>
  </NationalParkForecast>
  <NationalParkForecast IssueAt="04:00:00" IssueTime="2012-11-23T03:31:20" Issuer="Exeter" region="sw" regionName="Dartmoor National Park" type="Morning">
    <Section type="Today">
      <Title>Today:</Title>
      <para>A largely dry day with sunny spells and light winds. There is may be a few isolated showers.</para>
    </Section>
  </NationalParkForecast>
  <NationalParkForecast IssueAt="04:00:00" IssueTime="2012-11-23T03:31:20" Issuer="Exeter" region="sw" regionName="Exmoor National Park" type="Morning">
    <Section type="Today">
      <Title>Today:</Title>
      <para>Mainly dry and bright with sunny spells. Risk of one or two isolated showers, particularly in the morning.</para>
    </Section>
  </NationalParkForecast>
</NationalParkForecasts>
```

Anatomy of responses

- NationalParkForecasts
  - NationalParkForecast
    - Section
      - Title
      - para
### NationalParkForecasts

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NationalParkForecast</td>
<td>array of</td>
<td>NationalParkForecast</td>
</tr>
<tr>
<td></td>
<td>NationalParkForecast</td>
<td></td>
</tr>
</tbody>
</table>

### NationalParkForecast

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IssueAt</td>
<td>24 hour time</td>
<td>The official time of issue for the forecast e.g. '16:00:00'.</td>
</tr>
<tr>
<td>IssueTime</td>
<td>ISO 8601 date</td>
<td>The time at which the forecast was actually issued.</td>
</tr>
<tr>
<td>Issuer</td>
<td>string</td>
<td>The Met Office production unit responsible for the forecast.</td>
</tr>
<tr>
<td>region</td>
<td>string</td>
<td>The short name of the region e.g. 'sw'</td>
</tr>
<tr>
<td>regionName</td>
<td>string</td>
<td>The full name of the region e.g. 'Dartmoor National Park'.</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>The time of day to which the forecast refers</td>
</tr>
</tbody>
</table>

### Section

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>type</td>
<td>string</td>
<td>The period of time covered by the forecast.</td>
</tr>
<tr>
<td>Title</td>
<td>string</td>
<td>The title of the forecast.</td>
</tr>
<tr>
<td>para</td>
<td>string</td>
<td>The content of the forecast.</td>
</tr>
</tbody>
</table>

### txt/wxfcs/regionalforecast/datatype/sitelist

The regional forecast site list data feed provides a list of the locations (also known as sites) for which results are available for the regional forecast data feed. You can use this data feed to find details such as the ID of the region that you are interested in finding data for.

#### Resource URL


Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

#### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

#### Example request

Fetch the list of UK regional forecast locations in XML.


Returns approximately 600 B of XML.

1. <?xml version="1.0" encoding="UTF-8"?>
2. <Locations>
3.   <Location id="500" name="os"></Location>
4.   <Location id="501" name="he"></Location>
5.   <Location id="502" name="gr"></Location>
6.   <Location id="503" name="st"></Location>
7.   <Location id="504" name="ta"></Location>
8.   <Location id="505" name="dg"></Location>
9.   <Location id="506" name="ni"></Location>
10.  <Location id="507" name="nw"></Location>
11.  <Location id="508" name="ne"></Location>
12.  <Location id="509" name="yh"></Location>
13.  <Location id="510" name="wm"></Location>
14.  <Location id="511" name="em"></Location>
15.  <Location id="512" name="ee"></Location>
16.  <Location id="513" name="se"></Location>
17.  <Location id="514" name="sw"></Location>
18.  <Location id="515" name="uk"></Location>
19.  <Location id="516" name="wl"></Location>
20. </Locations>

Anatomy of responses

- Locations
  - Location

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Location array of Location</td>
<td>The response contains a single Locations node, which in turn contains a set of Location nodes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int</td>
<td>The ID number of the region e.g. '513'</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>The short name of the region e.g. 'sw'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Short name</th>
<th>Full name</th>
</tr>
</thead>
<tbody>
<tr>
<td>os</td>
<td>Orkney and Shetland</td>
</tr>
<tr>
<td>he</td>
<td>Highland and Eilean Siar</td>
</tr>
<tr>
<td>gr</td>
<td>Grampian</td>
</tr>
<tr>
<td>ta</td>
<td>Tayside</td>
</tr>
<tr>
<td>st</td>
<td>Strathclyde</td>
</tr>
<tr>
<td>dg</td>
<td>Dumfries, Galloway, Lothian</td>
</tr>
<tr>
<td>ni</td>
<td>Northern Ireland</td>
</tr>
<tr>
<td>yh</td>
<td>Yorkshire and the Humber</td>
</tr>
<tr>
<td>ne</td>
<td>Northeast England</td>
</tr>
<tr>
<td>em</td>
<td>East Midlands</td>
</tr>
<tr>
<td>ee</td>
<td>East of England</td>
</tr>
<tr>
<td>se</td>
<td>London and Southeast England</td>
</tr>
<tr>
<td>nw</td>
<td>Northwest England</td>
</tr>
<tr>
<td>wm</td>
<td>West Midlands</td>
</tr>
<tr>
<td>sw</td>
<td>Southwest England</td>
</tr>
<tr>
<td>wl</td>
<td>Wales</td>
</tr>
</tbody>
</table>
The national park forecast capabilities data feed provides a summary of the results that are available from the national park forecasts data feed, specifying the national parks for which data are available, and the time when the forecasts were issued.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/regionalforecast/datatype/capabilities

Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch the capabilities for the regional forecasts data feed in XML.


Returns approximately 100 B of XML.

1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <RegionalFcst xmlns="www.metoffice.gov.uk/xml/metoRegionalFcst" issuedAt="2012-11-26T04:00:00"></RegionalFcst>

**Anatomy of responses**

- RegionalFcst

**RegionalFcst**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>issuedAt</td>
<td>ISO 8601 date</td>
<td>the date and time at which the current regional forecast was issued</td>
</tr>
</tbody>
</table>

**txt/wxfcs/regionalforecast/datatype/locationId**

This provides access to national park forecasts. The data provided is generally updated twice daily, early morning and early afternoon.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/regionalforecast/datatype/locationId

Supported *datatype* values:

<table>
<thead>
<tr>
<th>Data type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>xml</td>
<td>Extensible Markup Language.</td>
</tr>
<tr>
<td>json</td>
<td>JavaScript Object Notation.</td>
</tr>
</tbody>
</table>
Supported `locationId` values:

<table>
<thead>
<tr>
<th>Location ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>number</td>
<td>A numbered location ID e.g. South West England = 513. The list of location IDs available for a datafeed can be fetched using the <code>sitelist</code> resource for that datafeed.</td>
</tr>
</tbody>
</table>

**Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required/optional</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Required</td>
<td>Your DataPoint API key</td>
</tr>
</tbody>
</table>

**Example request**

Fetch the regional forecasts for south west England in XML.


Returns approximately 3 kB of XML.

```xml
1. <?xml version="1.0" encoding="ISO-8859-1"?>
2. <RegionalFcst xmlns="www.metoffice.gov.uk/xml/metoRegionalFcst" createdOn="2012-11-26T03:32:11" issuedAt="2012-11-26T04:00:00" regionId="sw">
3.   <FcstPeriods>
4.     <Period id="day1to2">
5.       <Paragraph title="Headline:">Rather cloudy with scattered heavy showers.</Paragraph>
6.       <Paragraph title="Today:">Cloudy with scattered heavy showers, some with hail and thunder. Rainfall accumulations are expected to be less compared to that of recent days for most parts, nevertheless this may exacerbate recent flooding problems. Windy, especially around northern and western coasts. Maximum Temperature 10C.</Paragraph>
7.       <Paragraph title="Tonight:">Outbreaks of showery rain continuing through much of the night. The rain heavy at times, mainly across western counties. Slowly becoming drier towards dawn. Minimum Temperature 5C.</Paragraph>
8.       <Paragraph title="Tuesday:">Any remaining outbreaks of rain soon clearing south to leave a much drier and brighter but cooler day for many. A few scattered showers possible, mainly in the west. Windy. Maximum Temperature 9C.</Paragraph>
9.     </Period>
10.     <Period id="day3to5">
11.       <Paragraph title="Outlook for Wednesday to Friday:">Breezy, mainly dry with sunny spells and just a few scattered showers possible. Turning colder, and as winds ease, overnight frosts will become increasingly widespread.</Paragraph>
12.     </Period>
13.     <Period id="day6to15">
14.       <Paragraph title="UK Outlook for Saturday 1 Dec 2012 to Monday 10 Dec 2012:">Wintry showers are expected to affect some eastern areas on Saturday with snow on hills, possibly to low levels in the north. Elsewhere, largely dry and fine, but cold with the risk of frost, icy patches and overnight freezing fog. By Sunday, rain may spread into the far west, preceded by snow, mainly over higher ground. There is a lot of uncertainty for the remainder of the period but it is likely that northern and eastern areas remain cold with wintry showers for some. Elsewhere, it will probably become milder, at least for a time, but also more unsettled, with rain and hill snow accompanied by stronger winds. Later in the period, colder but drier conditions may become re-established across the UK, with frost and icy patches for many.</Paragraph>
15.     </Period>
16.     <Period id="day16to30">
17.       <Paragraph title="UK Outlook for Tuesday 11 Dec 2012 to Tuesday 25 Dec 2012:">As is usual, there are uncertainties in the forecast for this period. However, there are signs that northerly winds may be quite frequent across the UK. So, on balance, colder than average conditions are likely to continue, with a risk of frost and fog, and an increased risk of some snow.</Paragraph>
18.     </Period>
19. </FcstPeriods>
20. </RegionalFcst>
```
Anatomy of responses

- RegionalFcst
  - FcstPeriods
    - Period
      - Paragraph

RegionalFcst

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createdOn</td>
<td>ISO 8601 date</td>
<td>The time at which the forecast was actually issued.</td>
</tr>
<tr>
<td>issuedAt</td>
<td>ISO 8601 date</td>
<td>The official time of issue for the forecast</td>
</tr>
<tr>
<td>regionId</td>
<td>string</td>
<td>The short name of the region</td>
</tr>
<tr>
<td>FcstPeriods</td>
<td>FcstPeriods object</td>
<td></td>
</tr>
</tbody>
</table>

FcstPeriods

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>array of Period</td>
<td></td>
</tr>
</tbody>
</table>

Period

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>The period of time covered by the forecast. e.g. 'day1to2'</td>
</tr>
</tbody>
</table>

Paragraph

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>title</td>
<td>string</td>
<td>Title for the paragraph of forecast text.</td>
</tr>
<tr>
<td>$</td>
<td>string</td>
<td>A paragraph of text of the forecast.</td>
</tr>
</tbody>
</table>

txt/wxfcs/mountainarea/datatype/sitelist

The mountain area forecast site list data feed provides a list of the locations (also known as sites) for which results are available for the mountain area forecast data feed. You can use this data feed to find details such as the ID of the site that you are interested in finding data for.

Resource URL

Example request

1. `<?xml version="1.0" encoding="UTF-8"?>`
2. `<Locations>`
3. `<Location id="100" name="Brecon Beacons"></Location>`
4. `<Location id="101" name="East Highland"></Location>`
5. `<Location id="102" name="Lake District"></Location>`
6. `<Location id="103" name="Peak District"></Location>`
7. `<Location id="104" name="Snowdonia"></Location>`
8. `<Location id="105" name="West Highland"></Location>`
9. `<Location id="106" name="Yorkshire Dales"></Location>`
10. `</Locations>`
txt/wxfcs/mountainarea/datatype/capabilities

The mountain area forecast capabilities data feed provides a summary of which results are available from the get mountain area forecast by site ID data feed, specifying the creation dates, valid from and to dates, and the general risk for each mountain area.

Resource URL

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/datatype/capabilities

Example request

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/xml/capabilities?key=

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<MountainForecastList>
  <MountainForecast>
    <DataDate>2012-11-27T03:36:01Z</DataDate>
    <ValidFrom>2012-11-27T03:00:00Z</ValidFrom>
    <ValidTo>2012-12-01T03:00:00Z</ValidTo>
    <CreatedDate>2012-11-27T03:37:28Z</CreatedDate>
    <URI>http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/{format}/100</URI>
    <Area>Brecon Beacons</Area>
    <Risk>Medium</Risk>
  </MountainForecast>
  ...
  <MountainForecast>
    <DataDate>2012-11-27T04:57:08Z</DataDate>
    <ValidFrom>2012-11-27T04:00:00Z</ValidFrom>
    <ValidTo>2012-12-01T04:00:00Z</ValidTo>
    <CreatedDate>2012-11-27T04:58:58Z</CreatedDate>
    <URI>http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/{format}/106</URI>
    <Area>Yorkshire Dales</Area>
    <Risk>High</Risk>
  </MountainForecast>
</MountainForecastList>
```

Anatomy of responses

- MountainForecastList
  - MountainForecast
    - DataDate
    - ValidFrom
    - ValidTo
    - CreatedDate
    - URI
    - Area
    - Risk

<table>
<thead>
<tr>
<th>MountainForecastList</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
</tr>
<tr>
<td>MountainForecast</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MountainForecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
</tr>
<tr>
<td>DataDate</td>
</tr>
<tr>
<td>Field</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>ValidFrom</td>
</tr>
<tr>
<td>ValidTo</td>
</tr>
<tr>
<td>CreatedDate</td>
</tr>
<tr>
<td>URI</td>
</tr>
<tr>
<td>Area</td>
</tr>
<tr>
<td>Risk</td>
</tr>
</tbody>
</table>

**txt/wxfcs/mountainarea/datatype/locationId**

This provides access to mountain area forecasts covering the four day period after their issue date. The data provided by the web service is updated once a day at least, but may be updated more often.

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/datatype/locationId

**Example request**

http://datapoint.metoffice.gov.uk/public/data/txt/wxfcs/mountainarea/xml/102?key=

```xml
1. <?xml version="1.0" encoding="ISO-8859-1"?>
3.   <title>Mountain Forecasts</title>
4.   <location>Lake District</location>
5.   <issue date="2012-11-28" time="0350"></issue>
6.   <ValidFrom>2012-11-28T03:00:00Z</ValidFrom>
7.   <ValidTo>2012-12-02T03:00:00Z</ValidTo>
8.   <Validity>Wednesday</Validity>
9.   <IssuedDate>Wednesday, 28 November 2012</IssuedDate>
10.  <Hazards>
11.    <Hazard no="1">
12.      <Element>Blizzards</Element>
13.      <Risk>No Risk</Risk>
14.      <Comments></Comments>
15.    </Hazard>
16.    <Hazard no="2">
17.      <Element>Heavy snow</Element>
18.      <Risk>No Risk</Risk>
19.      <Comments></Comments>
20.    </Hazard>
21.    <Hazard no="3">
22.      <Element>Storm force winds</Element>
23.      <Risk>No Risk</Risk>
24.      <Comments></Comments>
25.    </Hazard>
26.    <Hazard no="4">
27.      <Element>Gales</Element>
28.      <Risk>No Risk</Risk>
29.      <Comments></Comments>
30.    </Hazard>
31.    <Hazard no="5">
32.      <Element>Severe chill effect</Element>
33.      <Risk>Medium</Risk>
34.      <Comments>Sub-zero temperatures combines with strong winds leading to significant wind chill.</Comments>
35.    </Hazard>
36.    <Hazard no="6">
```
 Persistent extensive hill fog

Thunderstorms

Heavy persistent rain

Strong sunlight

A sunny but cold day with strong northerly winds over the tops.

A dry and sunny day but feeling cold with low temperatures and strong winds causing significant wind-chill. A frosty start on high ground, and remaining frosty in the shade through much of the day.

Very good visibility affording clear panoramic views of distant hills.

Most hills will be cloud free, with just a few isolated patches of hill fog at times affecting the highest peaks.

Fresh to strong northerly winds, 35mph gusting 45mph over the more exposed areas. Easing slightly to 25-30 mph gusting 40 mph in the afternoon.

A cold and frosty start will lead to another dry and bright day, with the best of the sunshine over the western fells and more in the way of high cloud over the eastern fells.

Excellent visibility.

Hills are expected to be cloud free throughout the day.

A cold and frosty start will lead to another dry and bright day, with the best of the sunshine over the western fells and more in the way of high cloud over the eastern fells.

Excellent visibility.
100. <TempLowLevel>Minus 2 Celsius rising to plus 4 Celsius.</TempLowLevel>
101. <TempHighLevel>Minus 3 Celsius.</TempHighLevel>
102. <FreezingLevel>200-300m.</FreezingLevel>
103. </Forecast_Day1>
104. <Outlook_Day2>Remaining cold, dry and bright spell continues with many higher paths frozen and also patches of hill fog. The winds will be light and variable. Freezing level around 200-300m.</Outlook_Day2>
105. <Outlook_Day3>Cloudy conditions on Saturday with low temperatures and perhaps some snow showers. Extensive and persistent hill fog will cause very poor visibility during the morning. Winds will strengthen becoming northerly 20-25mph with gusts of 30-35mph adding to the chill effect. Freezing level around 200-300m.</Outlook_Day3>
106. <Outlook_Day4>Similar to previous days, remaining mostly cloudy with some snow showers, and light and variable winds. Freezing level 300m rising to 600m.</Outlook_Day4>
107. </report>

Anatomy of responses

- report
  - title
  - location
  - issue
  - ValidFrom
  - ValidTo
  - IssuedDate
  - Hazards
    - Hazard
      - Element
      - Risk
      - Comments
  - Overview
  - Forecast_Day0
    - Weather
    - Visibility
    - HillFog
    - MaxWindLevel
    - MaxWind
    - TempLowLevel
    - TempHighLevel
    - FreezingLevel
    - WeatherPPN
      - WxPeriod
        - Period
        - Weather
        - Probability
        - Ppn_type
  - Forecast_Day1
  - Forecast_Day2
  - Forecast_Day3
  - Forecast_Day4

report

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>creating-authority</td>
<td>string</td>
<td>This is always the Met Office</td>
</tr>
<tr>
<td>creation-time</td>
<td>ISO 8601 date</td>
<td>The creation time of the report</td>
</tr>
<tr>
<td>Field</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>title</td>
<td>string</td>
<td>This is always Mountain Forecasts</td>
</tr>
<tr>
<td>location</td>
<td>String</td>
<td>The name of the location to which the report refers</td>
</tr>
<tr>
<td>issue</td>
<td>issue Object</td>
<td>A user friendly representation of the issue date</td>
</tr>
<tr>
<td>ValidFrom</td>
<td>ISO 8601 date</td>
<td>The start of the validity period</td>
</tr>
<tr>
<td>ValidTo</td>
<td>ISO 8601 date</td>
<td>The end of the validity period</td>
</tr>
<tr>
<td>Validity</td>
<td>String</td>
<td>A textual representation of the validity period</td>
</tr>
<tr>
<td>IssuedDate</td>
<td>String</td>
<td>A textual representation of the issue date</td>
</tr>
<tr>
<td>Hazards</td>
<td>Hazards objects</td>
<td>This is a summary of the hazards that may be encountered and the current level of risk presented by each.</td>
</tr>
<tr>
<td>Overview</td>
<td>String</td>
<td>An overview of the weather in the relevant area</td>
</tr>
<tr>
<td>Forecast_Day0</td>
<td>Forecast_Day0 Object</td>
<td>This is a detailed forecast for day 0.</td>
</tr>
<tr>
<td>Forecast_Day1</td>
<td></td>
<td>This is a detailed forecast for day 1.</td>
</tr>
<tr>
<td>Outlook_Day2</td>
<td>String</td>
<td>a short paragraph giving the general outlook for day 2</td>
</tr>
<tr>
<td>Outlook_Day3</td>
<td>String</td>
<td>a short paragraph giving the general outlook for day 3</td>
</tr>
<tr>
<td>Outlook_Day4</td>
<td>String</td>
<td>a short paragraph giving the general outlook for day 4</td>
</tr>
</tbody>
</table>

### issue

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>date</td>
<td>ISO 8601 date</td>
<td>Date of issue</td>
</tr>
<tr>
<td>time</td>
<td>24-hour time</td>
<td>Time of issue</td>
</tr>
</tbody>
</table>

### Hazards

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard</td>
<td>array of Hazard</td>
<td></td>
</tr>
</tbody>
</table>

### Hazard

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>no</td>
<td>int</td>
<td>The number of the Hazard</td>
</tr>
<tr>
<td>Element</td>
<td>String</td>
<td>The type of Hazard</td>
</tr>
<tr>
<td>Risk</td>
<td>String</td>
<td>The level of risk</td>
</tr>
<tr>
<td>Comments</td>
<td>String</td>
<td>Additional comments</td>
</tr>
</tbody>
</table>

### Forecast_Day0

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather</td>
<td>String</td>
<td>a summary of the weather on day 0</td>
</tr>
<tr>
<td>Visibility</td>
<td>String</td>
<td>a summary of the visibility on day 0</td>
</tr>
<tr>
<td>HillFog</td>
<td>String</td>
<td>a summary of the hill fog on day 0</td>
</tr>
<tr>
<td>MaxWindLevel</td>
<td>String</td>
<td>a description of the maximum wind level on day 0</td>
</tr>
<tr>
<td>MaxWind</td>
<td>String</td>
<td>a description of the maximum wind on day 0</td>
</tr>
</tbody>
</table>
The surface pressure chart synoptic analysis and forecast capabilities data feed provides information on when the current surface pressure chart were issued, and also lists the timesteps for which surface pressure are available, and the URIs of the surface pressure synoptic analysis and forecast charts themselves as GIFs.

**Resource URL**


**Example request**


```
1. <?xml version="1.0" ?>
2. <BWSurfacePressureChartList>
3.   <BWSurfacePressureChart>
4.     <DataDate>2012-11-27T00:00:00Z</DataDate>
5.     <ValidFrom>2012-11-27T00:00:00Z</ValidFrom>
6.     <ValidTo>2012-11-27T00:00:00Z</ValidTo>
```
Anatomy of responses

- **BWSurfacePressureChartList**
  - **BWSurfacePressureChart**
    - **DataDate**
    - **ValidFrom**
    - **ValidTo**
    - **ProductURI**
    - **DataDateTime**
    - **ForecastPeriod**

**BWSurfacePressureChartList**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BWSurfacePressureChart</td>
<td>array of BWSurfacePressureChart</td>
<td></td>
</tr>
</tbody>
</table>

**BWSurfacePressureChart**

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataDate</td>
<td>ISO 8601 date</td>
<td>the Issued Date of the chart</td>
</tr>
<tr>
<td>ValidFrom</td>
<td>ISO 8601 date</td>
<td>the start of the validity period for the forecast</td>
</tr>
<tr>
<td>ValidTo</td>
<td>ISO 8601 date</td>
<td>the end of the validity period for the forecast</td>
</tr>
<tr>
<td>ProductURI</td>
<td>String</td>
<td>the URI that will retrieve the chart</td>
</tr>
<tr>
<td>DataDateTime</td>
<td>Int</td>
<td>the time at which the chart was issued (24 hour time)</td>
</tr>
<tr>
<td>ForecastPeriod</td>
<td>Int</td>
<td>the number of hours after the DataDateTime of the start of the validity period of the forecast</td>
</tr>
</tbody>
</table>

**layer/wxfcs/all/datatype/capabilities**

The forecast layer capabilities feed provides information on when the forecast layers that are currently available were issued, details the timesteps that are available, and lists the URIs at which they can be found. The forecast layer capabilities feed provides information on the available layers for the following products:

- Forecast map layers screen temperature
- Forecast map layers total cloud cover
- Forecast map layers mean sea level pressure
- Forecast map layers precipitation

**Resource URL**

http://datapoint.metoffice.gov.uk/public/data/layer/wxfcs/all/datatype/capabilities

**Example request**


**Anatomy of responses**
The observation layer capabilities feed provides information on when the observation layers that are currently available were issued, details the timesteps that are available, and lists the URIs at which they can be found. The observation layer capabilities feed provides information on the available layers for the following products:

- Current weather map layers UK rainfall radar
- Current weather map layers UK total cloud cover
- Current weather map layers UK lightning strikes
- Current weather map layers UK satellite infrared
- Current weather map layers UK satellite visible

**Resource URL**

**Example request**


**Anatomy of responses**

```
<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>type</td>
<td>string</td>
<td></td>
</tr>
<tr>
<td>BaseUrl</td>
<td>BaseUrl Object</td>
<td></td>
</tr>
<tr>
<td>Layer</td>
<td>array of Layer</td>
<td>A Layer object defines a single layer</td>
</tr>
</tbody>
</table>

**BaseUrl**

```
<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>forServiceTimeFormat</td>
<td>string</td>
<td>the format in which the timesteps are presented</td>
</tr>
<tr>
<td>$</td>
<td>String</td>
<td>the base URL of the observation layer feeds</td>
</tr>
</tbody>
</table>

**Layer**

```
<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>displayName</td>
<td>string</td>
<td>the product described by the Layer</td>
</tr>
<tr>
<td>Service</td>
<td>Service Object</td>
<td></td>
</tr>
</tbody>
</table>

**Service**
<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>ISO 8601 date</td>
<td>A single time for which data is available</td>
</tr>
</tbody>
</table>