IBM Passport Advantage Offerings | Weather Company Data for Advanced Analytics - Premium

The Weather Company Data APIs are served from our Enterprise Data Platform built upon the latest, most robust and globally distributed cloud technologies leveraging the core competence of our weather systems and next-generation globally distributed, highly available, low latency platforms. The Enterprise Data Platform has been architected from the beginning with extreme scale and performance as key factors of success and is automatically scales to deliver tens of Billions average daily requests with extremely low latency.

Overview

The IBM Passport Advantage offering of Weather Company Data API Products includes products bundled together in unique product offering packages.

- See the common usage and style guide which describes the common elements, error handling, language support and terminology used by the Weather Company Data APIs.
  - Guide on page 81

Weather Company Data for Advanced Analytics - Premium			
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Weather Company Data for Advanced Analytics | Daily Forecast (3-Day, 5-Day, 7-Day, 10-Day) - v1

Domain Portfolio: Forecast | Domain: Daily Forecasts | API Name: Daily Forecast (3-Day, 5-Day, 7-Day, 10-Day) - v1

> Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Daily Forecast API is sourced from the The Weather Company Forecast system. This TWC API returns weather forecasts starting current day. Your content licensing agreement with TWC determines the number of days returned in the API response and is constrained by the API Key that is provided to your company. Please refer to the Data Elements section later in this document for more details.

Forecast Composition

The TWC daily forecast product can contain multiple days of daily forecasts for each location. Each day of a forecast can contain up to (3) "temporal segments" meaning three separate forecasts. For any given forecast day we offer day, night, and a 24-hour forecast (daily summary). Implementing our forecasts requires your applications to perform basic processing in order to properly ingest the forecast data feeds.

Forecast Implementation

The data values in this API are correctly populated into Day, Night, or 24-hour temporal segments. These segments are separate objects in the response.

> PLEASE NOTE: The Day object will no longer appear in the API after 3:00pm Local Apparent Time. At 3pm Local Apparent Time, we recommend that your application no longer displays the Day object.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- daypart_name
- dow
- golf_category
- long_daypart_name
- lunar_phase
- narrative
- phrase_32char
- shortcast
- temp_phrase
- wdir_cardinal
- wind_phrase

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** language, format, units, geocode, apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/daily/3day.json?language=en-US&units=e&apiKey=yourApiKey https://api.weather.com/v1/geocode/34.063/-84.217/forecast/daily/5day.json?language=en-US&units=e&apiKey=yourApiKey https://api.weather.com/v1/geocode/34.063/-84.217/forecast/daily/7day.json?language=en-US&units=e&apiKey=yourApiKey https://api.weather.com/v1/geocode/34.063/-84.217/forecast/daily/10day.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
[Forecast Object] - Daily Summary Section					
class	Data identifier	string		fod_long_range_daily	N
blurb	A handwritten local or regional text forecast created by a meteorologist to supplement the system-generated forecast.	string		The Palomar fire is now about 45% contained. Smoke remains a significant problem in the LA basin.	N
blurb_author	The name initials of the meteorologist who authored the forecast blur.	string		SO	N
dow	Day of week	string		Thursday	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
fcst_valid	Time forecast is valid in UNIX seconds	epoch		1369252800	N
fcst_valid_local	Time forecast is valid in local apparent time.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
lunar_phase	Description phrase for the current lunar phase	string		Waning Gibbous	N
lunar_phase_code	3 character short code for lunar phases	string		WNG	N
lunar_phase_day	Day number within monthly lunar cycle	integer	1 through 28	17	N
max_temp	Daily maximum temperature	integer		82	Y
min_temp	Daily minimum temperature	integer		59	N
moonrise	First moonrise in local time. It reflects daylight savings time conventions.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	Y
moonset	First Moonset in local time. It reflects daylight savings time conventions.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	Y
narrative	The narrative forecast for the 24-hour period.	string		A few thunderstorms possible. Lows overnight in the low 60s.	N
num	This data field is the sequential number that identifies each of the forecasted days in the API. They start on day 1, which is the forecast for the current day. Then the forecast for tomorrow uses number 2, then number 3 for the day after tomorrow, and so forth.	Integer	1 - 15	1	N
qpf	The forecasted measurable precipitation (liquid or liquid equivalent) during 12 or 24 hour period.	decimal		0.06	N
qualifer_code	A code for special forecasted weather criteria for the 12 and 24 hour dayparts	string		Q9015	N

qualifier	A phrase associated to the qualifier_code describing special forecasted weather criteria for the 12 and 24 hour dayparts.	string		Winds could occasionally gust over 70 mph.	N
snow_code	Residual snow accumulation code for the 12 or 24 hour forecast period.	string		A9015	N
snow_phrase	A shortened text description of the forecasted snow accumulation during the forecast period (24 hours or 12 hours).	string		Potential for 6-12 inches of snow.	N
snow_qpf	The forecasted measurable precipitation as snow during the 12 or 24 hour forecast period.	decimal		1.3	N
snow_range	The expected amount of residual snow for the 12 or 24 hour period.	string		6 - 12	N
stormcon	The estimate of the likelihood of winter storm activity during a given 24 hour forecast period.	integer	0 to 10	0	Y
sunrise	The local time of the sunrise. It reflects any local daylight savings conventions. For a few Arctic and Antarctic regions, the Sunrise and Sunset data values may be the same (each with a value of 12:01am) to reflect conditions where a sunrise or sunset does not occur.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
sunset	The local time of the sunset. It reflects any local daylight savings conventions. For a few Arctic and Antarctic regions, the Sunrise and Sunset data values may be the same (each with a value of 12:01am) to reflect conditions where a sunrise or sunset does not occur.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
torcon	The estimate of the likelihood of tornado activity during a given 24 hour forecast period.	integer	0 to 10	0	Y
[Day Object] || * Note: [Night Object] - repeats all fields in the [Day Object] *** [Night Object] - Collapsed for presentation purposes*					
class					
accumulation_phrase	An accumulation phrase of any precipitation type in the 12 hour forecast period.	string		Additional rainfall over 2 inches expected.	N
alt_ daypart_name	A specialized version of the Daypart Name field. Certain holidays or historic events may replace the usual daypart name.	string		Christmas Day	N
clds	Average cloud cover expressed as a percentage.	integer	0 to 100	82	N
day_ind	Day or night indicator	string		D	N
daypart_name	The name of a 12 hour daypart not including day names in the first 48 hours.	String	Today, Tonight	Today	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
fcst_valid	Time forecast is valid in UNIX seconds	epoch		1369252800	N
fcst_valid_local	Time forecast is valid in local apparent time.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
golf_category	The Golf Index Category expressed as a phrase for the weather conditions for playing golf.	string		Very Good	Y
golf_index	The Golf Index expresses on a scale of 0 to 10 the weather conditions for playing golf. Not applicable at night. 0-2=Very Poor, 3=Poor, 4-5=Fair, 6-7=Good, 8-9=Very Good, 10=Excellent	integer	1-10	8	Y
hi	Heat Index - Maximum heat index. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		84	N
icon_code	This number is the key to the weather icon lookup. The data field shows the icon number that is matched to represent the observed weather conditions. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		26	N

icon_extd	Code representing explicit full set sensible weather. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		2600	N
long_daypart_name	The named time frame for the valid weather forecast in an expanded format. The named time frame can be either for 12-hour periods or 24-hour periods.	string	Monday, Monday Night, Tuesday, Tuesday Night, Wednesday, Wednesday Night, Thursday, Thursday Night, Friday, Friday Night, Saturday, Saturday Night, Sunday, Sunday Night	Tuesday Night	N
narrative	The narrative forecast for the daytime period.	string		A few thunderstorms possible. Lows overnight in the low 60s.	N
num	The sequential number that identifies each of the forecasted days in your feed. They start on day 1, which is the forecast for the current day. Then the forecast for tomorrow uses number 2, then number 3 for the day after tomorrow, and so forth.	integer		1	N
phrase_12char	Sensible weather phrase	string		Windy	N
phrase_22char	Sensible weather phrase	string		Cloudy	N
phrase_32char	Sensible weather phrase	string		Heavy Rain/Wind	N
pop	Sensible maximum probability of precipitation.	integer		20	N
pop_phrase	Probability of precipitation phrase.	string		Chance of snow 90%	N
precip_type	Type of precipitation to display with the probability of precipitation (pop) data element.	string	rain, snow, precip	rain	N
qpf	The forecasted measurable precipitation (liquid or liquid equivalent) during the 12 hour forecast period.	decimal		0.04	N
qualifier	A forecast qualifier that is applicable to the 12 hour forecast period.	string		Winds could occasionally gust over 70 mph.	N
qualifier_code	A code for the forecast qualifier applicable to the 12 hour forecast period.	string		Q9015	N
rh	The daytime relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	83	N
shortcast	An abbreviated sensible weather portion of narrative forecast.	string		Cloudy	N
snow_code	Residual snow accumulation code for the 12 or 24 hour forecast period.	string		A9015	N
snow_phrase	Snow accumulation phrase for the 12 hour forecast period.	string		Additional snow and ice accumulating 4 to 6 inches	N
snow_qpf	The forecasted measurable precipitation as snow during the 12 hour forecast period.	decimal		5.3	N
snow_range	Snow accumulation amount for the 12 hour forecast period.	decimal		4 - 6	N
subphrase_pt1	Part 1 of 3-part daytime sensible weather phrase	string		Cloudy	N
subphrase_pt2	Part 2 of 3-part daytime sensible weather phrase	string		windy	N
subphrase_pt3	Part 3 of 3-part daytime sensible weather phrase	string		Thunder	N
temp	The forecasted temperature for midpoint day (1pm) or midpoint night (1am) for a 12 hour daypart.	integer		81	N
temp_phrase	The short phrase containing the forecasted high or low temperature for 12 hour forecast period.	string		High 81F	N
thunder_enum	The enumeration of thunderstorm probability within an area for a 12 hour daypart.	integer	0 through 5	3	N

thunder_enum_phrase	The description of probability thunderstorm activity in an area for 12 hour daypart.	string		Severe thunderstorms possible		N
uv_desc	The UV Index Description which complements the UV Index value by providing an associated level of risk of skin damage due to exposure. 2 is Not Available, -1 is No Report, 0 to 2 is Low, 3 to 5 is Moderate, 6 to 7 is High, 8 to 10 is Very High, 11 to 16 is Extreme	string	-1 to 16	Low		N
uv_index	Maximum UV index for the 12 hour forecast period.	integer		2		N
uv_index_raw	The non-truncated UV Index which is the intensity of the solar radiation based on a number of factors.	decimal		2.22		N
uv_warning	TWC-created UV warning based on UV index of 11 or greater.	integer		0		N
vocal_key	An encoded narrative forecast used for creating computer-generated audio narratives of the forecast period. TWC use only.	string		D1:DA01:X2600260011:S260011:TH81:W07R02		N
wc	Wind Chill - Minimum wind chill. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer		68		N
wdir	Daytime average wind direction in magnetic notation.	integer	0 to 359	148		N
wdir_cardinal	Daytime average wind direction in cardinal notation.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	SE		N
wind_phrase	The phrase that describes the wind direction and speed for a 12 hour daypart.	string		Winds SSE at 5 to 10 mph.		N
wspd	Wind Speed - The maximum forecasted wind speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		7		N
wxman	The code to enable the Weather Man animation for forecast period. TWC use only.	string		wx4400		N

[Night Object] || * Note: [Night Object] - repeats all fields in the [Day Object] *** [Night Object] - Collapsed for presentation purposes*

JSON Sample

```
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1471537802651:851047427",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1471539254,
```

```json
      "status_code": 200
   },
   "forecasts": [
      {
         "class": "fod_long_range_daily",
         "expire_time_gmt": 1471539254,
         "fcst_valid": 1471518000,
         "fcst_valid_local": "2016-08-18T07:00:00-0400",
         "num": 1,
         "max_temp": 92,
         "min_temp": 72,
         "torcon": null,
         "stormcon": null,
         "blurb": null,
         "blurb_author": null,
         "lunar_phase_day": 15,
         "dow": "Thursday",
         "lunar_phase": "Full Moon",
         "lunar_phase_code": "F",
         "sunrise": "2016-08-18T07:00:50-0400",
         "sunset": "2016-08-18T20:19:22-0400",
         "moonrise": "2016-08-18T20:35:50-0400",
         "moonset": "2016-08-18T07:10:32-0400",
         "qualifier_code": null,
         "qualifier": null,
         "narrative": "Scattered thunderstorms possible. Highs in the low 90s and lows in the low 70s.",
         "qpf": 0.02,
         "snow_qpf": 0,
         "snow_range": "",
         "snow_phrase": "",
         "snow_code": "",
         "night": {
            "fcst_valid": 1471561200,
            "fcst_valid_local": "2016-08-18T19:00:00-0400",
            "day_ind": "N",
            "thunder_enum": 1,
            "daypart_name": "Tonight",
            "long_daypart_name": "Thursday night",
            "alt_daypart_name": "Tonight",
            "thunder_enum_phrase": "Thunder possible",
            "num": 2,
            "temp": 72,
            "hi": 91,
            "wc": 73,
```

        "pop": 20,
        "icon_extd": 9000,
        "icon_code": 29,
        "wxman": "wx1600",
        "phrase_12char": "Clear Late",
        "phrase_22char": "Clearing Late",
        "phrase_32char": "Clouds Early/Clearing Late",
        "subphrase_pt1": "Clearing",
        "subphrase_pt2": "Late",
        "subphrase_pt3": "",
        "precip_type": "rain",
        "rh": 84,
        "wspd": 5,
        "wdir": 291,
        "wdir_cardinal": "WNW",
        "clds": 62,
        "pop_phrase": "",
        "temp_phrase": "Low 72F.",
        "accumulation_phrase": "",
        "wind_phrase": "Winds light and variable.",
        "shortcast": "Clouds early, some clearing late",
        "narrative": "Cloudy skies early, then partly cloudy after midnight. A stray shower or thunderstorm is possible. Low 72F. Winds light and variable.",
        "qpf": 0,
        "snow_qpf": 0,
        "snow_range": "",
        "snow_phrase": "",
        "snow_code": "",
        "vocal_key": "D2:DA02:X2600300022:S900023:Q8001:TL72:W9902",
        "qualifier_code": null,
        "qualifier": "A stray shower or thunderstorm is possible.",
        "uv_index_raw": 0,
        "uv_index": 0,
        "uv_warning": 0,
        "uv_desc": "Low",
        "golf_index": null,
        "golf_category": ""
      },
      "day": {
        "fcst_valid": 1471518000,
        "fcst_valid_local": "2016-08-18T07:00:00-0400",
        "day_ind": "D",
        "thunder_enum": 2,
        "daypart_name": "Today",
        "long_daypart_name": "Thursday",

```
      "alt_daypart_name": "Today",
      "thunder_enum_phrase": "Thunder expected",
      "num": 1,
      "temp": 92,
      "hi": 97,
      "wc": 87,
      "pop": 40,
      "icon_extd": 3800,
      "icon_code": 38,
      "wxman": "wx2030",
      "phrase_12char": "Sct T-Storms",
      "phrase_22char": "Sct Thunderstorms",
      "phrase_32char": "Scattered Thunderstorms",
      "subphrase_pt1": "Scattered",
      "subphrase_pt2": "T-Storms",
      "subphrase_pt3": "",
      "precip_type": "rain",
      "rh": 51,
      "wspd": 6,
      "wdir": 273,
      "wdir_cardinal": "W",
      "clds": 59,
      "pop_phrase": "Chance of rain 40%.",
      "temp_phrase": "High 92F.",
      "accumulation_phrase": "",
      "wind_phrase": "Winds W at 5 to 10 mph.",
      "shortcast": "A few thunderstorms possible",
      "narrative": "Mixed clouds and sun with scattered thunderstorms. High 92F. Winds W at 5 to 10 mph. Chance of rain 40%.",
      "qpf": 0.01,
      "snow_qpf": 0,
      "snow_range": "",
      "snow_phrase": "",
      "snow_code": "",
      "vocal_key": "D1:DA01:X3800380013:S380013:TH92:W12R02:P9041",
      "qualifier_code": null,
      "qualifier": null,
      "uv_index_raw": 9.07,
      "uv_index": 9,
      "uv_warning": 0,
      "uv_desc": "Very High",
      "golf_index": 4,
      "golf_category": "Fair"
    }
  },
```

```json
{
    "class": "fod_long_range_daily",
    "expire_time_gmt": 1471539254,
    "fcst_valid": 1471604400,
    "fcst_valid_local": "2016-08-19T07:00:00-0400",
    "num": 2,
    "max_temp": 89,
    "min_temp": 71,
    "torcon": null,
    "stormcon": null,
    "blurb": null,
    "blurb_author": null,
    "lunar_phase_day": 16,
    "dow": "Friday",
    "lunar_phase": "Waning Gibbous",
    "lunar_phase_code": "WNG",
    "sunrise": "2016-08-19T07:01:33-0400",
    "sunset": "2016-08-19T20:18:11-0400",
    "moonrise": "2016-08-19T21:16:42-0400",
    "moonset": "2016-08-19T08:14:55-0400",
    "qualifier_code": null,
    "qualifier": null,
    "narrative": "Scattered thunderstorms. Highs in the upper 80s and lows in the low 70s.",
    "qpf": 0.33,
    "snow_qpf": 0,
    "snow_range": "",
    "snow_phrase": "",
    "snow_code": "",
    "night": {
        "fcst_valid": 1471647600,
        "fcst_valid_local": "2016-08-19T19:00:00-0400",
        "day_ind": "N",
        "thunder_enum": 0,
        "daypart_name": "Tomorrow night",
        "long_daypart_name": "Friday night",
        "alt_daypart_name": "Friday night",
        "thunder_enum_phrase": "No thunder",
        "num": 4,
        "temp": 71,
        "hi": 86,
        "wc": 72,
        "pop": 20,
        "icon_extd": 2900,
        "icon_code": 29,
```

```
            "wxman": "wx1600",
            "phrase_12char": "P Cloudy",
            "phrase_22char": "Partly Cloudy",
            "phrase_32char": "Partly Cloudy",
            "subphrase_pt1": "Partly",
            "subphrase_pt2": "Cloudy",
            "subphrase_pt3": "",
            "precip_type": "rain",
            "rh": 88,
            "wspd": 4,
            "wdir": 274,
            "wdir_cardinal": "W",
            "clds": 60,
            "pop_phrase": "",
            "temp_phrase": "Low 71F.",
            "accumulation_phrase": "",
            "wind_phrase": "Winds light and variable.",
            "shortcast": "Partly cloudy",
            "narrative": "Partly to mostly cloudy. Low 71F. Winds light and variable.",
            "qpf": 0,
            "snow_qpf": 0,
            "snow_range": "",
            "snow_phrase": "",
            "snow_code": "",
            "vocal_key": "D4:DA15:X2800300043:S300041:TL71:W9902",
            "qualifier_code": null,
            "qualifier": null,
            "uv_index_raw": 0,
            "uv_index": 0,
            "uv_warning": 0,
            "uv_desc": "Low",
            "golf_index": null,
            "golf_category": ""
          },
//This API will repeat additional times per response ** // Response Collapsed for Presentation Purposes
{}, // - Response Repeats for Day 2
{}, // - Response Repeats for Day 3…
{} // - Response Repeats for Day 10
        }
      }
    ]
}
```

Weather Company Data for Advanced Analytics | 15 Day - Hourly Forecast - v1

Domain Portfolio: Forecast | Domain: Hourly Forecasts | API Name: 15 Day - Hourly Forecast - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Hourly Forecast API is sourced from the The Weather Company Forecast system. This TWC API returns weather forecasts starting current day. Your content licensing agreement with TWC determines the number of days returned in the API response and is constrained by the API Key that is provided to your company. Please refer to the Data Elements section later in this document for more details.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- dow
- golf_category
- phrase_32char
- uv_desc
- wdir_cardinal

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** language, format, units, geocode, postal code apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/hourly/360hour.json?language=en-US&units=e&apiKey=yourApiKey

Request by Postal Code: **Required Parameters:** language, format, units, geocode, postal code apiKey**=yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>
https://api.weather.com/v1/location/30339:4:US/forecast/hourly/360hour.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
class	Data identifier	string		fod_long_range_hourly	N
clds	Hourly average cloud cover expressed as a percentage.	integer	0 to 100	82	N
day_ind	This data field indicates whether it is daytime or nighttime based on the Local Apparent Time of the location.	string	D = Day, N = Night, X = missing (for extreme northern and southern hemisphere	D	N
dewpt	The temperature which air must be cooled at constant pressure to reach saturation. The Dew	integer	-80 to 100 (°F) or -62 to 37 (°C)	63	N

	Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.				
dow	Day of week	string		Thursday	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
fcst_valid	Time forecast is valid in UNIX seconds	epoch		1369306800	N
fcst_valid_local	Time forecast is valid in local apparent time.	ISO		2013-08-06T07:00:00-0400	N
feels_like	Hourly feels like temperature. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index.	integer		84	N
golf_category	The Golf Index Category expressed as a worded phrase the weather conditions for playing golf.	string		Very Good	Y
golf_index	The Golf Index expresses on a scale of 0 to 10 the weather conditions for playing golf. Not applicable at night. 0-2=Very Poor, 3=Poor, 4-5=Fair, 6-7=Good, 8-9=Very Good, 10=Excellent	integer	1-10	8	Y
gust	The maximum expected wind gust speed.	integer		7	Y
hi	Hourly maximum heat index. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		84	Y
icon_code	This number is the key to the weather icon lookup. The data field shows the icon number that is matched to represent the observed weather conditions. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		26	N
icon_extd	Code representing explicit full set sensible weather. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		5500	N
mslp	Hourly mean sea level pressure	decimal		30.21	N
num	This data field is the sequential number that identifies each of the forecasted days in the API. They start on day 1, which is the forecast for the current day. Then the forecast for tomorrow uses number 2, then number 3 for the day after tomorrow, and so forth.	Integer	1 - 15	1	N
phrase_12char	Hourly sensible weather phrase	string		Cloudy	N
phrase_22char	Hourly sensible weather phrase	string		Cloudy	N
phrase_32char	Hourly sensible weather phrase	string		Fog Late	N
pop	Hourly maximum probability of precipitation	integer	0 to 100	20	N
precip_type	The short text describing the expected type accumulation associated with the Probability of Precipitation (POP) display for the hour.	string	rain,snow, precip	rain	N
qpf	The forecasted measurable precipitation (liquid or liquid equivalent) during the hour.	decimal		0.06	N
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	83	N

severity	A number denoting how impactful is the forecasted weather for this hour. Can be used to determine the graphical treatment of the weather display such as using red font on weather.com.	integer	0 = no threat 6 = dangerous / life threatening	2	N
snow_qpf	The forecasted hourly snow accumulation during the hour.	decimal		0	N
subphrase_pt1	Part 1 of 3-part hourly sensible weather phrase	string		Cloudy	N
subphrase_pt2	Part 2 of 3-part hourly sensible weather phrase	string		Late	N
subphrase_pt3	Part 3 of 3-part hourly sensible weather phrase	string		Thunder	N
temp	The temperature of the air, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements. You will receive this data field in Fahrenheit degrees or Celsius degrees.	integer	-140 to 140 (F)	68	N
uv_desc	The UV Index Description which complements the UV Index value by providing an associated level of risk of skin damage due to exposure.	string	-2 is Not Available -1 is No Report 0 to 2 is Low 3 to 5 is Moderate 6 to 7 is High 8 to 10 is Very High 11 to 16 is Extreme	Low	N
uv_index	Hourly maximum UV index	integer		2	N
uv_index_raw	The non-truncated UV Index which is the intensity of the solar radiation based on a number of factors.	decimal		2.22	N
uv_warning	TWC-created UV warning based on UV index of 11 or greater.	integer		0	N
vis	Prevailing hourly visibility	decimal	0 to 999	5.2	N
wc	Hourly minimum wind chill. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer		68	N
wdir	Hourly average wind direction in magnetic notation.	integer	0 to 359	145	N
wdir_cardinal	Hourly average wind direction in cardinal notation.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	SE	N
wspd	The maximum forecasted hourly wind speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		5	N
wxman	Code combining Hourly sensible weather and temperature conditions	string		wx4400	N

JSON Sample

{
  "metadata": {
    "language": "en-US",
    "transaction_id": "1471555597232:1367959664",
    "version": "1",
    "latitude": 34.06,
    "longitude": -84.21,
    "units": "e",
    "expire_time_gmt": 1471555970,
    "status_code": 200
  },
  "forecasts": [
    {
      "class": "fod_short_range_hourly",
      "expire_time_gmt": 1471555970,
      "fcst_valid": 1471557600,
      "fcst_valid_local": "2016-08-18T18:00:00-0400",
      "num": 1,
      "day_ind": "D",
      "temp": 91,
      "dewpt": 68,
      "hi": 96,
      "wc": 91,
      "feels_like": 96,
      "icon_extd": 2600,
      "wxman": "wx1230",
      "icon_code": 26,
      "dow": "Thursday",
      "phrase_12char": "Cloudy",
      "phrase_22char": "Cloudy",
      "phrase_32char": "Cloudy",
      "subphrase_pt1": "Cloudy",
      "subphrase_pt2": "",
      "subphrase_pt3": "",
      "pop": 15,
      "precip_type": "rain",
      "qpf": 0,
      "snow_qpf": 0,
      "rh": 47,
      "wspd": 7,
      "wdir": 284,
      "wdir_cardinal": "WNW",

```
      "gust": null,
      "clds": 85,
      "vis": 10,
      "mslp": 29.99,
      "uv_index_raw": 1.13,
      "uv_index": 1,
      "uv_warning": 0,
      "uv_desc": "Low",
      "golf_index": 8,
      "golf_category": "Very Good",
      "severity": 1
    },
//This API will repeat additional times per response ** Collapsed for presentation purposes
{}, // - Response Repeats hourly for Day 2
{}, // - Response Repeats hourly for Day 3…
{} // - Response Repeats hourly for Day 15
 ]
}
```

Weather Company Data for Advanced Analytics | Intraday Forecast (3-Day, 5-Day, 7-Day, 10-Day) - v1

Domain Portfolio: Forecast | Domain: Intraday Forecasts | API Name: Intraday Forecast (3-Day, 5-Day, 7-Day, 10-Day) - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Intraday Forecast API is sourced from the The Weather Company Forecast system. This TWC API returns weather forecasts in 6-hour periods starting current day. The 6-hour periods are Morning, Afternoon, Evening, and Overnight. Your content licensing agreement with TWC determines the number of days returned in the API response and is constrained by the API Key that is provided to your company.

Understanding Intraday Forecasts

The Intraday Forecast product breaks down the days forecasts into (four) 6-hour segments for each of the included days.

Intraday Segment	Intraday Segment Name	Reference Description
1	Morning	7 AM - 1 PM Local Apparent Time; the midpoint defined as 10 AM.
2	Afternoon	1 PM - 7 PM Local Apparent Time; the midpoint defined as 4 PM.
3	Evening	7 PM - 1 AM Local Apparent Time; the midpoint defined as 10 PM.
4	Overnight	1 AM - 7 AM Local Apparent Time; the midpoint defined as 4 AM.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- daypart_name
- dow
- phrase32_char
- wdir_cardinal

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): Required Parameters: language, format, units, geocode, postal code apiKey=**yourApiKey**

https://api.weather.com/v1/geocode/34.063/-84.217/forecast/intraday/3day.json?language=en-US&units=e&apiKey=yourApiKey
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/intraday/5day.json?language=en-US&units=e&apiKey=yourApiKey
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/intraday/7day.json?language=en-US&units=e&apiKey=yourApiKey
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/intraday/10day.json?language=en-US&units=e&apiKey=yourApiKey

Request by Postal Code: Required Parameters: language, format, units, geocode, postal code apiKey**=yourApiKey**
The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>

https://api.weather.com/v1/location/30339:4:US/forecast/intraday/10day.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
class	Data identifier	string		fod_long_range_intraday	N
clds	6-hour average cloud cover expressed as a percentage.	integer	0 to 100	82	N
daypart_name	The name for the 6-hour period of the day.	string	Morning Afternoon Evening Overnight	Morning	N
dow	Day of week	string		Thursday	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
fcst_valid	Time forecast is valid in UNIX seconds	epoch		1369306800	N
fcst_valid_local	Time forecast is valid in local apparent time.	ISO		2013-08-06T07:00:00-0400	N
icon_code	This number is the key to the weather icon lookup. The data field shows the icon number that is matched to represent the observed weather conditions. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		26	N
icon_extd	Code representing explicit full set sensible weather. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		5500	N
num	This data field is the sequential number that identifies each of the forecasted days in the API. They start on day 1, which is the forecast for the current day. Then the forecast for tomorrow uses number 2, then number 3 for the day after tomorrow, and so forth.	Integer	1 - 15	1	N
phrase_12char	6-hour sensible weather phrase	string		Cloudy	N
phrase_22char	6-hour sensible weather phrase	string		Cloudy	N
phrase_32char	6-hour sensible weather phrase	string		Fog Late	N
pop	Daytime maximum probability of precipitation.	integer		20	N
precip_type	The short text describing the expected type accumulation associated with the Probability of Precipitation (POP) display for the hour.	string	rain,snow, precip	rain	N
qualifier	A qualifier sensible weather extension for the 6-hour period.	string		Winds could occasionally gust over 70 mph.	Y
qualifier_code	6-hour sensible weather qualifier code.	string		Q9015	Y
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the	integer	0 to 100	83	N

	amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.					
subphrase_pt1	Part 1 of 3-part daypart sensible weather phrase	string		Cloudy		N
subphrase_pt2	Part 2 of 3-part daypart sensible weather phrase	string		Late		N
subphrase_pt3	Part 3 of 3-part daypart sensible weather phrase	string		Thunder		N
temp	The temperature of the air, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements. You will receive this data field in Fahrenheit degrees or Celsius degrees.	integer	-140 to 140 (F)	68		N
wdir	6-hour average wind direction in magnetic notation.	integer	0 to 359	145		N
wdir_cardinal	6-hour average wind direction in cardinal notation.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	SE		N
wspd	The maximum forecasted 6-hour wind speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		5		N

JSON Sample

```
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1471548007907:1671560253",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1471548260,
        "status_code": 200
    },
    "forecasts": [
        {
            "class": "fod_long_range_intraday",
            "expire_time_gmt": 1471548260,
            "fcst_valid": 1471539600,
            "fcst_valid_local": "2016-08-18T13:00:00-0400",
            "num": 1,
            "temp": 90,
            "pop": 24,
```

```
      "icon_extd": 3000,
      "icon_code": 30,
      "dow": "Thursday",
      "daypart_name": "Afternoon",
      "phrase_12char": "P Cloudy",
      "phrase_22char": "Partly Cloudy",
      "phrase_32char": "Partly Cloudy",
      "subphrase_pt1": "Partly",
      "subphrase_pt2": "Cloudy",
      "subphrase_pt3": "",
      "precip_type": "rain",
      "rh": 50,
      "wspd": 6,
      "wdir": 274,
      "wdir_cardinal": "W",
      "clds": 62,
      "qualifier_code": null,
      "qualifier": "A stray shower or thunderstorm is possible."
    },
    {
      "class": "fod_long_range_intraday",
      "expire_time_gmt": 1471548260,
      "fcst_valid": 1471561200,
      "fcst_valid_local": "2016-08-18T19:00:00-0400",
      "num": 2,
      "temp": 79,
      "pop": 53,
      "icon_extd": 3809,
      "icon_code": 47,
      "dow": "Thursday",
      "daypart_name": "Evening",
      "phrase_12char": "Sct T-Storms",
      "phrase_22char": "Sct Thunderstorms",
      "phrase_32char": "Scattered Thunderstorms",
      "subphrase_pt1": "Scattered",
      "subphrase_pt2": "T-Storms",
      "subphrase_pt3": "",
      "precip_type": "rain",
      "rh": 77,
      "wspd": 6,
      "wdir": 281,
      "wdir_cardinal": "W",
      "clds": 75,
      "qualifier_code": null,
```

```json
      "qualifier": null
    },
    {
      "class": "fod_long_range_intraday",
      "expire_time_gmt": 1471548260,
      "fcst_valid": 1471582800,
      "fcst_valid_local": "2016-08-19T01:00:00-0400",
      "num": 3,
      "temp": 74,
      "pop": 15,
      "icon_extd": 2900,
      "icon_code": 29,
      "dow": "Friday",
      "daypart_name": "Overnight",
      "phrase_12char": "P Cloudy",
      "phrase_22char": "Partly Cloudy",
      "phrase_32char": "Partly Cloudy",
      "subphrase_pt1": "Partly",
      "subphrase_pt2": "Cloudy",
      "subphrase_pt3": "",
      "precip_type": "rain",
      "rh": 92,
      "wspd": 2,
      "wdir": 291,
      "wdir_cardinal": "WNW",
      "clds": 57,
      "qualifier_code": null,
      "qualifier": "A stray shower or thunderstorm is possible."
    },
    {
      "class": "fod_long_range_intraday",
      "expire_time_gmt": 1471548260,
      "fcst_valid": 1471604400,
      "fcst_valid_local": "2016-08-19T07:00:00-0400",
      "num": 4,
      "temp": 78,
      "pop": 43,
      "icon_extd": 3800,
      "icon_code": 38,
      "dow": "Friday",
      "daypart_name": "Morning",
      "phrase_12char": "Sct T-Storms",
      "phrase_22char": "Sct Thunderstorms",
      "phrase_32char": "Scattered Thunderstorms",
```

```
                "subphrase_pt1": "Scattered",
                "subphrase_pt2": "T-Storms",
                "subphrase_pt3": "",
                "precip_type": "rain",
                "rh": 80,
                "wspd": 4,
                "wdir": 279,
                "wdir_cardinal": "W",
                "clds": 52,
                "qualifier_code": null,
                "qualifier": null
            },
//This API will repeat additional times per response ** Collapsed for presentation purposes
{}, // - Response Repeats for Day 2
{}, // - Response Repeats for Day 3…
        ]
}
```

Weather Company Data for Advanced Analytics | 15 Minute Forecast - v1

Domain Portfolio: Forecast | Domain: Short-Range Forecast | API Name: 15 Minute Forecast - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The short range 15 Minute Forecast API is sourced from the TWC Forecast system. This API returns weather content consisting of forecasted weather for the next 15 minutes increment time steps out to 7 hours.

Understanding the 15-Minute Forecasts

Implementing our forecasts requires your applications to perform basic processing in order to properly ingest the forecast data feeds.

Forecast Composition

The TWC 15 Minute forecast product can contain up to 28 short range forecasts for each location. You should discard all previous hourly forecasts for a given forecast location when a new record is received.

Forecast Implementation

To request and display the 15 Minute Forecast product there is no need to pass a parameter to select an hour. Each request will return the full 15 Minute Forecast.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported TWC codes).

- dow
- golf_category
- phrase_32char
- uv_desc
- wdir_cardinal

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Request by Geocode (Latitude & Longitude): Required Parameters: language, units, geocode, postal code apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/fifteenminute.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
class	Data identifier	string		fod_short_range_fifteen_minute	N
clds	Average cloud cover expressed as a percentage for the 15-minute period.	integer	0 to 100	82	N

day_ind	This data field indicates whether it is daytime or nighttime based on the Local Apparent Time of the location.	string	D = Day, N = Night, X = missing (for extreme northern and southern hemisphere	D	N
dewpt	Dew point for the 15-minute forecast period The temperature which air must be cooled at constant pressure to reach saturation. The Dew Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.	integer	-80 to 100 (°F) or -62 to 37 (°C)	63	N
dow	Day of week	string		Thursday	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
fcst_valid	Time forecast is valid in UNIX seconds	epoch		1369252800	N
fcst_valid_local	Time forecast is valid in local apparent time.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
feels_like	15-minute feels like temperature. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index.	integer		84	N
gust	The maximum expected wind gust speed.	integer		7	Y
hi	15-minute maximum heat index. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		84	Y
icon_code	This number is the key to the weather icon lookup. The data field shows the icon number that is matched to represent the observed weather conditions. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		26	N
icon_extd	Code representing explicit full set sensible weather. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		5500	N
mslp	Mean sea level pressure	decimal		30.21	N
num	This data field is the sequential number that identifies each of the forecasted days in the API. They start on day 1, which is the forecast for the current day. Then the forecast for tomorrow uses number 2, then number 3 for the day after tomorrow, and so forth.	Integer	1 - 15	1	N
phrase_12char	15-minute sensible weather phrase	string		Cloudy	N
phrase_22char	15-minute sensible weather phrase	string		Cloudy	N
phrase_32char	15-minute sensible weather phrase	string		Fog Late	N
pop	15-minute maximum probability of precipitation	integer	0 to 100	20	N
precip_type	The short text describing the expected type accumulation associated with the Probability of Precipitation (POP) display for the 15-minute period.	string	rain,snow, precip	rain	N
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	83	N

severity	A code denoting how impactful is the forecasted weather for this 15-minute period.	integer	0 = no threat 6 = dangerous / life threatening	2	N
snow_rate	The forecasted hourly snow accumulation during the 15-minute period.	decimal		0.2	N
subphrase_pt1	Part 1 of 3-part 15-minute sensible weather phrase	string		Cloudy	N
subphrase_pt2	Part 2 of 3-part 15-minute y sensible weather phrase	string		Late	N
subphrase_pt3	Part 3 of 3-part 15-minute sensible weather phrase	string		Thunder	N
temp	Temperature for the 15-minute forecast period. The temperature of the air, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements. You will receive this data field in Fahrenheit degrees or Celsius degrees.	integer	-140 to 140 (F)	68	N
uv_desc	The UV Index Description which complements the UV Index value by providing an associated level of risk of skin damage due to exposure. -2 is Not Available -1 is No Report, 0 to 2 is Low, 3 to 5 is Moderate, 6 to 7 is High, 8 to 10 is Very High, 11 to 16 is Extreme	string	-2 to 16	Low	N
uv_index	Maximum UV index for the 15-minute period.	integer		2	N
uv_index_raw	The non-truncated UV Index which is the intensity of the solar radiation based on a number of factors.	decimal		2.22	N
uv_warning	TWC-created UV warning based on UV index of 11 or greater.	integer		0	N
vis	Prevailing hourly visibility	decimal	0 to 999	5.2	N
wc	15-minute minimum wind chill. An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer		68	N
wdir	Average wind direction in magnetic notation for the 15-minute period.	integer	0 to 359	145	N
wdir_cardinal	Average wind direction in cardinal notation for the 15-minute period.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	SE	N
wspd	The maximum forecasted hourly wind speed for the 15-minute period. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		5	N
wxman	Code combining Hourly sensible weather and temperature conditions	string		wx4400	N

JSON Sample

```
{
   "metadata": {
      "language": "en-US",
```

```json
        "transaction_id": "1473207176956:-15066738",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1473207296,
        "status_code": 200
    },
    "forecasts": [
        {
            "class": "fod_short_range_fifteen_minute",
            "expire_time_gmt": 1473207206,
            "fcst_valid": 1473207300,
            "fcst_valid_local": "2016-09-06T20:15:00-0400",
            "num": 1,
            "day_ind": "N",
            "temp": 81,
            "dewpt": 58,
            "hi": 82,
            "wc": 81,
            "feels_like": 82,
            "icon_extd": 3100,
            "wxman": "wx1500",
            "icon_code": 31,
            "dow": "Tuesday",
            "phrase_12char": "Clear",
            "phrase_22char": "Clear",
            "phrase_32char": "Clear",
            "subphrase_pt1": "Clear",
            "subphrase_pt2": "",
            "subphrase_pt3": "",
            "pop": 0,
            "precip_type": "rain",
            "precip_rate": 0,
            "snow_rate": 0,
            "rh": 46,
            "wspd": 1,
            "wdir": 255,
            "wdir_cardinal": "WSW",
            "uv_desc": "Low",
            "uv_index": 0,
            "gust": null,
            "clds": 8,
            "vis": 10,
```

```
        "mslp": 30.13,
        "uv_index_raw": 0,
        "uv_warning": 0,
        "severity": 1
    },
        // Response Collapsed for Presentation Purposes
    ]
}
```

Weather Company Data for Advanced Analytics | Precipitation Forecast - v1

Domain Portfolio: Forecast | Domain: Short-Range Forecast | API Name: Precipitation Forecast - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Precipitation Events Forecast API provides a weather forecast for precipitation events(rain, snow, sleet, freezing rain) onset and offset times for 28 time steps over the next 7 hours.

Understanding the Precipitation Forecast

Forecast Composition

1. The Precipitation Events Forecast (aka "onset/offset", aka "precip events") is the summary "events" of the raw 15-minute data. In practice 24 time steps are almost never returned. There is often only 1 event (e.g., "dry through the entire 6hr period"). However, there will always be at least one event returned. While the theoretical maximum is 24 events, in practice it rarely goes above 10-12 events.
2. During a 6 hour period if the weather changes from dry to cloudy to rain or snow then you have a record for each part with start time and end time. Unlike like hourly or other time sliced forecast that are based on time period. This forecast is based on weather events and not on time.

Forecast Implementation

To request and display the Precipitation Events product. You need not pass a parameter to select an hour or day. Each request will return the full precipitation events for the next 6 hours.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- characteristic
- event_type
- intensity
- severity

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Request by Geocode (Latitude & Longitude): Required Parameters: language, format, units, geocode, apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/forecast/precipitation.json?language=en-US&units=e&apiKey=yourApiKey
Request by Postal Code: Required Parameters: language, format, units, postal code apiKey**=yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>
https://api.weather.com/v1/location/30075:4:US/forecast/precipitation.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
characteristic	A number which corresponds to the precipitation characteristic description. 0 = none, 1 = intermittent, 2 = continuous	Integer	0 - 2	1	N
class	Data identifier	string		fod_short_range_precipitation	N
event_end	The end time for a forecasted precipitation event in UNIX seconds.	epoch		1369252800	N
event_end_local	The local end time for a forecasted precipitation event in UNIX seconds in the location's local time.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
event_start	The start time for a forecasted precipitation event in UNIX seconds.	epoch		1369252800	N
event_start_local	The start time for a forecasted precipitation event in UNIX seconds in the location's local time.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
event_type	A number which corresponds to the precipitation event type description. 0=none, 1=rain, 2=snow, 3=mix, 4=thunder	Integer	0 - 4	2	N
imminence	A number which corresponds to the imminence of precipitation as a color. 0 = green, 1 = yellow, 2 = red	Integer	0 - 3	1	N
intensity	A number which corresponds to the precipitation intensity description. 0 = none, 1 = light, 2 = moderate, 3 = heavy	Integer	0 - 3	1	N
num	Precipitation event number within the API response	Integer	Usually less than 10	7	N
qpf	The measurable precipitation (liquid or solid) during a given forecasted event.	Decimal	0 to 99.99	5.65	N
severity	A number which corresponds to the precipitation severity.	Integer	1 through 6 , 1=lowest...6=highest	6	N
snow_qpf	The forecasted measurable precipitation as snow during the forecast event.	Decimal	0 to 999.99	123.9	N

JSON Sample

```
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1473206165118:2068731322",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1473206600,
        "status_code": 200
    },
    "forecasts": [
        {
            "class": "fod_short_range_precipitation",
```

```json
      "expire_time_gmt": 1473206600,
      "num": 1,
      "event_start": 1473206400,
      "event_end": 1473231600,
      "event_start_local": "2016-09-06T20:00:00-0400",
      "event_end_local": "2016-09-07T03:00:00-0400",
      "event_type": 0,
      "intensity": 0,
      "severity": 1,
      "characteristic": 0,
      "imminence": 0,
      "qpf": 0,
      "snow_qpf": 0
    }
  ]
}
```

Weather Company Data for Advanced Analytics | Currents On Demand - v1

Domain Portfolio: Observations | Domain: Current Conditions | API Name: Currents On Demand - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Weather Current Conditions are generated on demand from The Weather Company (TWC) Currents On Demand (COD) system. The COD data feed returns a similar set of data elements as traditional site-based observations. The API provides information on temperature, precipitation, wind, barometric pressure, visibility, ultraviolet (UV) radiation, and other related weather observations elements as well as date/time, weather icon codes and phrases. The COD is gridded across the globe at a 4KM geocode resolution.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- dow
- phrase_32char
- ptend_desc
- sky_cover
- uv_desc
- wdir_cardinal

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Request by Geocode (Latitude & Longitude): Required Parameters: geocode, language, format, units, postal code apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/observations/current.json?language=en-US&units=e&apiKey=yourApiKey
Request by Postal Code: Required Parameters: geocode, language, format, units, postal code apiKey**=yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>
https://api.weather.com/v1/location/30075:4:US/observations/current.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
class	Data Identifier	string		observation	N
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	N
day_ind	This data field indicates whether it is daytime or nighttime based on the Local Apparent Time of the location.	string	D = Day,	D	N

			N = Night, X = missing (for extreme northern and southern hemisphere		
dow	day of week	string		Wednesday	N
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
icon_code	This number is the key to the weather icon lookup. The data field shows the icon number that is matched to represent the observed weather conditions. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		30	N
icon_extd	Code representing explicit full set sensible weather. Please refer to the Forecast Icon Code, Weather Phrases and Images document.	integer		3000	N
obs_qualifier_100char	100 character version of obs qualifier Note: This Obs qualifier field is unit of measure independent when populated. However, obs Qualifier fields will be null until further notice.	string		Dangerous wind chills, limit outdoor exposure	Y
obs_qualifier_32char	32 character version of obs qualifier Note: This Obs qualifier field is unit of measure independent when populated. However, obs Qualifier fields will be null until further notice.	string		Dangerous wind chills	Y
obs_qualifier_50char	50 character version of obs qualifier Obs Qualifier fields will be null until further notice.	string		Dangerous wind chills, limit outdoor exposure	Y
obs_qualifier_code	The observation qualifier. It provides a qualitative description of current conditions, comparing the observation to climate averages, records, precip reports, severe weather warnings, etc NOTE: Obs Qualifier fields will be null until further notice.	string	"OQ" + 4-digit integer	OQ0031	Y
obs_qualifier_severity	An objective index or enumeration of the severity or significance of the observation qualifier. Note: This Obs qualifier field is unit of measure independent when populated. However, obs Qualifier fields will be null until further notice.	integer	1 (low) through 6 (high)	3	Y
obs_time	Time observation is valid	epoch		1369252800	N
obs_time_local	Time observation is valid ... . in local, but at top of next UTC hour	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
phrase_12char	12 char phrase Note: This field will be NULL for all languages other than US English (en_US)	string		P Cloudy	N
phrase_22char	22 char phrase Note: This field will be NULL for all languages other than US English (en_US)	string		Partly Cloudy	N
phrase_32char	Accompanying string to icon_extd Note: This field is translated for all supported languages	string		Partly Cloudy	N
ptend_code	Code of pressure tendency Note: This field will be NULL outside of CONUS and Europe 0 = steady, 1 = rising, 2 = falling, 3=rising rapidly, 4= falling rapidly	integer	0 - 4	0	N
ptend_desc	Descriptive text of pressure tendency over the past three hours. Note: This field will be NULL outside of CONUS and Europe	string	steady, rising, falling, rising rapidly, falling rapidly	Steady	N
sky_cover	Descriptive sky cover - based on percentage of cloud cover	string	coverage < 0.09375, Clear; coverage < .59375 Partly Cloudy; coverage < .75, Mostly Cloudy; coverage >= .75, Cloudy	Partly Cloudy	N
sunrise	This field contains the local time of the sunrise. It reflects any local daylight savings conventions. For a few Arctic and Antarctic regions, the Sunrise and Sunset data values may be the same (each with a	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN;	2014-08-20T10:47:59-05:00	N

	value of 12:01am) to reflect conditions where a sunrise or sunset does not occur.		NNNN=GMT offset		
sunset	This field contains the local time of the sunset. It reflects any local daylight savings conventions. For a few Arctic and Antarctic regions, the Sunrise and Sunset data values may be the same (each with a value of 12:01am) to reflect conditions where a sunrise or sunset does not occur.	ISO	ISO 8601 - YYYY-MM-DDTHH:MM:SS-NNNN; NNNN=GMT offset	2014-08-20T10:47:59-05:00	N
uv_desc	The UV Index Description which complements the UV Index value by providing an associated level of risk of skin damage due to exposure. -2 is Not Available, -1 is No Report, 0 to 2 is Low, 3 to 5 is Moderate, 6 to 7 is High, 8 to 10 is Very High, 11 to 16 is Extreme	string	-2 through 16	Low	N
uv_index	TWC-created UV index	integer		6	N
uv_warning	TWC-created UV warning based on UV index of 11 or greater	bool		1	N
wdir	The direction from which the wind blows expressed in degrees. The magnetic direction varies from 0 to 359 degrees, where 0° indicates the North, 90° the East, 180° the South, 270° the West, and so forth.	integer	0<=wind_dire_deg<=350, in 10 degree interval	60	N
wdir_cardinal	This field contains the cardinal direction from which the wind blows in an abbreviated form. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind, the wind is at your face. Face southward and the North wind is at your back.	string	N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM	ENE	N
wxman	The Weather Man animation code. Based upon the current weather and the current temperature. TWC use only.	string	"wx" + 4-digit integer	wx1050	N

JSON Sample

```
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1473204794361:-1611744004",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1473205392,
        "status_code": 200
    },
    "observation": {
        "class": "observation",
        "expire_time_gmt": 1473205392,
        "obs_time": 1473203100,
        "obs_time_local": "2016-09-06T19:05:00-0400",
        "wdir": 190,
        "icon_code": 32,
        "icon_extd": 3200,
        "sunrise": "2016-09-06T07:14:23-0400",
        "sunset": "2016-09-06T19:55:18-0400",
        "day_ind": "D",
        "uv_index": 0,
        "uv_warning": 0,
```

```
"wxman": "wx1000",
"obs_qualifier_code": null,
"ptend_code": 2,
"dow": "Tuesday",
"wdir_cardinal": "S",
"uv_desc": "Low",
"phrase_12char": "Sunny",
"phrase_22char": "Sunny",
"phrase_32char": "Sunny",
"ptend_desc": "Falling",
"sky_cover": "Clear",
"clds": "FEW",
"obs_qualifier_severity": null,
"vocal_key": "OT81:OX3200",
"imperial": {
    "wspd": 0,
    "gust": null,
    "vis": 10,
    "mslp": 1022,
    "altimeter": 30.18,
    "temp": 81,
    "dewpt": 58,
    "rh": 46,
    "wc": 81,
    "hi": 82,
    "temp_change_24hour": 3,
    "temp_max_24hour": 91,
    "temp_min_24hour": 63,
    "pchange": -0.01,
    "feels_like": 82,
    "snow_1hour": 0,
    "snow_6hour": 0,
    "snow_24hour": 0,
    "snow_mtd": 0,
    "snow_season": 0,
    "snow_ytd": 0.5,
    "snow_2day": 0,
    "snow_3day": 0,
    "snow_7day": 0,
    "ceiling": null,
    "precip_1hour": 0,
    "precip_6hour": 0,
    "precip_24hour": 0,
    "precip_mtd": 0.65,
```

```json
            "precip_ytd": 27.32,
            "precip_2day": 0,
            "precip_3day": 0,
            "precip_7day": 0.65,
            "obs_qualifier_100char": null,
            "obs_qualifier_50char": null,
            "obs_qualifier_32char": null
        }
    }
}
```

Weather Company Data for Advanced Analytics | PWS Observations - Current Conditions - v2

Domain Portfolio: Observations | Domain: Current Conditions | API Name: PWS Observations - Current Conditions - v2

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

Personal Weather Station (PWS) Current Conditions returns the current conditions observations for the current record.Current record is the last record reported within 60 minutes. If the station has not reported a current conditions in the past 60 minutes, the response will not return an expired observation record (older than 60 minutes); a 'Data Expired' message will be returned instead.

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): Required Parameters: format, units, stationId, apiKey apiKey=yourApiKey
https://api.weather.com/v2/pws/observations/current?stationId=KMAHANOV10&format=json&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
country	Country Code	string		US	Y
epoch	Time in UNIX seconds	epoch		1475157931	Y
humidity	The relative humidity of the air.	long		71	Y
lat	Latitude of PWS	decimal	Any valid latitude value. -90 to 90	32.50828934	Y
lon	Longitude of PWS	decimal	Any valid longitude value. -180 to 180	-110.8763962	Y
neighborhood	Neighborhood associated with the PWS location	string		WOW Arizona!	Y
obsTimeLocal	Time observation is valid in local apparent time by timezone - tz	ISO	YYYYY-MM-dd HH:mm:ss	2016-09-29 14:05:31	Y
obsTimeUtc	GMT(UTC) time	ISO	ISO 8601 - yyyy-MM-dd'T'HH:mm:ssZZ	2016-09-29T14:05:31Z	Y
realtimeFrequency	Frequency of data report updates in minutes	decimal		5	Y
softwareType	Software type of the PWS	string		WS-1001 V2.2.9	Y
solarRadiation	Solar Radiation	decimal		91.96	Y
stationID	ID as registered by wunderground.com	string		KAZTUCSO539	N

uv	UV reading of the intensity of solar radiation	decimal		1	Y
winddir	Wind Direction	long		52	Y
imperial metric metric_si uk_hybrid	Object containing fields that use a defined unit of measure. The object label is dependent on the units parameter assigned in the request. "imperial", "metric", "metric_si", "uk_hybrid"	object		imperial: {.....}	N
dewpt	The temperature which air must be cooled at constant pressure to reach saturation. The Dew Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.	decimal	-80 to 100 (°F) or -62 to 37 (°C)	58	Y
elev	Elevation	long		3094	Y
heatIndex	Heat Index - An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index.	long		67	Y
precipRate	Rate of precipitation - instantaneous precipitation rate. How much rain would fall if the precipitation intensity did not change for one hour	decimal		0.03	Y
precipTotal	Accumulated precipitation for today	decimal		0.03	Y
pressure	Mean Sea Level Pressure, the equivalent pressure reading at sea level recorded at this station	decimal		30.06	Y
temp	Temperature in defined unit of measure.	long		67	Y
windChill	Wind Chill - An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value.	long		-34	Y
windGust	Wind Gust - sudden and temporary variations of the average Wind Speed. The report always shows the maximum wind gust speed recorded during the observation period. It is a required display field if Wind Speed is shown.	decimal		56	Y
windSpeed	Wind Speed - The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as ""from whence the wind blows"" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	decimal		56	Y

JSON Sample

```
{
  "observations": [
    {
      "stationID": "KMAHANOV10",
      "obsTimeUtc": "2016-10-03T11:16:30Z",
      "obsTimeLocal": "2016-10-03 11:16:30",
      "neighborhood": "1505Broadway",
      "softwareType": "Rainwise IP-100",
```

```json
      "country": "US",
      "solarRadiation": null,
      "lon": -70.86485291,
      "realtimeFrequency": 3,
      "epoch": 1475493390,
      "lat": 42.09263229,
      "uv": null,
      "winddir": 90,
      "humidity": 100,
      "metric": {
        "temp": 13,
        "heatIndex": 13,
        "dewpt": 13,
        "windChill": null,
        "windSpeed": 0,
        "windGust": 0,
        "pressure": 1014.56,
        "precipRate": 1.52,
        "precipTotal": 1.02,
        "elev": 31
      }
    }
  ]
}
```

Weather Company Data for Advanced Analytics | Site-Based Observations - v1

Domain Portfolio: Observations | Domain: Current Conditions | API Name: Site-Based Observations - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

Current Conditions are sourced from both physical site-based observation stations and synthetic weather observations produced by the TWC Currents system. This API returns the latest weather observation for the location supplied to include current temperatures, winds, pressure and other observed weather information. Weather observations from physical devices deployed worldwide (weather data collected from METAR, SYNOP, BUOY, CMAN devices).

Current Condition & Time-Series Data

Access to retained site-based and synthetic data will be distributed on-demand in Current Conditions and Time Series data feeds.   These recent observations are retained in the primary TWC database up to 48 hours (2 days) on specific reporting stations and nn hours of observations per station. Observations per station within a 24 hour period varies due to station operation requirements (i.e. modified operating hours, number of observations recorded per hour, maintenance issues, etc).

The recent observations data will be continuously updated and replaced with a first-in / first-out methodology, (rotating data with newest observation and moving the oldest observations to the archive storage) based on date/time stamping of the observations. The amount of data retained and available from any given station may be more than a single observation or more than 24 individual observation reports for any given station id. The number of observations is determined by the type of observation it is, i.e. NWS, PWS, etc.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- pressure_desc
- uv_desc
- wx_phrase
-

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** geocode, language, format, units, apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/observations.json?language=en-US&units=e&apiKey=yourApiKey

Request by Postal Code: **Required Parameters:** language, format, units, postal code apiKey**=yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>
https://api.weather.com/v1/location/30075:4:US/observations.json?language=en-US&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
blunt_phrase	Weather description qualifier short phrase	string		Warmer than yesterday.	Y
class	data identifier	string	default	observation	N
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	Y
day_ind	Daytime or nighttime of the local apparent time of the location	string	D = Day, N = Night, X = Missing (for extreme northern and southern hemisphere	D	Y
dewpt	The temperature which air must be cooled at constant pressure to reach saturation. The Dew Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.	integer	-80 to 100 (°F) or -62 to 37 (°C)	60	Y
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
feels_like	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index.	integer	-140 to 140	60	Y
gust	Wind gust speed. This data field contains information about sudden and temporary variations of the average Wind Speed. The report always shows the maximum wind gust speed recorded during the observation period. It is a required display field if Wind Speed is shown. The speed of the gust can be expressed in miles per hour or kilometers per hour.	integer		35	Y
heat_index	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		70	Y
icon_extd	The four-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer		5500	N
key	Primary data field to group or access data	string	same as observation ID	KATL	N
max_temp	High temperature in the last 24 hours	integer	-140 to 140	81	Y
min_temp	Low temperature in the last 24 hours	integer	-140 to 140	48	Y
obs_id	Observation station ID	string		KATL	N
obs_name	Observation station name	string		Hartsfield-Jackson Airport	N
precip_hrly	Precipitation for the last hour	decimal	0.00 to 99.99	0.5	Y
precip_total	Precipitation amount in the last rolling 24 hour period	decimal	0.00 to 99.99	0.3	Y
pressure	Barometric pressure is the pressure exerted by the atmosphere at the earth's surface, due to the weight of the air. This value is read directly from an instrument called a mercury barometer and its units are expressed in millibars (equivalent to HectoPascals).	double		30.06	Y
pressure_desc	A phrase describing the change in the barometric pressure reading over the last hour.	string	Steady, Rising, Rapidly Rising, Falling,	Steady	Y

			Rapidly Falling		
pressure_tend	The change in the barometric pressure reading over the last hour expressed as an integer.	integer	0 = Steady 1 = Rising or Rapidly Rising 2 = Falling or Rapidly Falling	0	Y
qualifier	Weather description qualifier code	string		QQ0063	Y
qualifier_svrty	Weather description qualifier severity	string	1 (low) to 6 (high)	1	Y
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	91	Y
snow_hrly	Snow increasing rapidly in inches or centimeters per hour depending on whether or not the snowfall is reported by METAR or TECCI (synthetic observations). METAR snow accumulation for the last hour is in inches and TECCI is in centimeters.	decimal	0 to 15	1	Y
temp	The temperature of the air, at the time of the observation, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements.	integer	-140 to 140	62	Y
terse_phrase	Weather description qualifier terse phrase	string		Dangerous wind chills. Limit outdoor exposure.	Y
uv_desc	Ultraviolet index description	string	Extreme, High, Low, Minimal, Moderate, No Report, Not Available	High	Y
uv_index	Ultraviolet index	integer	0 to 11 and 999	7	Y
valid_time_gmt	Valid time of observation as a Unix epoch value (seconds since start of 1970, UTC)	epoch		1369252800	N
vis	The horizontal visibility at the observation point. Visibilities can be reported as fractional values particularly when visibility is less than 2 miles. Visibilities greater than 10 statute miles(16.1 kilometers) which are considered "unlimited" are reported as "999" in your feed. You can also find visibility values that equal zero. This occurrence is not wrong. Dense fogs and heavy snows can produce values near zero. Fog, smoke, heavy rain and other weather phenomena can reduce visibility to near zero miles or kilometers.	double	0 to 999 or null; For greater than 1 = no decimal. For less than 1 = 2 (Metric) & 2 (Imperial) decimal places.	10, 0.25 (Metric) 0.25 (Imperial)	Y
wc	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer	Use only if temperature is below 40 degrees Fahrenheit OR below 5 degrees Celsius	-25	Y
wdir	The direction from which the wind blows expressed in degrees. The magnetic direction varies from 1 to 360 degrees, where 360° indicates the North, 90° the East, 180° the South, 270° the West, and so forth. A 'null' value represents no determinable wind direction.	integer	1 to 360	45	Y
wdir_cardinal	This field contains the cardinal direction from which the wind blows in an abbreviated form. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind, the wind is at your face. Face southward and the North wind is at your back.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	ENE	Y
wspd	Wind Speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		15	Y

wx_icon	The two-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer	0 to 48	47	Y
wx_phrase	A text description of the observed weather conditions at the reporting station	string	257 phrases	Mostly sunny	Y
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	N
water_temp	Water temperature	integer	25 to 100	80	Y
primary_wave_period	Primary wave period	integer	0-99	13	Y
primary_wave_height	Primary wave height	decimal	0-99.99	3.28	Y
primary_swell_period	Primary swell period	integer	0-99	13	Y
primary_swell_height	Primary swell height	decimal	0-99.99	1.64	Y
primary_swell_direction	Primary swell direction	integer	0 to 359	190	Y
secondary_swell_period	Secondary swell period	integer	0-99	null	Y
secondary_swell_height	Secondary swell height	decimal	0-99.99	null	Y
secondary_swell_direction	Secondary swell direction	integer	0 to 359	null	Y

JSON Sample

```
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1473201321183:-1106734720",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "expire_time_gmt": 1473207900,
        "status_code": 200
    },
    "observation": {
        "key": "T72227031",
        "class": "observation",
        "expire_time_gmt": 1473207900,
        "obs_id": "T72227031",
        "obs_name": "Duluth",
        "valid_time_gmt": 1473200700,
        "day_ind": "D",
        "temp": 90,
        "wx_icon": 32,
        "icon_extd": 3200,
        "wx_phrase": "Sunny",
        "pressure_tend": 0,
        "pressure_desc": "Steady",
        "dewPt": 54,
```

      "heat_index": 88,
      "rh": 29,
      "pressure": 30.18,
      "vis": 10,
      "wc": 90,
      "wdir": 70,
      "wdir_cardinal": "ENE",
      "gust": null,
      "wspd": 1,
      "max_temp": 92,
      "min_temp": 63,
      "precip_total": 0,
      "precip_hrly": 0,
      "snow_hrly": 0,
      "uv_desc": "Low",
      "feels_like": 88,
      "uv_index": 1,
      "qualifier": "OQ0047",
      "qualifier_svrty": "1",
      "blunt_phrase": "Hot.",
      "terse_phrase": "Hot.",
      "clds": "SKC",
      "water_temp": null,
      "primary_wave_period": null,
      "primary_wave_height": null,
      "primary_swell_period": null,
      "primary_swell_height": null,
      "primary_swell_direction": null,
      "secondary_swell_period": null,
      "secondary_swell_height": null,
      "secondary_swell_direction": null
    }
}

Weather Company Data for Advanced Analytics | Time-Series Observations (Current & 24 Hours Past) - v1

Domain Portfolio: Observations | Domain: Current Conditions | API Name: Time-Series Observations (Current & 24 Hours Past) - v1

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Time-Series Observations returns the previous 24 hour period from the previous day up to the last reported current condition today. Current Conditions are sourced from both physical site-based observation stations and synthetic weather observations produced by the TWC Currents system. This API returns the latest weather observation for the location supplied to include current temperatures, winds, pressure and other observed weather information. Weather observations from physical devices deployed worldwide (weather data collected from METAR, SYNOP, BUOY, CMAN devices).

Current Condition & Time-Series Data
Access to retained site-based and synthetic data will be distributed on-demand in Current Conditions and Time Series data feeds. These recent observations are retained in the primary TWC database up to 48 hours (2 days) on specific reporting stations and nn hours of observations per station. Observations per station within a 24 hour period varies due to station operation requirements (i.e. modified operating hours, number of observations recorded per hour, maintenance issues, etc).

The recent observations data will be continuously updated and replaced with a first-in / first-out methodology, (rotating data with newest observation and moving the oldest observations to the archive storage) based on date/time stamping of the observations. The amount of data retained and available from any given station may be more than a single observation or more than 24 individual observation reports for any given station id. The number of observations is determined by the type of observation reported i.e. NWS, PWS, etc.

- It is not to be assumed that data returned will be equal to the hours of past observations requested. Example: 3 hours of past observations may not return just 3 observations.
- Some reporting stations report observations more than once an hour.

Translated Fields:
This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- pressure_desc
- uv_desc
- wx_phrase
-

Unit of Measure Requirement
The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): Required Parameters: geocode, language, units, hours, apiKey**=yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/observations/timeseries.json?language=en-US&units=e&hours=1&apiKey=yourApiKey
Request by Postal Code: Required Parameters: language, format, units, hours, postal code apiKey**=yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>

https://api.weather.com/v1/location/30075:4:US/observations/timeseries.json?language=en-US&units=e&hours=1&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
blunt_phrase	Weather description qualifier short phrase	string		Warmer than yesterday.	Y
class	data identifier	string	default	observation	N
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	Y
day_ind	Daytime or nighttime of the local apparent time of the location	string	D = Day, N = Night, X = Missing (for extreme northern and southern hemisphere	D	Y
dewpt	The temperature which air must be cooled at constant pressure to reach saturation. The Dew Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.	integer	-80 to 100 (°F) or -62 to 37 (°C)	60	Y
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
feels_like	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index.	integer	-140 to 140	60	Y
gust	Wind gust speed. This data field contains information about sudden and temporary variations of the average Wind Speed. The report always shows the maximum wind gust speed recorded during the observation period. It is a required display field if Wind Speed is shown. The speed of the gust can be expressed in miles per hour or kilometers per hour.	integer		35	Y
heat_index	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		70	Y
icon_extd	The four-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer		5500	N
key	Primary data field to group or access data	string	same as observation ID	KATL	N
max_temp	High temperature in the last 24 hours	integer	-140 to 140	81	Y
min_temp	Low temperature in the last 24 hours	integer	-140 to 140	48	Y
obs_id	Observation station ID	string		KATL	N
obs_name	Observation station name	string		Hartsfield-Jackson Airport	N
precip_hrly	Precipitation for the last hour	decimal	0.00 to 99.99	0.5	Y
precip_total	Precipitation amount in the last rolling 24 hour period	decimal	0.00 to 99.99	0.3	Y
pressure	Barometric pressure is the pressure exerted by the atmosphere at the earth's surface, due to the weight of the air. This value is read directly from an instrument called a mercury barometer and its units are expressed in millibars (equivalent to HectoPascals).	double		30.06	Y

pressure_desc	A phrase describing the change in the barometric pressure reading over the last hour.	string	Steady, Rising, Rapidly Rising, Falling, Rapidly Falling	Steady	Y
pressure_tend	The change in the barometric pressure reading over the last hour expressed as an integer.	integer	0 = Steady 1 = Rising or Rapidly Rising 2 = Falling or Rapidly Falling	0	Y
qualifier	Weather description qualifier code	string		QQ0063	Y
qualifier_svrty	Weather description qualifier severity	string	1 (low) to 6 (high)	1	Y
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	91	Y
snow_hrly	Snow increasing rapidly in inches or centimeters per hour depending on whether or not the snowfall is reported by METAR or TECCI (synthetic observations). METAR snow accumulation for the last hour is in inches and TECCI is in centimeters.	decimal	0 to 15	1	Y
temp	The temperature of the air, at the time of the observation, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements.	integer	-140 to 140	62	Y
terse_phrase	Weather description qualifier terse phrase	string		Dangerous wind chills. Limit outdoor exposure.	Y
uv_desc	Ultraviolet index description	string	Extreme, High, Low, Minimal, Moderate, No Report, Not Available	High	Y
uv_index	Ultraviolet index	integer	0 to 11 and 999	7	Y
valid_time_gmt	Valid time of observation as a Unix epoch value (seconds since start of 1970, UTC)	epoch		1369252800	N
vis	The horizontal visibility at the observation point. Visibilities can be reported as fractional values particularly when visibility is less than 2 miles. Visibilities greater than 10 statute miles(16.1 kilometers) which are considered "unlimited" are reported as "999" in your feed. You can also find visibility values that equal zero. This occurrence is not wrong. Dense fogs and heavy snows can produce values near zero. Fog, smoke, heavy rain and other weather phenomena can reduce visibility to near zero miles or kilometers.	double	0 to 999 or null; For greater than 1 = no decimal. For less than 1 = 2 (Metric) & 2 (Imperial) decimal places.	10, 0.25 (Metric) 0.25 (Imperial)	Y
wc	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer	Use only if temperature is below 40 degrees Fahrenheit OR below 5 degrees Celsius	-25	Y
wdir	The direction from which the wind blows expressed in degrees. The magnetic direction varies from 1 to 360 degrees, where 360° indicates the North, 90° the East, 180° the South, 270° the West, and so forth. A 'null' value represents no determinable wind direction.	integer	1 to 360	45	Y
wdir_cardinal	This field contains the cardinal direction from which the wind blows in an abbreviated form. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind, the wind is at your face. Face southward and the North wind is at your back.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	ENE	Y
wspd	Wind Speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field.	integer		15	Y

	Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.					
wx_icon	The two-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer	0 to 48	47		Y
wx_phrase	A text description of the observed weather conditions at the reporting station	string	257 phrases	Mostly sunny		Y
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC		N
water_temp	Water temperature	integer	25 to 100	80		Y
primary_wave_period	Primary wave period	integer	0-99	13		Y
primary_wave_height	Primary wave height	decimal	0-99.99	3.28		Y
primary_swell_period	Primary swell period	integer	0-99	13		Y
primary_swell_height	Primary swell height	decimal	0-99.99	1.64		Y
primary_swell_direction	Primary swell direction	integer	0 to 359	190		Y
secondary_swell_period	Secondary swell period	integer	0-99	null		Y
secondary_swell_height	Secondary swell height	decimal	0-99.99	null		Y
secondary_swell_direction	Secondary swell direction	integer	0 to 359	null		Y

JSON Sample

```json
{
    "metadata": {
        "language": "en-US",
        "transaction_id": "1473202846859:-356896210",
        "version": "1",
        "latitude": 34.06,
        "longitude": -84.21,
        "units": "e",
        "hours": 1,
        "expire_time_gmt": 1473209100,
        "status_code": 200
    },
    "observations": [
        {
            "key": "T72227031",
            "class": "observation",
            "expire_time_gmt": 1473206700,
            "obs_id": "T72227031",
            "obs_name": "Duluth",
            "valid_time_gmt": 1473199500,
            "day_ind": "D",
            "temp": 90,
            "wx_icon": 32,
```

```
            "icon_extd": 3200,
            "wx_phrase": "Sunny",
            "pressure_tend": 2,
            "pressure_desc": "Falling",
            "dewPt": 54,
            "heat_index": 88,
            "rh": 29,
            "pressure": 30.18,
            "vis": 10,
            "wc": 90,
            "wdir": 40,
            "wdir_cardinal": "NE",
            "gust": null,
            "wspd": 1,
            "max_temp": 92,
            "min_temp": 63,
            "precip_total": 0,
            "precip_hrly": 0,
            "snow_hrly": 0,
            "uv_desc": "Low",
            "feels_like": 88,
            "uv_index": 1,
            "qualifier": "OQ0047",
            "qualifier_svrty": "1",
            "blunt_phrase": "Hot.",
            "terse_phrase": "Hot.",
            "clds": "SKC",
            "water_temp": null,
            "primary_wave_period": null,
            "primary_wave_height": null,
            "primary_swell_period": null,
            "primary_swell_height": null,
            "primary_swell_direction": null,
            "secondary_swell_period": null,
            "secondary_swell_height": null,
            "secondary_swell_direction": null
        },
        {
            // Response Collapsed for Presentation Purposes
        }
    ]
}
```

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview
Historical site-based observations are sourced from both physical site-based observation stations and synthetic weather observations produced by the TWC Currents system. This API returns the latest weather observation for the location supplied to include current temperatures, winds, pressure and other observed weather information. Weather observations from physical devices deployed worldwide (weather data collected from METAR, SYNOP, BUOY, CMAN devices).

Site-based Historical Observations
Access to retained site-based and synthetic data will be distributed on-demand in historical data feeds. Past weather observations, up to one month (31 days max) of archived weather observation data for the location and date or daterange requested.

Limitation: Archived observation data varies significantly by station and location.   The earliest date of data recorded is from January 1931, but not all months from this time forward are available. Observations per station within a 24 hour period varies due to station operation requirements (i.e. modified operating hours, number of observations recorded per hour, maintenance issues, etc).

Historical Observations Data and Their Limitations
Historical observations are "archived" and originate from METAR and SYNOP observation stations/devices. Although there is archived observation data dating back to January 1931 from some METAR stations, the available historical data is not contiguous for all months in a given year, for every year, and for all locations. Please be aware that there is a large volume of historical records that can be retrieved. However there are gaps in which a "no data found" message will be displayed for a period. When observation data is provided, it is recommended that processing rules be applied to ensure the desired ordering of the observations (oldest to newest, newest to oldest) using the observation date/time element in the feed. Reporting stations report weather observations at different intervals. Some observations are reported hourly, some every 3 hours, every 6 hours, etc. Some stations do not report during nighttime hours.

- Please Note: that minimum and maximum temperature values are often null. The National Weather Service in the U.S. did not begin to provide these elements until recent years.

Translated Fields:
This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).
- pressure_desc
- uv_desc
- wx_phrase
-

Unit of Measure Requirement
The unit of measure for the response. The following values are supported:
- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): Required Parameters: geocode, language, units, startDate (YYYYMMDD), endDate (YYYYMMDD), apiKey=**yourApiKey**
https://api.weather.com/v1/geocode/34.063/-84.217/observations.json?language=en-US&units=e&startDate=20140615&endDate=20140704&apiKey=yourApiKey
Request by Postal Code: Required Parameters: language, format, units, postal code, startDate (YYYYMMDD), endDate (YYYYMMDD), apiKey=**yourApiKey** The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code>
https://api.weather.com/v1/location/30075:4:US/observations.json?language=en-US&units=estartDate=20140615&endDate=20140704&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
blunt_phrase	Weather description qualifier short phrase	string		Warmer than yesterday.	Y
class	data identifier	string	default	observation	N
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	Y
day_ind	Daytime or nighttime of the local apparent time of the location	string	D = Day, N = Night, X = Missing (for extreme northern and southern hemisphere	D	Y
dewpt	The temperature which air must be cooled at constant pressure to reach saturation. The Dew Point is also an indirect measure of the humidity of the air. The Dew Point will never exceed the Temperature. When the Dew Point and Temperature are equal, clouds or fog will typically form. The closer the values of Temperature and Dew Point, the higher the relative humidity.	integer	-80 to 100 (°F) or -62 to 37 (°C)	60	Y
expire_time_gmt	Expiration time in UNIX seconds	epoch		1369252800	N
feels_like	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index.	integer	-140 to 140	60	Y
gust	Wind gust speed. This data field contains information about sudden and temporary variations of the average Wind Speed. The report always shows the maximum wind gust speed recorded during the observation period. It is a required display field if Wind Speed is shown. The speed of the gust can be expressed in miles per hour or kilometers per hour.	integer		35	Y
heat_index	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of warm temperatures and high humidity. When the temperature is 70°F or higher, the Feels Like value represents the computed Heat Index. For temperatures between 40°F and 70°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so use the Temperature value.	integer		70	Y
icon_extd	The four-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer		5500	N
key	Primary data field to group or access data	string	same as observation ID	KATL	N
max_temp	High temperature in the last 24 hours	integer	-140 to 140	81	Y
min_temp	Low temperature in the last 24 hours	integer	-140 to 140	48	Y

obs_id	Observation station ID	string		KATL	N
obs_name	Observation station name	string		Hartsfield-Jackson Airport	N
precip_hrly	Precipitation for the last hour	decimal	0.00 to 99.99	0.5	Y
precip_total	Precipitation amount in the last rolling 24 hour period	decimal	0.00 to 99.99	0.3	Y
pressure	Barometric pressure is the pressure exerted by the atmosphere at the earth's surface, due to the weight of the air. This value is read directly from an instrument called a mercury barometer and its units are expressed in millibars (equivalent to HectoPascals).	double		30.06	Y
pressure_desc	A phrase describing the change in the barometric pressure reading over the last hour.	string	Steady, Rising, Rapidly Rising, Falling, Rapidly Falling	Steady	Y
pressure_tend	The change in the barometric pressure reading over the last hour expressed as an integer.	integer	0 = Steady 1 = Rising or Rapidly Rising 2 = Falling or Rapidly Falling	0	Y
qualifier	Weather description qualifier code	string		QQ0063	Y
qualifier_svrty	Weather description qualifier severity	string	1 (low) to 6 (high)	1	Y
rh	The relative humidity of the air, which is defined as the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. Relative humidity is always expressed as a percentage.	integer	0 to 100	91	Y
snow_hrly	Snow increasing rapidly in inches or centimeters per hour depending on whether or not the snowfall is reported by METAR or TECCI (synthetic observations). METAR snow accumulation for the last hour is in inches and TECCI is in centimeters.	decimal	0 to 15	1	Y
temp	The temperature of the air, at the time of the observation, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements.	integer	-140 to 140	62	Y
terse_phrase	Weather description qualifier terse phrase	string		Dangerous wind chills. Limit outdoor exposure.	Y
uv_desc	Ultraviolet index description	string	Extreme, High, Low, Minimal, Moderate, No Report, Not Available	High	Y
uv_index	Ultraviolet index	integer	0 to 11 and 999	7	Y
valid_time_gmt	Valid time of observation as a Unix epoch value (seconds since start of 1970, UTC)	epoch		1369252800	N
vis	The horizontal visibility at the observation point. Visibilities can be reported as fractional values particularly when visibility is less than 2 miles. Visibilities greater than 10 statute miles(16.1 kilometers) which are considered "unlimited" are reported as "999" in your feed. You can also find visibility values that equal zero. This occurrence is not wrong. Dense fogs and heavy snows can produce values near zero. Fog, smoke, heavy rain and other weather phenomena can reduce visibility to near zero miles or kilometers.	double	0 to 999 or null; For greater than 1 = no decimal. For less than 1 = 2 (Metric) & 2 (Imperial) decimal places.	10, 0.25 (Metric) 0.25 (Imperial)	Y
wc	An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the cold temperatures and wind speed. When the temperature is 61°F or lower the Feels Like value represents the computed Wind Chill so display the Wind Chill value. For temperatures between 61°F and 75°F, the Feels Like value and Temperature are the same, regardless of wind speed and humidity, so display the Temperature value.	integer	Use only if temperature is below 40 degrees Fahrenheit OR below 5 degrees Celsius	-25	Y
wdir	The direction from which the wind blows expressed in degrees. The magnetic direction varies from 1 to 360 degrees, where 360° indicates the North, 90° the East, 180° the South, 270° the West, and so	integer	1 to 360	45	Y

	forth. A 'null' value represents no determinable wind direction.				
wdir_cardinal	This field contains the cardinal direction from which the wind blows in an abbreviated form. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind, the wind is at your face. Face southward and the North wind is at your back.	string	N , NNE , NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW, CALM, VAR	ENE	Y
wspd	Wind Speed. The wind is treated as a vector; hence, winds must have direction and magnitude (speed). The wind information reported in the hourly current conditions corresponds to a 10-minute average called the sustained wind speed. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field. Wind directions are always expressed as "from whence the wind blows" meaning that a North wind blows from North to South. If you face North in a North wind the wind is at your face. Face southward and the North wind is at your back.	integer		15	Y
wx_icon	The two-digit number to represent the observed weather conditions. Refer to the Icon Code, Weather Phrases and Images document	integer	0 to 48	47	Y
wx_phrase	A text description of the observed weather conditions at the reporting station	string	257 phrases	Mostly sunny	Y
clds	Cloud cover description code	string	SKC, CLR, SCT, FEW, BKN, OVC	SKC	N
water_temp	Water temperature	integer	25 to 100	80	Y
primary_wave_period	Primary wave period	integer	0-99	13	Y
primary_wave_height	Primary wave height	decimal	0-99.99	3.28	Y
primary_swell_period	Primary swell period	integer	0-99	13	Y
primary_swell_height	Primary swell height	decimal	0-99.99	1.64	Y
primary_swell_direction	Primary swell direction	integer	0 to 359	190	Y
secondary_swell_period	Secondary swell period	integer	0-99	null	Y
secondary_swell_height	Secondary swell height	decimal	0-99.99	null	Y
secondary_swell_direction	Secondary swell direction	integer	0 to 359	null	Y

JSON Sample

```
{
  "metadata": {
    "language": "en-US",
    "transaction_id": "1474388670432:-282484419",
    "version": "1",
    "latitude": 33.4,
    "longitude": -83.19,
    "units": "e",
    "expire_time_gmt": 1474392270,
    "status_code": 200
  },
  "observations": [
    {
      "key": "K3J7",
```

"class": "observation",
"expire_time_gmt": 1402812900,
"obs_id": "K3J7",
"obs_name": "Greensboro",
"valid_time_gmt": 1402805700,
"day_ind": "N",
"temp": 72,
"wx_icon": 33,
"icon_extd": 3300,
"wx_phrase": "Fair",
"pressure_tend": null,
"pressure_desc": null,
"dewPt": 66,
"heat_index": 72,
"rh": 83,
"pressure": 29.29,
"vis": 10,
"wc": 72,
"wdir": null,
"wdir_cardinal": "CALM",
"gust": null,
"wspd": 0,
"max_temp": null,
"min_temp": null,
"precip_total": null,
"precip_hrly": 0,
"snow_hrly": null,
"uv_desc": "Low",
"feels_like": 72,
"uv_index": 0,
"qualifier": null,
"qualifier_svrty": null,
"blunt_phrase": null,
"terse_phrase": null,
"clds": "CLR",
"water_temp": null,
"primary_wave_period": null,
"primary_wave_height": null,
"primary_swell_period": null,
"primary_swell_height": null,
"primary_swell_direction": null,
"secondary_swell_period": null,
"secondary_swell_height": null,
"secondary_swell_direction": null

```
  },
    // Response Collapsed for Presentation Purposes
  ]
}
```

CLEANED OBSERVATION

API DOCUMENTATION

TWC GLOBAL DATA SETS

TWC Global Data Sets

The method which may be used to access the WSI global data sets programmatically is via a REST web services data request. First, establish an account with WS where in which an account with a unique ID will be created and provided. You may have multiple accounts. Each key is configured to allow up to X number of calls per month which was discussed and agreed upon in conversations with your TWC account manager. The definition of a call is noted below.

An API call is defined as 7 days or less of data. For example, if you request 14 days of data it would be counted as 2 calls against your monthly call allowance.

1.) Standard/Premium Weather Variables

2.) Degree Day Variables

3.) Hi-Resolution Precipitation

1. STANDARD/PREMIUM WEATHER VARIABLES

Certain parameters are required to initiate a weather request. As is standard in URIs, all parameters are separated using the ampersand (**&**) character. The list of parameters and their possible values are enumerated below.

Each API key is provisioned to provide data for a specific set of Standard Weather Variables. In addition, your key can be provisioned for access to a special set of 6 Premium Weather Variables. The specific set of Standard and Premium Variables can be found in tables listed below.

- **userKey (*required*)** — this unique client identifier is assigned by WSI
- **lat/long** or **zipcode** *(required)* – Data can be requested either by latitude/longitude or zip code. Currently searching by zip code is only supported for US zip codes.
- **startDate (*required*)** — "mm/dd/yyyy" Indicates the starting date for weather request (Start date is first hour of requested date)

TWC GLOBAL DATA SETS

- **endDate (*required*)** — "mm/dd/yyyy" indicates the ending date for weather request (End date is first hour of date requested, Data will be returned between the first hour of start date and first hour of end date. Make end date an extra day if you would like data for that day.)
- **interval (*required*)** — The desired temporal resolution of the data being retrieved. Accepted values are:
    - **hourly**
    - **daily**
    - **monthly**
- **units (*required*)** — The desired units in which to express the data being retrieved. Accepted values are:
    - **imperial**
    - **metric**
- **format (*required*)** — The desired format in which to return the data being retrieved. Accepted values are:
    - **json**
    - **xml**
    - **csv**
- **version –** The specific version of the API to be utilized. Currently accepted values are:
    - **2**
- **station** – The specific data source to use for the requested location.
    - **cfsr** – Use the closest virtual grid point to the requested location. You are guaranteed to have data returned for the entire time frame requested when using this value - **Default**
    - **metar** – Will conduct a nearest neighbor search and chooses a METAR station if it is 17.5 km or less from the requested location. If a METAR station is used, you are not guaranteed to have data returned for the entire time frame requested. METAR data is only returned for the period of the requested time period in which it is available. **Premium Weather Variables are not available when using this option.**

- **fields** – Specify the specific set of variables to return in the data being retrieved. Accepted values are in the table provided below. You can specify more than one variable by separating each value by a comma, i.e. **fields=windSpeedMph,surfaceTemperatureFahrenheit.** If no fields are specified, all parameters will be returned.

- **time –** Specify the time unit the requested data is returned in. Accepted values are:
    - **lwt (local wall time)**
    - **gmt (Greenwich mean time) - Default**

- **delivery –** Specify how the data is returned. Accepted values are:
    - **stream** – Data is delivered directly to the browser or the application that makes the API call
    - **file** – Data is delivered in a file that is downloaded to your system **– Default**

Available Standard Weather Variables

Name	Description
SiteId	Site / location identifier (either Virtual Grid Square ID or METAR ID)
dateHrGmt	Greenwich Mean Time (GMT) date-time (also known as Universal Time)
dateHrLwt	Valid local date-time (Local wall time {includes daylight savings time})
surfaceTemperatureFahrenheit	Surface air (dry bulb) temperature at 2 meters
surfaceDewpointTemperatureFahrenheit	Atmospheric humidity metric (temperature at which dew will form)
surfaceWetBulbTemperatureFahrenheit	Atmospheric humidity metric (evaporative cooling potential of moist surface)
relativeHumidityPercent	Percent of water vapor in the air relative to its saturation point
apparentTemperatureFahrenheit	Air temperature that includes impact of wind and humidity
windChillTemperatureFahrenheit	Air temperature that includes impact of wind
heatIndexFahrenheit	Air temperature that includes the impact of humidity
precipitationPreviousHourInches	Liquid equivalent for types: warm rain, freezing rain, sleet, snow
snowfallInches	Total Snowfall
surfaceAirPressureMillibars	Atmospheric pressure at the Surface
mslPressureMillibars	Mean Sea Level Pressure
cloudCoveragePercent	Percentage of the sky covered by clouds
windSpeedMph	Unobstructed wind speed at 10 meters
windDirectionDegrees	Upwind direction (e.g., wind from east = 270, from south = 180, etc.) at 10 meters
surfaceWindGustsMph	Unobstructed wind gusts at 10 meters
diffuseHorizontalRadiationWsqm	Diffuse (indirect) solar radiation flux on a plane parallel to the Earth's surface
directNormalIrradianceWsqm	Direct solar radiation flux on a surface 90 deg to the sun
downwardSolarRadiationWsqm	Total solar radiation flux on a plane parallel to the Earth's surface
surfaceTemperatureCelsius	Surface air (dry bulb) temperature at 2 meters
surfaceDewpointTemperatureCelsius	Atmospheric humidity metric (temperature at which dew will form)
surfaceWetBulbTemperatureCelsius	Atmospheric humidity metric (evaporative cooling potential of moist surface)
apparentTemperatureCelsius	Air temperature that includes impact of wind and humidity
windChillTemperatureCelsius	Air temperature that includes impact of wind

heatIndexCelsius	Air temperature that includes the impact of humidity
snowfallCentimeters	Total Snowfall
precipitationPreviousHourCentimeters	Liquid equivalent for types: warm rain, freezing rain, sleet, snow
surfaceAirPressureKilopascals	Atmospheric pressure
mslPressureKilopascals	Mean Sea Level Pressure
surfaceWindGustsKph	Unobstructed wind gusts at 10 meters
windSpeedKph	Unobstructed wind speed at 10 meters

Available Premium Weather Variables	
Name	**Description**
potentialEvapotranspirationMicrometersPerHour	Maximum evaporation rate possible (sum of evaporation and plant transpiration)
surfaceWaterRunOffMillimeters	Precipitation in previous hour expected to run off (not be absorbed)
zeroToTenLiquidSoilMoisturePercent	Layer-average by volume
zeroToTenSoilTemperatureFahrenheit	Layer-average
zeroToTenSoilTemperatureCelsius	Layer-average
tenToFortyLiquidSoilMoisturePercent	Layer-average by volume
tenToFortySoilTemperatureFahrenheit	Layer-average
tenToFortySoilTemperatureCelsius	Layer-average

Response Messages

HTTP Status Code	Reason
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
429	Too many requests

Date Range Restriction: There is a max of 1 year of historical data allowed per request. If you request more than 1 year of data your end date will be shortened. You would receive data from your start date to 1 year out.

Examples to Retrieve Standard Parameters

Sample {Lat/Long} URL request (Required Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/GetObs?version=2&lat=42.134&long=-78.132&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&userKey=999999999999999999999999999999

Sample {Lat/Long} URL request (All Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/GetObs?version=2&lat=42.303&long=99.062&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&fields=surfaceTemperatureFahrenheit,relativeHumidity,windSpeedMph,downwardSolarRadiation&delivery=file&userKey=999999999999999999999999999999

Sample {Zipcode} URL request (Required Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/GetObs?version=2&zipcode=01810&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&userKey=999999999999999999999999999999

Sample {Zipcode} URL request (All Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/GetObs?version=2&zipcode=01810&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&fields=surfaceTemperatureFahrenheit,relativeHumidity,windSpeedMph,downwardSolarRadiation&delivery=stream&userKey=999999999999999999999999999999

Examples to Retrieve Standard & Premium Parameters

Sample {Lat/Long} URL request (Required Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/premium?version=2&lat=42.134&long=-78.132&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&userKey=999999999999999999999999999999

Sample {Lat/Long} URL request (All Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/premium?version=2&lat=42.303&long=99.062&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial&format=json&fields=TenToFortyLiquidSoilMoisture&delivery=file&userKey=999999999999999999999999999999

Sample {Zipcode} URL request (Required Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/premium?
version=2&zipcode=01810&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial
&format=json&userKey=99999999999999999999999999999

Sample {Zipcode} URL request (All Parameters)

http://cleanedobservations.wsi.com/CleanedObs.svc/premium?
version=2&zipcode=01810&startDate=05/01/2015&endDate=05/02/2015&interval=hourly&units=imperial
&format=json&fields=TenToFortyLiquidSoilMoisture&delivery=file&userKey=99999999999999999999999
999999999

2. DEGREE DAY VARIABLES

Certain parameters are required to initiate a weather request. As is standard in URIs, all parameters are separated using the ampersand (**&**) character. The list of parameters and their possible values are enumerated below.

- **userKey (*required*)** — this unique client identifier is assigned by WSI
- **lat/long (*required*)** – latitude/longitude for which data is being requested for
- **startDate (*required*)** — "mm/dd/yyyy" Indicates the starting date for weather request (Start date is first hour of requested date)
- **endDate (*required*)** — "mm/dd/yyyy" indicates the ending date for weather request (End date is first hour of date requested, Data will be returned between the first hour of start date and first hour of end date. Make end date an extra day if you would like data for that day.)
- **units (*required*)** — The desired units in which to express the data being retrieved. Accepted values are:
  - **imperial**
  - **metric**
- **format (*required*)** — The desired format in which to return the data being retrieved. Accepted values are:
  - **json**
  - **xml**
  - **csv**
- **delivery –** Specify how the data is returned. Accepted values are:

- **stream** – Data is delivered directly to the browser or the application that makes the API call

- **file** – Data is delivered in a file that is downloaded to your system **– Default**

- **version –** The specific version of the API to be utilized. Currently accepted values are:

  - **2**

- **crop –** Specific to Growing Degree Days and Killing Degree Days. Currently accepted values are:

  - **Corn - Default**

  - **Wheat**

  - **Potato**

  - **Cotton**

  - **Peanut**

- **basetemp –** The base temperature to be used in the Growing/Killing Degree Day calculation. The value can be provided in either Fahrenheit or Celsius but needs to be consistent with the value used for the "units" parameter.

  If both the "crop" and "basetemp" parameters are not provided a **Default** value of **50F** is used. Otherwise, the default basetemp for the entered crop will be used which are listed below within the Definitions section.

Definitions:

Cooling Degree Days - Difference of average daily temperature and 65 F / 18 C. If positive, equals the difference. Else is 0.

Heating Degree Days - Difference of 65 F / 18 C and average daily temperature. If positive, equals the difference. Else is 0.

Growing/Killing Degree Days - Difference from average daily temperature from base temperature of a crop (base temperature is defined by crop). Equals 0 if average daily temperature is below 32 F / 0 C or above 86 F / 30 C.

Default basetemp based on crop:

Corn: 50 F / 10 C
Wheat: 40 F / 4 C
Cotton: 60 F / 16 C
Peanut: 56 F / 13 C

Potato: 45 F / 7 C

Response Messages

HTTP Status Code	Reason
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
429	Too many requests

Date Range Restriction: There is a max of 1 year of historical data allowed per request. If you request more than 1 year of data your end date will be shortened. You would receive data from your start date to 1 year out.

Examples

Calculate Growing/Killing Degree Days for Corn with a basetemp of 55F

http://cleanedobservations.wsi.com//CleanedObs.svc/GetDegreeDay?lat=42.134&long=-78.132&startDate=05/01/2015&endDate=05/02/2015&station=metar&units=imperial&crop=corn&basetemp=55&format=xml&userKey=99999999999999999999999999&delivery=stream

Calculate Growing/Killing Degree Days for Wheat with a basetemp of 10C

http://cleanedobservations.wsi.com//CleanedObs.svc/GetDegreeDay?lat=42.134&long=-78.132&startDate=05/01/2015&endDate=05/02/2015&station=metar&units=metric&crop=wheat&basetemp=10&format=xml&userKey=99999999999999999999999999&delivery=stream

3. Hi-Resolution Precipitation

Our standard datasets provide precipitation data at 30km resolution but we now provide access to a higher resolution suite of precipitation data. Data can be retrieved for locations in the Continental United States at both 1km and 4km resolution. Data is available globally at 8km resolution between 60 degrees N and 60 degrees S. Temporal availability for each resolution is outlined below.

1km: June 1, 2015 to Present

4km: January 1, 2002 to Present

8km: December 1, 2015 to Present

TWC GLOBAL DATA SETS

Certain parameters are required to initiate a weather request. As is standard in URIs, all parameters are separated using the ampersand (**&**) character. The list of parameters and their possible values are enumerated below.

- **userKey (*required*)** — this unique client identifier is assigned by WSI

- **lat/long (*required)*** – latitude/longitude for which data is being requested for

- **startDate (*required*)** — "mm/dd/yyyy" Indicates the starting date for weather request (Start date is first hour of requested date)

- **interval (*required)*** — The desired temporal resolution of the data being retrieved. Accepted values are:
    - **hourly**
    - **daily**
    - **monthly**

- **endDate (*required*)** — "mm/dd/yyyy" indicates the ending date for weather request (End date is first hour of date requested, Data will be returned between the first hour of start date and first hour of end date. Make end date an extra day if you would like data for that day.)

- **units (*required)*** — The desired units in which to express the data being retrieved. Accepted values are:
    - **imperial**
    - **metric**

- **time –** Specify the time unit the requested data is returned in. Accepted values are:
    - **lwt (local wall time)**
    - **gmt (Greenwich mean time) – Default**

- **peril (*required)*** — The parameter type desired. Accepted values are:
    - **precipitation**
    - **rain**
    - **snow**
    - **freezingrain**

TWC GLOBAL DATA SETS

- **resolution (*required*)** – The desired spatial resolution

    - **1km (Data only available over the Continental United States)**

    - **4km (Data only available over the Continental United States)**

    - **8km (Data available globally between 60⁰N and 60⁰S)**

- **format (*required*)** — The desired format in which to return the data being retrieved. Accepted values are:

    - **json**

    - **xml**

    - **csv**

- **delivery –** Specify how the data is returned. Accepted values are:

    - **stream** – Data is delivered directly to the browser or the application that makes the API call

    - **file** – Data is delivered in a file that is downloaded to your system **– Default Value**

- **version –** The specific version of the API to be utilized. Currently accepted values are:

    - **1 – Default Value**

Date Range Restriction: There is a max of 1 year of historical data allowed per request. If you request more than 1 year of data your end date will be shortened. You would receive data from your start date to 1 year out.

Examples

Retrieve 8km hourly rainfall data in a CSV file

http://cleanedobservations.wsi.com//CleanedObs.svc/precip?version=1&lat=42.134&long=-78.132&startDate=02/11/2017&endDate=02/12/2017&peril=rain&interval=hourly&units=imperial&time=gmt&format=csv&userKey=99999999999999999999999999&delivery=file&resolution=8km

Retrieve 4km hourly rainfall data in XML format displayed in your browser and streamed directly to your custom software

http://cleanedobservations.wsi.com//CleanedObs.svc/precip?version=1&lat=42.134&long=-78.132&startDate=02/11/2017&endDate=02/12/2017&peril=rain&interval=hourly&units=imperial&time=gmt&format=xml&userKey=99999999999999999999999999&delivery=stream&resolution=4km

About The Weather Company

The Weather Company, an IBM Business, is the world's largest private weather enterprise, helping people make informed decisions – and take action – in the face of weather. The company offers the most accurate, personalized and actionable weather data and insights to millions of consumers and thousands of businesses via Weather's API, its business solutions division, and its own digital products from The Weather Channel (weather.com) and Weather Underground (wunderground.com).

The company delivers up to 26 billion forecasts daily. Its products include a top weather app on all major mobile platforms globally; the world's largest network of personal weather stations; a top-20 U.S. website; the seventh most data-rich site in the world; one of the world's largest IoT data platforms; and industry-leading business solutions. Weather Means Business™. The world's biggest brands in aviation, energy, insurance, media, and government rely on The Weather Company for data, technology platforms and services to help improve decision-making and respond to weather's impact on business.

Contact Information

The Weather Company
400 Minuteman Road
Andover, MA 01810

Phone: (978) 983-6300
Website: http://business.weather.com

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview
Personal Weather Station (PWS) Daily Summary Historical Observations returns the daily summary of daily observations for each day's observations report.

Unit of Measure Requirement
The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** format, units, stationId, apiKey apiKey=**yourApiKey**
https://api.weather.com/v2/pws/dailysummary/7day?stationId=KMAHANOV10&format=json&units=e&apiKey=yourApiKey

Data Elements & Definitions
Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
epoch	Time in UNIX seconds	epoch		1369252800	Y
humidityAvg	Average Humidity of the period	long		32	Y
humidityHigh	Highest Humidity of the period	long		32	Y
humidityLow	Lowest Humidity of the period	long		32	Y
lat	Latitude of PWS	decimal	Any valid latitude value. -90 to 90	29.8972	Y
lon	Longitude of PWS	decimal	Any valid longitude value. -180 to 180	-97.9362	Y
obsTimeLocal	Time observation is valid in local apparent time by timezone	ISO	YYYYY-MM-dd HH:mm:ss	2016-09-27 00:59:39	Y
obsTimeUtc	GMT(UTC) time	ISO	ISO 8601 - yyyy-MM-dd'T'HH:mm:ssZZ	2016-09-27T06:59:39Z	Y
solarRadiationHigh	Highest Solar Radiation of the period	decimal		947	Y
stationID	ID as registered by wunderground.com	string		KAZTUCSO539	N
tz	Time zone of PWS	string		America/Chicago	Y
uvHigh	Highest UV Index of the period	decimal		2	Y
winddirAvg	Wind direction average of the period	long		170	Y
imperial	Object containing fields that use a defined unit of measure. The object label is dependent on the units	object		imperial: {.....}	N

metric metric_si uk_hybrid	parameter assigned in the request. "imperial", "metric", "metric_si", "uk_hybrid"				
dewptAvg	Average dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
dewptHigh	Maximum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
dewptLow	Minimum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
heatindexAvg	Heat index average of the period	long		68.2	Y
heatindexHigh	Heat index high temperature of the period	long		71.8	Y
heatindexLow	Heat index low temperature of the period	long		61.7	Y
precipRate	Rate of precipitation - instantaneous precipitation rate. How much rain would fall if the precipitation intensity did not change for one hour	decimal		0.03	Y
precipTotal	Accumulated Rain for the day in defined unit of measure	decimal		0.03	Y
pressureMax	Highest Barometric pressure in defined unit of measure of the period	decimal		30.12	Y
pressureMin	Lowest Barometric pressure in defined unit of measure of the period	decimal		0.01	Y
pressureTrend	Pressure tendency over the preceding period	decimal		28.09	Y
tempAvg	Temperature average of the period	long		72.7	Y
tempHigh	High Temperature of the period	long		87.3	Y
tempLow	Low Temperature of the period	long		63.7	Y
windchillAvg	Windchill average of the period	long		32	Y
windchillHigh	High Windchill temperature of the period	long		45	Y
windchillLow	Low Windchill temperature of the period	long		35	Y
windgustAvg	Wind gust average of the period	decimal		54	Y
windgustHigh	Highest Wind gust of the period	decimal		56	Y
windgustLow	Lowest Wind gust of the period	decimal		43	Y
windspeedAvg	Wind speed average of the period	decimal		3	Y
windspeedHigh	Highest Wind speed of the period	decimal		5	Y
windspeedLow	Lowest Wind speed of the period	decimal		1	Y

JSON Sample

```
{
  "summaries": [
    {
      "stationID": "KMAHANOV10",
      "tz": "America/New_York",
      "obsTimeUtc": "2016-09-28T03:59:54Z",
      "obsTimeLocal": "2016-09-27 23:59:54",
```

```
    "epoch": 1475035194,
    "lat": 42.09263229,
    "lon": -70.86485291,
    "solarRadiationHigh": null,
    "uvHigh": null,
    "winddirAvg": 0,
    "humidityHigh": 97,
    "humidityLow": 77,
    "humidityAvg": 88,
    "metric": {
      "tempHigh": 21,
      "tempLow": 11,
      "tempAvg": 17,
      "windspeedHigh": 0,
      "windspeedLow": 0,
      "windspeedAvg": 0,
      "windgustHigh": 0,
      "windgustLow": 0,
      "windgustAvg": 0,
      "dewptHigh": 18,
      "dewptLow": 9,
      "dewptAvg": 14,
      "windchillHigh": null,
      "windchillLow": null,
      "windchillAvg": null,
      "heatindexHigh": 21,
      "heatindexLow": 12,
      "heatindexAvg": 17,
      "pressureMax": null,
      "pressureMin": null,
      "pressureTrend": null,
      "precipRate": 0,
      "precipTotal": 10.41
    }
  },
  // Response Collapsed for Presentation Purposes
 ]
}
```

Weather Company Data for Advanced Analytics | PWS Recent History - 1 Day - Rapid History - v2

Domain Portfolio: Observations | Domain: Historical | API Name: PWS Recent History - 1 Day - Rapid History - v2

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

Personal Weather Station (PWS) Rapid Historical Observations returns the daily observations records in rapid frequency as frequent as every 5 minutes. Actual frequency of reports ranges and is dependent on how frequently an individual Personal Weather Station (PWS) reports data.

Unit of Measure Requirement

The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** format, units, stationId, apiKey apiKey=**yourApiKey**
https://api.weather.com/v2/pws/observations/all/1day?stationId=KMAHANOV10&format=json&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
epoch	Time in UNIX seconds	epoch		1369252800	Y
humidityAvg	Average Humidity of the period	long		32	Y
humidityHigh	Highest Humidity of the period	long		32	Y
humidityLow	Lowest Humidity of the period	long		32	Y
lat	Latitude of PWS	decimal	Any valid latitude value. -90 to 90	29.8972	Y
lon	Longitude of PWS	decimal	Any valid longitude value. -180 to 180	-97.9362	Y
obsTimeLocal	Time observation is valid in local apparent time by timezone	ISO	YYYYY-MM-dd HH:mm:ss	2016-09-27 00:59:39	Y
obsTimeUtc	GMT(UTC) time	ISO	ISO 8601 - yyyy-MM-dd'T'HH:mm:ssZZ	2016-09-27T06:59:39Z	Y
solarRadiationHigh	Highest Solar Radiation of the period	decimal		947	Y
stationID	ID as registered by wunderground.com	string		KAZTUCSO539	N
tz	Time zone of PWS	string		America/Chicago	Y
uvHigh	Highest UV Index of the period	decimal		2	Y
winddirAvg	Wind direction average of the period	long		170	Y

imperial metric metric_si uk_hybrid	Object containing fields that use a defined unit of measure. The object label is dependent on the units parameter assigned in the request. "imperial", "metric", "metric_si", "uk_hybrid"	object		imperial: {.....}	N
dewptAvg	Average dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
dewptHigh	Maximum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
dewptLow	Minimum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)	43.0	Y
heatindexAvg	Heat index average of the period	long		68.2	Y
heatindexHigh	Heat index high temperature of the period	long		71.8	Y
heatindexLow	Heat index low temperature of the period	long		61.7	Y
precipRate	Rate of precipitation - instantaneous precipitation rate. How much rain would fall if the precipitation intensity did not change for one hour	decimal		0.03	Y
precipTotal	Accumulated Rain for the day in defined unit of measure	decimal		0.03	Y
pressureMax	Highest Barometric pressure in defined unit of measure of the period	decimal		30.12	Y
pressureMin	Lowest Barometric pressure in defined unit of measure of the period	decimal		0.01	Y
pressureTrend	Pressure tendency over the preceding period	decimal		28.09	Y
tempAvg	Temperature average of the period	long		72.7	Y
tempHigh	High Temperature of the period	long		87.3	Y
tempLow	Low Temperature of the period	long		63.7	Y
windchillAvg	Windchill average of the period	long		32	Y
windchillHigh	High Windchill temperature of the period	long		45	Y
windchillLow	Low Windchill temperature of the period	long		35	Y
windgustAvg	Wind gust average of the period	decimal		54	Y
windgustHigh	Highest Wind gust of the period	decimal		56	Y
windgustLow	Lowest Wind gust of the period	decimal		43	Y
windspeedAvg	Wind speed average of the period	decimal		3	Y
windspeedHigh	Highest Wind speed of the period	decimal		5	Y
windspeedLow	Lowest Wind speed of the period	decimal		1	Y

JSON Sample

```
{
  "observations": [
    {
      "stationID": "KMAHANOV10",
      "tz": "America/New_York",
      "obsTimeUtc": "2016-10-03T04:04:57Z",
```

```
      "obsTimeLocal": "2016-10-03 00:04:57",
      "epoch": 1475467497,
      "lat": 42.09263229,
      "lon": -70.86485291,
      "solarRadiationHigh": null,
      "uvHigh": null,
      "winddirAvg": 0,
      "humidityHigh": 100,
      "humidityLow": 100,
      "humidityAvg": 100,
      "metric": {
        "tempHigh": 12,
        "tempLow": 12,
        "tempAvg": 12,
        "windspeedHigh": 0,
        "windspeedLow": 0,
        "windspeedAvg": 0,
        "windgustHigh": 0,
        "windgustLow": 0,
        "windgustAvg": 0,
        "dewptHigh": 12,
        "dewptLow": 12,
        "dewptAvg": 12,
        "windchillHigh": null,
        "windchillLow": null,
        "windchillAvg": null,
        "heatindexHigh": 12,
        "heatindexLow": 12,
        "heatindexAvg": 12,
        "pressureMax": 1015.58,
        "pressureMin": 1015.58,
        "pressureTrend": 0,
        "precipRate": 0,
        "precipTotal": 0
      }
    },

// Response Collapsed for Presentation Purposes
  ]
}
```

Weather Company Data for Advanced Analytics | PWS Recent History - 7 Day - Hourly History - v2

Domain Portfolio: Observations | Domain: Historical | API Name: PWS Recent History - 7 Day - Hourly History - v2

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview
Personal Weather Station (PWS) Hourly Historical Observations returns the hourly records for each day's observations report.

Unit of Measure Requirement
The unit of measure for the response. The following values are supported:

- e = English units
- m = Metric units
- h = Hybrid units (UK)

URL Construction

Request by Geocode (Latitude & Longitude): **Required Parameters:** format, units, stationId, apiKey apiKey=**yourApiKey**
https://api.weather.com/v2/pws/observations/hourly/7day?stationId=KMAHANOV10&format=json&units=e&apiKey=yourApiKey

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
epoch	Time in UNIX seconds	epoch		1369252800	Y
humidityAvg	Average Humidity of the period	long		32	Y
humidityHigh	Highest Humidity of the period	long		32	Y
humidityLow	Lowest Humidity of the period	long		32	Y
lat	Latitude of PWS	decimal	Any valid latitude value. -90 to 90	29.8972	Y
lon	Longitude of PWS	decimal	Any valid longitude value. -180 to 180	-97.9362	Y
obsTimeLocal	Time observation is valid in local apparent time by timezone	ISO	YYYYY-MM-dd HH:mm:ss	2016-09-27 00:59:39	Y
obsTimeUtc	GMT(UTC) time	ISO	ISO 8601 - yyyy-MM-dd'T'HH:mm:ssZZ	2016-09-27T06:59:39Z	Y
solarRadiationHigh	Highest Solar Radiation of the period	decimal		947	Y
stationID	ID as registered by wunderground.com	string		KAZTUCSO539	N
tz	Time zone of PWS	string		America/Chicago	Y
uvHigh	Highest UV Index of the period	decimal		2	Y
winddirAvg	Wind direction average of the period	long		170	Y
imperial	Object containing fields that use a defined unit of measure. The object label is dependent on the units	object		imperial: {.....}	N

metric metric_si uk_hybrid	parameter assigned in the request. "imperial", "metric", "metric_si", "uk_hybrid"					
dewptAvg	Average dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)		43.0	Y
dewptHigh	Maximum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)		43.0	Y
dewptLow	Minimum dew point of the period	decimal	-80 to 100 (°F) or -62 to 37 (°C)		43.0	Y
heatindexAvg	Heat index average of the period	long			68.2	Y
heatindexHigh	Heat index high temperature of the period	long			71.8	Y
heatindexLow	Heat index low temperature of the period	long			61.7	Y
precipRate	Rate of precipitation - instantaneous precipitation rate. How much rain would fall if the precipitation intensity did not change for one hour	decimal			0.03	Y
precipTotal	Accumulated Rain for the day in defined unit of measure	decimal			0.03	Y
pressureMax	Highest Barometric pressure in defined unit of measure of the period	decimal			30.12	Y
pressureMin	Lowest Barometric pressure in defined unit of measure of the period	decimal			0.01	Y
pressureTrend	Pressure tendency over the preceding period	decimal			28.09	Y
tempAvg	Temperature average of the period	long			72.7	Y
tempHigh	High Temperature of the period	long			87.3	Y
tempLow	Low Temperature of the period	long			63.7	Y
windchillAvg	Windchill average of the period	long			32	Y
windchillHigh	High Windchill temperature of the period	long			45	Y
windchillLow	Low Windchill temperature of the period	long			35	Y
windgustAvg	Wind gust average of the period	decimal			54	Y
windgustHigh	Highest Wind gust of the period	decimal			56	Y
windgustLow	Lowest Wind gust of the period	decimal			43	Y
windspeedAvg	Wind speed average of the period	decimal			3	Y
windspeedHigh	Highest Wind speed of the period	decimal			5	Y
windspeedLow	Lowest Wind speed of the period	decimal			1	Y

JSON Sample

```
{
  "observations": [
    {
      "stationID": "KMAHANOV10",
      "tz": "America/New_York",
      "obsTimeUtc": "2016-10-03T04:04:57Z",
      "obsTimeLocal": "2016-10-03 00:04:57",
```

```
    "epoch": 1475467497,
    "lat": 42.09263229,
    "lon": -70.86485291,
    "solarRadiationHigh": null,
    "uvHigh": null,
    "winddirAvg": 0,
    "humidityHigh": 100,
    "humidityLow": 100,
    "humidityAvg": 100,
    "metric": {
      "tempHigh": 12,
      "tempLow": 12,
      "tempAvg": 12,
      "windspeedHigh": 0,
      "windspeedLow": 0,
      "windspeedAvg": 0,
      "windgustHigh": 0,
      "windgustLow": 0,
      "windgustAvg": 0,
      "dewptHigh": 12,
      "dewptLow": 12,
      "dewptAvg": 12,
      "windchillHigh": null,
      "windchillLow": null,
      "windchillAvg": null,
      "heatindexHigh": 12,
      "heatindexLow": 12,
      "heatindexAvg": 12,
      "pressureMax": 1015.58,
      "pressureMin": 1015.58,
      "pressureTrend": 0,
      "precipRate": 0,
      "precipTotal": 0
    }
  },

// Response Collapsed for Presentation Purposes
  ]
}
```

Weather Company Data - [*Utility Offered In Multiple Packages*] | Location Service - v3

Domain Portfolio: Utility | Domain: Search | API Name: Location Service - v3

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter. Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT". The response provides a data element expire_time_gmt, this should be used to expire and remove a record from your system.

Geography: Global   **Attribution Required:** NO   **Attribution Requirements:** N/A

Overview

The Location Service API provides the ability to lookup a location name or geocode (latitude and longitude) to retrieve a set of locations matching the request. The Location Service supports search by; City Name, Address, Geocode (Latitude and Longitude), Postal Code, IATA Code, ICAO Code.

Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- address
- adminDistrict
- city
- country

URL Construction

Request by City Name: **Required Parameters:** query, language, format **||** **Optional Parameters:** countryCode, adminDistrictCode, locationType=(city, address) Returns an information in an array for search string ="atlanta" and locationType filter applied as locationType = "city"
https://api.weather.com/v3/location/search?**query=atlanta**&**locationType=city**&language=en-US&format=json&apiKey=**yourApiKey** https://api.weather.com/v3/location/search?**query=Lincoln Memorial Circle SW**&**locationType=address**&language=en-US&format=json&apiKey=**yourApiKey**
Search by Geocode: **Required Parameters:** geocode, language, format Returns information for search string ="33.74,-84.39".
https://api.weather.com/v3/location/point?**geocode=33.74,-84.39**&language=en-US&format=json&apiKey=**yourApiKey**
Search by Postal Code: Required Parameters: postalKey, language, format Returns information for search string postalKey = "30339:US"   Postal Key is a composite of \<Postal Code>:\<Country Code>
https://api.weather.com/v3/location/point?**postalKey=30339:US**&language=en-US&format=json&apiKey=**yourApiKey**
Search by IATA Code: Required Parameters: iataCode, language, format Returns information for search string = "ATL"
https://api.weather.com/v3/location/point?**iataCode=ATL**&language=en-US&format=json&apiKey=**yourApiKey**
Search by icao Code: Required Parameters: icaoCode, language, format Returns information for search string = "KATL"
https://api.weather.com/v3/location/point?**icaoCode=KATL**&language=en-US&format=json&apiKey=**yourApiKey**

Data Elements & Definitions

Note: Field names are sorted alphabetically in the table below for presentation purposes. The table below does not represent the sort order of the API response.

Field Name	Description	Type	Range	Sample	Nulls Allowed
location	Object for location data	object			
address	Address level location detail.	[string]		Atlanta, Georgia, United States	Y
adminDistrict	The internationalized State, Region, District or Province identifier for 'state' or geopolitical area. - level 1 administrative division.	[string]	Any valid state, region, district or province name.	Georgia,	Y
adminDistrictCode	The internationalized State, Region, District or Province identifier code for 'state' or geopolitical area. - level 1 administrative division.	[string]	Any valid state, region, district or province code.	GA,	Y
airportName	The airport name associated to the (ICAO / IATA) airport code.	[string]	Any valid airport name.	Hartsfield-Jackson Intl,	Y
city	The recognized City or Place name of the requested location.	[string]	Any valid city name.	Atlanta	Y
country	Full name of location Country	[string]	Any valid country name.	United States,	Y
countryCode	ISO Country Code	[string]	Any valid ISO country code.	US,	Y
displayName	The common display name for a location.	[string]	Any valid location display name.	Atlanta	Y
ianaTimeZone	The standard IANA Time Zone for the location requested.	[string]	Any valid IANA time zone.	America/New_York,	Y
iataCode	The International Air Transport Association (IATA) airport codes of the requested location.	[string]	Any valid IATA code.	ATL	Y
icaoCode	The International Civil Aviation Organization (ICAO) airport codes of the requested location.	[string]	Any valid ICAO code.	KATL	Y
latitude	Latitude of the requested location.	[decimal]	Any valid latitude value.	33.638271,	N
longitude	Longitude of the requested location.	[decimal]	Any valid longitude value.	-84.429369,	N
neighborhood	The recognized Neighborhood name of the requested location	[string]	Any valid neighborhood name.	Eagan Park,	Y
postalCode	The Postal Code of the requested location.	[string]	Any valid postal code.	30337,	Y
postalKey	Postal Key is a composite location identifier key of <Postal Code>:<Country Code>	[string]	Any valid postal key value.	30337:US,	Y
placeId	A unique place identifier	[string]	Unique Place Identifier	25d07eca1bcda02800c1a9e699d7eb1c8132cad9bc2d6efa8a2531f0ee4a81cd	Y
locale	Object for additional city & sub-city locale information.	[object]			
locale1	City or Sub-City locale information - depending on country.	[string]	Any valid city or sub-city locale		Y
locale2	City or Sub-City locale information - depending on country.	[string]	Any valid city or sub-city locale		Y

locale3	City or Sub-City locale information - depending on country.	[string]	Any valid city or sub-city locale		Y
locale4	City or Sub-City locale information - depending on country.	[string]	Any valid city or sub-city locale		Y
Fields Unique To Location / Point					
dstEnd	The date time which the location ends daylight savings time observation.	[ISO]	Any valid ISO date time.	2017-11-05T01:00:00-0500	Y
dstStart	The date time which the location starts daylight savings time observation.	[ISO]	Any valid ISO date time.	2017-03-12T03:00:00-0400	Y

JSON Sample

City Name [Response Returned As Array]	Geocode
{ "location": { "latitude": [33.7491,33.1137,40.2153,] "longitude": [-84.3902,-94.1644,-86.0264,] "address": ["Atlanta, Georgia, United States","Atlanta, Texas, United States","Atlanta, Indiana, United States",] "city": ["Atlanta","Atlanta","Atlanta",] "locale":[{"locale1":"Atlanta","locale2";"Atlanta","locale3":"Atlanta",locale4":"Atlanta"}] "neighborhood": [null,null,null], "adminDistrict": ["Georgia", "Texas", "Illinois",] "adminDistrictCode": ["GA", "TX", "IL",] "postalCode": ["30303","75551","46031",] "postalKey": ["30303:US","75551:US","46031:US",], "country": ["United States", "United States", "United States",] "countryCode": ["US", "US", "US",] "ianaTimeZone": ["America/New_York","America/Chicago","America/Indiana/Indianapolis",] "displayName": ["Atlanta", "Atlanta", "Atlanta"] "placeId": ["ecf640b12d9d6154defc02422801cac7362562935c5221d83a5572c1dfdedd97"...] }}	{ "location": { "latitude": 33.740131, "longitude": -84.389743, "city": "Atlanta", "locale":[{"locale1":"Atlanta","locale2";"Atlanta","locale3":"Atlanta"}] "neighborhood": "Summerhill", "adminDistrict": "Georgia", "adminDistrictCode": "GA", "postalCode": "30312", "postalKey": "30312:US", "country": "United States", "countryCode": "US", "ianaTimeZone": "America/New_York" "displayName": "Summerhill", "dstEnd": "2017-11-05T01:00:00-0500", "dstStart": "2017-03-12T03:00:00-0400", "placeId": "25d07eca1bcda02800c1a9e699d7eb1c8132cad9bc2d6efa8a2531f0ee4a81cd" }}
Postal Code	**IATA Code**	**ICAO Code**
{ "location": { "latitude": 33.8688221, "longitude": -84.4674759, "city": "Atlanta", "locale":[{"locale1":"Atlanta","locale2";"Atlanta","locale3":"Atlanta","locale4":"Atlanta"}] "neighborhood": "Cumberland Bridge", "adminDistrict": "Georgia",	{ "location": { "latitude": 33.638271, "longitude": -84.429369, "city": "Atlanta", "locale":[{"locale1":"Atlanta","locale2";"Atlanta","locale3":"Atlanta","locale4":"Atlanta"}] "neighborhood": "Eagan Park", "adminDistrict": "Georgia",	{ "location": { "latitude": 33.638271, "longitude": -84.429369, "city": "locale":[{"locale1":"Atlanta","locale2";"Atlanta","locale3":"Atlanta","locale4":"Atlanta"}] "neighborhood": "Eagan Park", "adminDistrict": "Georgia",

"adminDistrictCode": "GA",
"postalCode": "30339",
"postalKey": "30339:US",
"country": "United States",
"countryCode": "US",
"ianaTimeZone": "America/New_York"
"displayName": "Cumberland Bridge",
"dstEnd": "2017-11-05T01:00:00-0500",
"dstStart": "2017-03-12T03:00:00-0400",
"placeId":
"ecf640b12d9d6154defc02422801cac7362562935c5221d83a5572c1dfded
d97"
}}

"adminDistrictCode": "GA",
"postalCode": "30337",
"postalKey": "30337:US",
"country": "United States",
"countryCode": "US",
"ianaTimeZone": "America/New_York",
"airportName": "Hartsfield-Jackson Intl",
"dstEnd": "2017-11-05T01:00:00-0500",
"dstStart": "2017-03-12T03:00:00-0400",
"iataCode": "ATL",
"placeId":
"3474be034807c5d9ff1e0183e965448c7abbb337e21116050616f1fdf84d72
1b"
}}

"adminDistrictCode": "GA",
"postalCode": "30337",
"postalKey": "30337:US",
"country": "United States",
"countryCode": "US",
"ianaTimeZone": "America/New_York",
"airportName": "Hartsfield-Jackson Intl",
"dstEnd": "2017-11-05T01:00:00-0500",
"dstStart": "2017-03-12T03:00:00-0400",
"icaoCode": "KATL",
"placeId":
"3474be034807c5d9ff1e0183e965448c7abbb337e21116050616f1fdf84d72
1b"
}}

Overview

This common usage and style guide describes the common elements, error handling, language support and terminology used by the Weather Company Data APIs.

HTTP Headers

Standard HTTP Cache-Control headers are used to define caching length. The TTL value is provided in the HTTP Header as an absolute time value using the "Expires" parameter.
Example: "Expires: Fri, 12 Jul 2013 12:00:00 GMT".

The following HTTP headers should be set to the appropriate values:

Header	Documentation	Usage
Accept-Encoding: gzip	*http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.3	**REQUIRED**: All requests to the API's should request that the response be compressed. Unless noted otherwise; the only supported encoding format is: **gzip**

Cross-Origin Resource Sharing

All TWC APIs support Cross-Origin Resource Sharing or CORS. For additional information on this communications mechanism, please refer to the following documents:

Resource	Documentation
W3 CORS Specification	http://www.w3.org/TR/cors/
CORS Tutorial	http://www.html5rocks.com/en/tutorials/cors/

URL Path Components

URL Part	URL Part Type	Description
hostname	host	**api.weather.com** is the host for these API's
version	Path Part	Current API version (example: "v2")
product	Path Part	Product name (example: "observations/current")
apiKey	Query Parameter	Your API key for accessing the API
format	Query Parameter	The format of the response ("json")

geocode	Query Parameter	For API's which require a location for the data, the geocode is a listed in order of latitude and longitude (ex. 34.53,-84.50)
language	Query Parameter	Language to return the response in (ex. en-US, es, es-MX, fr-FR)
units	Query Parameter	The unit of measure for the response. The following values are supported: ● e = English units ● m = Metric units ● h = Hybrid units (UK) ● s = Metric SI units

HTTP Error Status Codes

There are some differences in error status codes between v1 and v2/v3 APIs; the difference in HTTP status codes is noted in the table below for v1 APIs and v2/v3 APIs.

v1 API - HTTP Status Code	Description
200	OK. The request has succeeded.
400	Bad request. The request could not be understood by the server due to malformed syntax or there is no data found for the location requested.
401	Unauthorized. The request requires authentication.
403	Forbidden. The server understood the request but is refusing to fulfill it.
404	Not found. The endpoint requested is not found.
500	Internal server error. The server encountered an unexpected condition which prevented it from fulfilling the request.
v2/v3 API - HTTP Status Code	**Description**
204	No Data Found for specific query. The 204 status code will have an empty response body.
400	Bad request. The request could not be understood by the server due to malformed syntax. This is implemented for all API's. API will reject the request if any invalid parameters are supplied.
401	Unauthorized. The request requires authentication.
403	Forbidden. The server understood the request but the API key is not authorized to perform the requested operation.
404	Not found. The endpoint requested is not found.
405	Method Not Allowed. For example, sending a POST instead of a GET.
406	Not Acceptable. For example, not accepting gzip compressed responses.
408	Request Timeout. Client did not produce request within time server was willing to wait.

500	Internal server error. The server encountered an unexpected condition which prevented it from fulfilling the request.
502-504	Service Unavailable or Gateway issue. These error codes are returned if the service is temporarily unavailable.

Standard Units of Measure

Data attributes that respond to the 'units' parameter follow the pattern below for the different units of measure applied to the data.

Long Name	Imperial (English) - e	Metric - m	Metric SI - s	Hybrid UK - h
Temperature	f (fahrenheit)	c (celsius)	c (celsius)	c (celsius)
Pressure	hg (inches of mercury)	mb (millibars of mercury)	mb (millibars of mercury)	mb (millibars)
Precipitation Amount	in (inches) - rain/snow	mm (millimeters - rain), cm (centimeters - snow)	mm (millimeters - rain), cm (centimeters - snow)	mm (millimeters - rain), cm (centimeters - snow)
Distance	mi (miles)	km (kilometer)	m (meter)	mi (miles)
Visibility	mi (miles)	km (kilometer)	km (kilometer)	km (kilometer)
Wind Speed	mh (miles/hour)	km (kilometer/hour)	m/s (meters per second)	mph (miles per hour)
Wave Height	ft (feet)	mtr (meter)		ft (feet)

Language Translations & Language Codes

Some attributes support language translations. Any attribute that supports translated content will be noted as such in the 'Translated Fields' section of the API specific documentation. The 'Translated Fields' section denotes which fields respond to the valid 'language' parameter in the API request. Translated content will only be provided for valid supported languages as noted in the Language Code table.

Language Code	Description	Short Language Code	Unit of Measure
ar-AE	Arabic - UAE	ar	m
bn-BD	Bengali (Bangladesh)	bn	m
bn-IN	Bengali (India)		m
ca-ES	Catalan	ca	m
cs-CZ	Czech (Czech Republic)	cs	m
da-DK	Danish	da	m
de-DE	German/Germany	de	m

de-CH	German/Switzerland	de	m
el-GR	Greek	el	m
en-GB	English/Great Britain		h
en-AU	English/Australia		h
en-IN	English/India		m
en-US	English/United States	en	e
es-AR	Spanish/Argentina		m
es-ES	Spanish/Spain		m
es-US	Spanish/US		m
es-LA	Spanish (LATAM)		m
es-MX	Spanish/Mexico		m
es-UN	Spanish (International)		m
es-ES	Spanish/Spain	es	e
fa-IR	Persian (Farsi)	fa	m
fi-FI	Finnish	fi	m
fr-CA	French (Canada)		m
fr-FR	French/France	fr	m
fr-CH	French/Switzerland	fr	m
he-IL	Hebrew	he	m
hi-IN	Hindi	hi	m
hr-HR	Croatian	hr	m
hu-HU	Hungarian	hu	m

in-ID	Indonesian	in	m
it-IT	Italian/Italy	it	m
it-CH	Italian/Switzerland	it	m
iw-IL	Hebrew	iw	m
ja-JP	Japanese	ja	m
kk-KZ	Kazakh	kk	m
ko-KR	Korean	ko	m
ms-MY	Malay	ms	m
nl-NL	Dutch	nl	m
no-NO	Norwegian	no	m
nn-NO	Norwegian	nn	m
pl-PL	Polish	pl	m
pt-BR	Portuguese/Brazil	pt	m
pt-PT	Portuguese	pt	m
ro-RO	Romanian	ro	m
ru-RU	Russian	ru	m
sk-SK	Slovak - Slovakia	sk	m
sv-SE	Swedish - Sweden	sv	m
th-TH	Thai - Thailand	th	m

Postal Code Support

Some APIs support requests by postal code. There is limited postal code support for v1 APIs. If noted with postal code support; the following countries postal codes are supported.

- United States
- Country Code: US
- United Kingdom
- Country Code: GB
- France
- Country Code: FR
- Germany
- Country Code: DE
- Italy
- Country Code: IT