OAG flightview Weather Conditions Data API

This document describes the OAG flightview Weather Conditions data feed, delivered as a web service. Customers may obtain current conditions and either 5-day or 7-day forecast for airports around the world. The data elements for both current conditions and forecast are listed below along with how to access the web service. A demo web service instance is provided for trial purposes.

This document assumes the reader has a basic understanding of web services and sending and receiving SOAP requests.

Overview

OAG flightview's Weather Conditions Web Service provides current conditions and forecast for airports worldwide. Web methods are available for requesting current conditions only, 5-day forecast only, 7-day forecast only, or current conditions plus 5-day or 7-day forecast. For each of these web methods, it is possible to query up to 5 airports at a time.

The refresh period for current conditions is more frequent than that for forecast conditions. Current conditions are updated every 30 minutes while the forecast is updated 4 times per day, at *approximately* 0:15, 6:15, 12:15, and 18:15 US Eastern Time.

How to Access the Weather Conditions Web Service

Each customer will have access to the FV Weather Conditions web service using a WSDL, client name and password.

The WSDL can be accessed here:
http://data.flightview.com/weather/webservices/weatherdatasource.asmx?wsdl

For demo and testing purposes, please contact our sales team to get the credentials to a demo account.

The FV Weather Conditions web service accepts web method requests in SOAP v1.1 or v1.2 standard. Some modern web development environments provide tools that analyze a web service WSDL and create classes and methods for consuming the web service. Alternatively, the WSDL can be viewed and coded against manually.

Successful queries will be authenticated with the credentials provided and the results will include the data elements listed in a later section of this document. If incorrect parameters are passed to the web methods then an error response will be issued according to the WSDL specification.

Web Method Request Specification

There are five web methods that may be called, including:

GetCurrentWeather
Get7DaysWeatherForecast
Get5DaysWeatherForecast
GetCombined5DaysWeatherForecast*
GetCombined7DaysWeatherForecast

NOTE: Only the GetCombined5DaysWeatherForecast can be used in the demo web service.

The web method calling sequence for all the methods listed above includes 4 parameters:

1. Array of location codes (Input)
2. Weather data for specified locations (Output)

3. RequestId (Output)
4. An array of error message strings (Output)

NOTE: The RequestId parameter is a unique request id assigned by the web service. The web service logs each request and associates it with this ID. If customers log this value, then it can be used to help the OAG flightview team investigate potential issues.

Each web method returns a Boolean value. If the value is true then the web method was successfully executed. If the value is false then an error was encountered and the customer should use the returned error messages to analyze the nature of the error.

Web Method Request for Demo

Only the Get Combined5DaysWeatherForecast method is available in the demo web service. The following is an example of this web method call to the demo web service generated in the SoapUI:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:flig="http://www.flightview.com/">
  <soapenv:Header>
    <flig:WeatherClientAuthentication>
      <!--Optional:-->
      <flig:Client>FvDemo</flig:Client>
      <!--Optional:-->
      <flig:Password>****</flig:Password>
      <!--Optional:-->
      <flig:DeviceId>?</flig:DeviceId>
    </flig:WeatherClientAuthentication>
  </soapenv:Header>
<soapenv:Body>
    <flig:GetCombined5DaysWeatherForecast>
      <!--Optional:-->
      <flig:locationCodes>
        <!--Zero or more repetitions:-->
        <flig:string>PEK</flig:string>
        <flig:string>LHR</flig:string>
      </flig:locationCodes>
    </flig:GetCombined5DaysWeatherForecast>
  </soapenv:Body>
</soapenv:Envelope>
```

The parameters, locationCodes, are the 3-letter IATA airport codes for the airports whose weather is desired.

If the values passed do not match the specification the method call will fail, no results will be returned, and an error message will be provided.

A sample response is provided in the appendix.

Current Conditions Data Elements

The following data elements are provided as the current conditions for each airport.

- ***Location:*** The airport for which the current conditions are reported.
- ***Temperature:*** The current ambient air temperature.

- ***Feels Like:*** A temperature index of what the temperature really feels like. A composite of the effects of heat index or wind chill.
- ***Phrase:*** A description of the current sky conditions.
- ***Icon:*** An image that represents the current weather.
- ***Heat Index:*** The current apparent temperature.
- ***Wind Chill Temperature:*** A temperature index of what the temperature feels like with the current average wind speed.
- ***Relative Humidity:*** A measure of how much moisture is in the air as a percentage of what it can hold based on the current temperature. This index is reported as a percent.
- ***Wind Direction:*** The direction where the wind is coming from.
- ***Wind Speed:*** The speed at which the wind is blowing measured in miles per hour.
- ***Pressure:*** The Barometric pressure measured in inches mercury (inHg).
- ***Visibility:*** The distance that one can see, measured in miles.
- ***Date:*** The date and time when this data was created. The time zone by default is UTC.

Forecast Conditions Data Elements

The following data elements are provided as the forecast conditions for each airport.

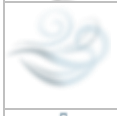
- ***Airport Code:*** The airport for which the forecast is reported.
- ***Day:*** Day of the week associated with the forecast fields.
- ***High Temperature:*** The forecasted high ambient air temperature for the day.
- ***Feels Like High:*** The forecasted high temperature index of what the temperature really feels like reported in Fahrenheit. A composite of the effects of heat index or wind chill.
- ***Phrase:*** A description of the forecasted daytime sky conditions.
- ***Icon:*** An image that represents the forecasted daytime weather.
- ***Probability of Precipitation:*** The forecasted probability of precipitation during the day, measured in percentage.
- ***Low Temperature:*** The forecasted low ambient air temperature for the day.
- ***Feels Like Low:*** The forecasted low temperature index of what the temperature really feels like. A composite of the effects of heat index or wind chill.
- ***Phrase Night:*** A description of the forecasted nighttime sky conditions.
- ***Icon Night:*** An image that represents the forecasted nighttime weather. In the data feed there is a numerical mapping to a set of icons.
- ***Probability of Precipitation Night:*** The forecasted probability of precipitation during the night, measured in percentage.

- ***Timestamp:*** The date and time when this data was created. The time zone by default is UTC.

Icon Mapping

The following table maps the icon numbers in the feed to a description as well as a sample icon.

Icon	Number	Description
	01	Sunny Clear
	02	Mostly Clear
	03	Partly Cloudy
	05	Haze
	06	Mostly Cloudy
	07	Cloudy
	08	Drizzle
	11	Fog
	12	Rain Showers
	13	Rain Showers Cloudy, chance of rain Partly cloudy, chance of rain Clear, chance of rain
	14	Rain Showers Cloudy, chance of rain Partly cloudy, chance of rain Clear, chance of rain
	15	Thunderstorms Thunderstorms and Frozen Precipitation
	16	Thunderstorms Thunderstorms and Frozen Precipitation

	17	Thunderstorms Thunderstorms and Frozen Precipitation
	18	Rain
	19	Snow Showers
	20	Snow Showers
	21	Snow Showers
	22	Snow Blowing Snow
	23	Snow
	24	Freezing
	25	Sleet
	26	Freezing Drizzle Freezing Rain
	29	Mixed Precipitation
	30	Very Hot Becoming Warmer
	31	Very Cold Becoming Colder
	32	Windy
	45	Frost
	46	Humid

	47	Dry
Night Only ICONS		
	33	Clear
	34	Mostly Clear
	35	Partly Cloudy
	37	Haze
	38	Cloudy Mostly Cloudy
	39	Rain Showers Cloudy, chance of rain Partly cloudy, chance of rain Clear, chance of rain
	40	Rain Showers
	41	Thunderstorms Thunderstorms and Frozen Precipitation
	42	Thunderstorms Thunderstorms and Frozen Precipitation
	43	Snow Showers
	44	Snow

Appendix

Sample Response


```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetCombined5DaysWeatherForecastResponse
xmlns="http://www.flightview.com/">

<GetCombined5DaysWeatherForecastResult>true</GetCombined5DaysWeatherForeca
stResult>
      <weather>
        <CombinedLocationWeatherData>
          <CurrentWeather>
            <Location>PEK</Location>
            <Phrase>Clear</Phrase>
            <Temperature>64</Temperature>
            <TemperatureUnits>F</TemperatureUnits>
            <HeatIndex>64</HeatIndex>
            <HeatIndexUnits>F</HeatIndexUnits>
            <WindChill>64</WindChill>
            <WindChillUnits>F</WindChillUnits>
            <RelativeHumidity>94</RelativeHumidity>
            <RelativeHumidityUnits>%</RelativeHumidityUnits>
            <WindDirection>VAR</WindDirection>
            <WindSpeed>2</WindSpeed>
            <WindSpeedUnits>mph</WindSpeedUnits>
            <Pressure>29.94</Pressure>
            <PressureUnits>in/Hg</PressureUnits>
            <Visibility>10</Visibility>
            <VisibilityUnits>mi</VisibilityUnits>
            <Icon>33</Icon>
            <FeelsLikeTemperature>64</FeelsLikeTemperature>
            <FeelsLikeTemperatureUnits>F</FeelsLikeTemperatureUnits>
            <TimeStamp>2018-09-11T15:31:00Z</TimeStamp>
          </CurrentWeather>
          <Forecast>
            <Location>PEK</Location>
            <DailyForecast>
              <DayForecast>
                <ForecastDate>2018-09-11</ForecastDate>
                <DayName>Tuesday</DayName>
                <Icon>18</Icon>
                <HighTemperatureUnits>F</HighTemperatureUnits>
                <HighTemperatureValue>83</HighTemperatureValue>
                <LowTemperatureUnits>F</LowTemperatureUnits>
                <LowTemperatureValue>65</LowTemperatureValue>
                <FeelsLikeHighTemperature>83</FeelsLikeHighTemperature>
                <FeelsLikeHighTemperatureUnits>F</FeelsLikeHighTemperatureUnits>
                <FeelsLikeLowTemperature>65</FeelsLikeLowTemperature>
                <FeelsLikeLowTemperatureUnits>F</FeelsLikeLowTemperatureUnits>
                <Phrase>Cloudy, rain</Phrase>
```

```
            <ProbabilityOfPrecip>40</ProbabilityOfPrecip>
            <ProbabilityOfPrecipUnits>percent</ProbabilityOfPrecipUnits>
            <NightPhrase>Cloudy, rain</NightPhrase>
            <NightIcon>18</NightIcon>
            <NightProbabilityOfPrecip>80</NightProbabilityOfPrecip>

<NightProbabilityOfPrecipUnits>percent</NightProbabilityOfPrecipUnits>
          </DayForecast>
          <DayForecast>
            <ForecastDate>2018-09-12</ForecastDate>
            <DayName>Wednesday</DayName>
            <Icon>06</Icon>
            <HighTemperatureUnits>F</HighTemperatureUnits>
            <HighTemperatureValue>82</HighTemperatureValue>
            <LowTemperatureUnits>F</LowTemperatureUnits>
            <LowTemperatureValue>65</LowTemperatureValue>
            <FeelsLikeHighTemperature>82</FeelsLikeHighTemperature>
            <FeelsLikeHighTemperatureUnits>F</FeelsLikeHighTemperatureUnits>
            <FeelsLikeLowTemperature>65</FeelsLikeLowTemperature>
            <FeelsLikeLowTemperatureUnits>F</FeelsLikeLowTemperatureUnits>
            <Phrase>Mostly cloudy</Phrase>
            <ProbabilityOfPrecip>30</ProbabilityOfPrecip>
            <ProbabilityOfPrecipUnits>percent</ProbabilityOfPrecipUnits>
            <NightPhrase>Partly cloudy</NightPhrase>
            <NightIcon>35</NightIcon>
            <NightProbabilityOfPrecip>40</NightProbabilityOfPrecip>

<NightProbabilityOfPrecipUnits>percent</NightProbabilityOfPrecipUnits>
          </DayForecast>
          <DayForecast>
            <ForecastDate>2018-09-13</ForecastDate>
            <DayName>Thursday</DayName>
            <Icon>07</Icon>
            <HighTemperatureUnits>F</HighTemperatureUnits>
            <HighTemperatureValue>86</HighTemperatureValue>
            <LowTemperatureUnits>F</LowTemperatureUnits>
            <LowTemperatureValue>66</LowTemperatureValue>
            <FeelsLikeHighTemperature>86</FeelsLikeHighTemperature>
            <FeelsLikeHighTemperatureUnits>F</FeelsLikeHighTemperatureUnits>
            <FeelsLikeLowTemperature>66</FeelsLikeLowTemperature>
            <FeelsLikeLowTemperatureUnits>F</FeelsLikeLowTemperatureUnits>
            <Phrase>Cloudy</Phrase>
            <ProbabilityOfPrecip>0</ProbabilityOfPrecip>
            <ProbabilityOfPrecipUnits>percent</ProbabilityOfPrecipUnits>
            <NightPhrase>Cloudy</NightPhrase>
            <NightIcon>38</NightIcon>
            <NightProbabilityOfPrecip>30</NightProbabilityOfPrecip>

<NightProbabilityOfPrecipUnits>percent</NightProbabilityOfPrecipUnits>
          </DayForecast>
          <DayForecast>
            <ForecastDate>2018-09-14</ForecastDate>
            <DayName>Friday</DayName>
            <Icon>03</Icon>
            <HighTemperatureUnits>F</HighTemperatureUnits>
            <HighTemperatureValue>85</HighTemperatureValue>
            <LowTemperatureUnits>F</LowTemperatureUnits>
```

```
                <LowTemperatureValue>67</LowTemperatureValue>
                <FeelsLikeHighTemperature>85</FeelsLikeHighTemperature>
                <FeelsLikeHighTemperatureUnits>F</FeelsLikeHighTemperatureUnits>
                <FeelsLikeLowTemperature>67</FeelsLikeLowTemperature>
                <FeelsLikeLowTemperatureUnits>F</FeelsLikeLowTemperatureUnits>
                <Phrase>Partly cloudy</Phrase>
                <ProbabilityOfPrecip>30</ProbabilityOfPrecip>
                <ProbabilityOfPrecipUnits>percent</ProbabilityOfPrecipUnits>
                <NightPhrase>Cloudy</NightPhrase>
                <NightIcon>38</NightIcon>
                <NightProbabilityOfPrecip>40</NightProbabilityOfPrecip>

<NightProbabilityOfPrecipUnits>percent</NightProbabilityOfPrecipUnits>
              </DayForecast>
              <DayForecast>
                <ForecastDate>2018-09-15</ForecastDate>
                <DayName>Saturday</DayName>
                <Icon>07</Icon>
                <HighTemperatureUnits>F</HighTemperatureUnits>
                <HighTemperatureValue>73</HighTemperatureValue>
                <LowTemperatureUnits>F</LowTemperatureUnits>
                <LowTemperatureValue>57</LowTemperatureValue>
                <FeelsLikeHighTemperature>73</FeelsLikeHighTemperature>
                <FeelsLikeHighTemperatureUnits>F</FeelsLikeHighTemperatureUnits>
                <FeelsLikeLowTemperature>57</FeelsLikeLowTemperature>
                <FeelsLikeLowTemperatureUnits>F</FeelsLikeLowTemperatureUnits>
                <Phrase>Cloudy</Phrase>
                <ProbabilityOfPrecip>0</ProbabilityOfPrecip>
                <ProbabilityOfPrecipUnits>percent</ProbabilityOfPrecipUnits>
                <NightPhrase>Partly cloudy</NightPhrase>
                <NightIcon>35</NightIcon>
                <NightProbabilityOfPrecip>0</NightProbabilityOfPrecip>

<NightProbabilityOfPrecipUnits>percent</NightProbabilityOfPrecipUnits>
              </DayForecast>
            </DailyForecast>
            <TimeStamp>2018-09-11T12:06:00Z</TimeStamp>
          </Forecast>
        </CombinedLocationWeatherData>
      </weather>
      <requestId>636722774589655038_29</requestId>
      <messages/>
    </GetCombined5DaysWeatherForecastResponse>
  </soap:Body>
</soap:Envelope>
```