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Vector Aviation AIRMETs - v2

Domain Portfolio: Weather Imagery | Domain: Aviation | API Name: Vector Aviation AIRMETs - v2 **Restricted**

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

Overview

The Feature Data Service (FDS) API provides geographic features for a number of products. The client can use these features to render a visual representation of data.

- FDS provides geometric vector data where each feature can be a set of points, a polygon or set of polygons, a linestring or set of linestrings, or any other valid GeoJSON type
- Each feature is described by a set of geographic coordinates and a set of properties.
- Each feature is uniquely identified by the *combination* of its product key, feature key and valid time; the valid time is used to assign the feature to a unique feature set.
- For additional details about FDS, please see the Weather Company Data | Data Visualization - Weather Imagery | Common Usage Guide

Using FDS products requires a multi-step workflow to retrieve the necessary data for the specific product data request. Step 2 requires the **'time'** value parameter, found in the response from Step 1.

- **Step 1:** Get Product Info - Provides time-based labels for the feature sets that are currently available.
- **Step 2:** Get Features for a Single Tile - Provides all geographic features for a single tile, taken from a single feature set within a specific product.

HTTP Headers and Data Lifetime - Caching and Expiration

For details on appropriate header values as well as caching and expiration definitions, please see **The Weather Company Data | API Common Usage Guide**.

URL Construction

Step 1: Get Product Info
Required Parameters: **productKey,** apiKey=**yourApiKey** || **Optional Parameters:** meta, max-times https://api.weather.com/v2/vector-api/products/**<productKey>**/info?**apiKey=yourApiKey**
The [**/products/{productKey}/info**] request provides the labels for the feature sets that are currently available. These labels are required as input for the subsequent [**/products/{productKey}/features**] request, and they are invoked in that request's **'time'** parameter.
https://api.weather.com/v2/vector-api/products/6002/info?meta=true&max-times=12&apiKey=yourApiKey
Step 2: Get Features for a Single Tile
Required Parameters: **productKey, time, lod, x, y,** apiKey=**yourApiKey** || **Optional Parameters:** declutter, tile-size https://api.weather.com/v2/vector-api/products/**<productKey>**/features?time=**<time>**&lod=**<lod>**&x=**<x>**&y=**<y>**&**apiKey=yourApiKey**
The [**/products/{productKey}/features**] request provides a set of features for a single tile, from a particular feature set within a particular product. Each feature contains a small set of key metadata properties, including its ID and valid time, which are required as input for any subsequent [**/products/{productKey}/feature-details**] request, as the **'feature-id'** and **'valid-time'** parameters.

https://api.weather.com/v2/vector-api/products/6002/features?time=1492016701805&lod=10&x=175&y=409&tile-size=256&apiKey=yourApiKey

Product Data Dictionary: 6002 - Aviation AIRMETs

The source of the data includes NOAAport, NWS FTP, WxWire and UKMO feed of WMO bulletins. The product is an active state product such that the last transmission in obsoletes any previous issuance. The disappearance of a feature can be inferred as a cancellation or aging out of the prior feature.

The JSON data includes the following fields:

Field *Found in the GeoJSON response, in each feature's **properties** field*	**Description**
Valid_time	Unix Timestamp when the Airmet was queried
Issuing_station	ICAO ID of the station that disseminated the WMO bulletin
Issue_time	Timestamp in ISO-8601 format when the WMO bulletin was issued from the source.
Icao_site_id	ICAO ID of the station that issued the WMO bulletin
Airmet_id	ID for the Airmet, where available in the raw format
geometry	GeoJSON Polygon lat/lon coordinates.
Fir_ids	Array of FIR region IDs that intersect the geographic region of the Airmet
Airmet_category	High level categorization of the Airmet when available in the raw format. Currently includes one of S(ierra), T(ango), or Z(ulu).
Raw_type	Non-standardized type string as it was parsed from the raw format
Type	Standardized Type
Phenomenon	Standardized Phenomenon
Active_at	Timestamp in ISO-8601 format when the Airmet becomes active
Expire_at	Timestamp in ISO-8601 format when the Airmet is no longer active
Continuation_time	Optional Timestamp in ISO-8601 format when the upstream source is expected to either extend the time extent or cancel the Airmet
Lower_level	Lower Altitude Boundary in FL units, SFC or FRZLVL
Upper_level	Upper Altitude Boundary in FL units
Moving_dir	Direction of Movement in degrees
Moving_speed	Speed of Movement in Knots
Data	Raw Bulletin Text

Standardized Type/Phenomenon Mapping Table

Phenomenon	**Type**	**Description**
TURB	TURB	Turbulence
	CAT	Clear Air Turbulence
	MTW	Mountain Waves

ICING	RIME	Rime Ice
	FZRA	Freezing Rain
	FZDZ	Freezing Drizzle
	FZFG	Freezing Fog
	ICE	Ice
CONV	SQL TSGR	Squall Thunderstorm with Hail
	EMBD TSGR	Embedded Thunderstorm with Hail
	ISOL TSGR	Isolated Thunderstorm with Hail
	OCNL TSGR	Occasional Thunderstorm with Hail
	FRQ TSGR	Frequent Thunderstorm with Hail
	SQL TS	Squall Thunderstorm
	EMBD TS	Embedded Thunderstorm
	ISOL TS	Isolated Thunderstorm
	OCNL TS	Occasional Thunderstorm
	FRQ TS	Frequent Thunderstorm
	TSGR	Thunderstorm with Hail
	TS	Thunderstorm
	TC	Tropical Cyclone
	TCU	Towering Cumulus
	CB	Cumulonimbus
	FC	Funnel Cloud
	WATERSPOUT	Waterspout
VA	VA CLD	Volcanic Ash Cloud
	VA	Volcanic Ash
	RDOACT CLD	Radioactive Cloud
DUST	DS	Dust Storm
	BLDU	Blowing Dust
	PO	Dust/Sand Whirls
SAND	SS	Sand Storm
	BLSA	Blowing Sand
WINDS	WINDS	Winds
	WS	Wind Shear
	GUSTS	Wind Gusts
VIS	CIG	Ceiling
	MT OBSC	Mountain Obscuration
	BKN CLD	Broken Clouds

	OVC CLD	Overcast
	CLD	Clouds
	BLSN	Blowing Snow
	SN	Snow
	VIS	Visibility/Mist/Rain
	IFR	Instrument Flight Rules
	LOW CLD	Low Clouds/Fog