IBM Environmental Intelligence Suite

—

GETTING STARTED GUIDE

The Weather Company
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Introduction

Thank you for choosing Environmental Intelligence Suite, helping you make critical weather-related decisions!

In this guide, you will find the essential information needed to start the journey with IBM Environmental Intelligence Suite, such as API key credentials for Weather Data and the list of alert Perils you have access to.

IBM Environmental Intelligence Suite is a suite of applications based on the world's most accurate weather data from The Weather Company, as well as several petabytes of geospatial-temporal data from the Geospatial Analytics engine born out of IBM Research, which include a variety of industry-specialized data such as COVID-19 (epidemiology) and crop health (agriculture).
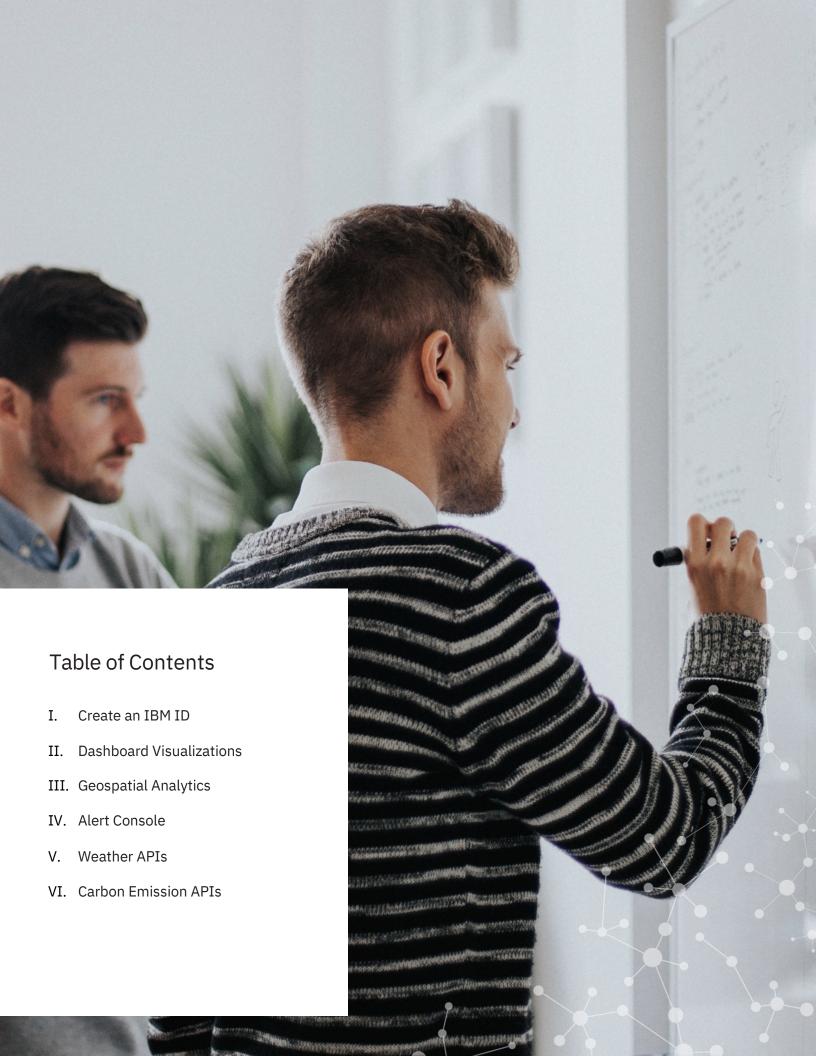
While this would equip you with the state-of-the-art weather technology and data science capabilities imperative in the era of machine learning and AI, our goal is to help you understand the data and its impact on your business and take actions to avoid disruptions and ensure business continuity. This is made possible through Dashboard Visualizations to extract insights in a user-friendly manner and through Alert Console to send out short- to long-term notifications and action items to the right people, at the right time.

We are constantly improving our product to best serve our clients as a reliable technology companion. If you have any questions or feedback, please do not hesitate to reach out to us.

We hope you're as excited as we to start your journey to discover the hidden truth behind how weather impacts your business and how to transform weather into your ally. As our colleague John Bosse (Product Manager) tells our newly joined team members, "You will be a weather geek before you know it!"

IBM Environmental Intelligence Suite
Product Management Team

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I. Create an IBMid (if you do not have one)

Create your IBMid at https://ibm.co/2YZuI1b

The first step is getting your users set up with an IBMid.
You can use your existing company email to serve as your IBMid.
Skip this step and move on to the next section, if you already
have an IBMid set up.

Once your IBMid is created, you can access IBM Environmental
Intelligence Suite following the instructions in the next sections.

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II. Dashboard Visualizations

Access to the Dashboard Visualizations has been provisioned for the users requested.

Step **1**

Click on the *Dashboard Visualizations* card from the Main Environmental Intelligence Suite screen at:

https://environmentalintelligencesuite.ibm.com/

Step **2**

Log in using your IBMid and password

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III. Geospatial Analytics

There are two ways in which you can access Geospatial Analytics.

First, you can use the browser-based Geospatial Analytics UI to explore the data catalog, view sample queries and build your own queries via a guided interface.

Second, you can use a Jupyter / Python notebook, or any program that can submit HTTPS requests, to interact with the Geospatial Analytics API.

Geospatial Analytics - UI

Click on the *Geospatial Analytics* from the navigation bar on the Main Environmental Intelligence Suite page.

Geospatial Analytics - API

The Geospatial Analytics API key is used to retrieve an API access token.

Within the next several hours, the IBM Environmental Intelligence Suite access management team will send individual emails containing an API key to each person authorized to use the Geospatial Analytics API.

See the following documentation for more information.

Geospatial Analytics API Authentication

Obtaining an API Access Token

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IV. Alert Console

An automated email was already sent, asking you to click a link to confirm your identity for login to https://myibm.ibm.com/. If you are an Admin user, you can add other users using this link.

Once your account is confirmed, you will have access to Alert Console on https://environmentalintelligencesuite.ibm.com/.

Upon your first login, you will have an initial entitlement to one or more of the following geographic sets of Perils. Please reach out to your seller if you would like to view the full Perils catalog and/or add additional Perils to your entitlement.

Weather Perils Provisioned : USA

Peril ID	Description
NWS_TOR	A Tornado Warning has been issued. A tornado is imminent. Seek shelter immediately.
NWS_SVR	A Severe Thunderstorm Warning has been issued for severe thunderstorms that are either occurring or are imminent. Winds of 58 mph or higher and/or hail 1" in diameter or larger are associated with these kind of storms.
NWS_FLW	A River Flood Warning has been issued for flooding along a river that is imminent or occurring.
NWS_HIGH_WIND_WARNING	A High Wind Warning has been issued to warn of sustained winds exceeding 40 mph for more than an hour or winds gusts exceeding 58 mph for any duration.
NWS_HURRICANE_WARNING	A Hurricane Warning has been issued. Tropical cyclone winds of 74 mph or higher are expected within the next 36 hours.
NWS_TROPICAL_STORM_WARNING	A Tropical Storm Warning has been issued. Sustained winds between 39 and 73 mph are expected within the next 36 hours.
NWS_WINTER_STORM_WARNING	A Winter Storm Warning has been issued due to hazardous winter weather that is either occurring or is imminent. Significant snow/sleet/ice and wind can be associated with this storm.
NWS_BLIZZARD_WARNING	A Blizzard Warning has been issued to warn of snow/blowing snow causing 1/4 mile visibility or less and winds exceeding 35 mph within the next 12 to 18 hours.
NWS_FLOOD_WARNING	An Areal Flood Warning has been issued to warn of flooding over a large area including streets, low-lying areas, creeks, and small streams.
ACCUM_PRECIP_TOTAL_24HR_GTE_25.40_MM	Rainfall of 1 inch or more is forecast in the next 24 hours.
ACCUM_SNOW_TOTAL_24HR_GTE_0.08_M	Snow forecast of 3 inches or more in the next 24 hours.
GCOD_ACCUM_PRECIP_TOTAL_1HR_GTE_25.40_MM	Rainfall greater than 1 inch in the past hour.
GCOD_ACCUM_SNOW_TOTAL_1HR_GTE_0.0254_M	Snow greater than 1 inch in the past 1 hour.
GCOD_WIND_GUST_SFC_GTE_17.88_MS	Wind gusts above 40 mph occurred within the past hour.
WIND_SPEED_SFC_24HR_GTE_17.88_MS	Wind speeds above 40 mph are forecast to occur in your area over the next 24 hours.
SSDS_INGESTOR_HEARTBEAT	This product delivers a heartbeat originating in the SSDS ingestor microservice at a fixed interval for an asset at 68.92, -138.2

IV. Alert Console

Weather Perils Provisioned : Canada

Peril ID	Description
ACCUM_PRECIP_TOTAL_24HR_GTE_25.40_MM	Rainfall of 1 inch or more is forecast in the next 24 hours.
ACCUM_SNOW_TOTAL_24HR_GTE_0.08_M	Snow forecast of 3 inches or more in the next 24 hours.
CANADA_BLIZZARD_WARNING	A Blizzard Warning has been issued. Blowing snow from winds of 40 km/h or greater is expected reducing visibility to 400m or less over the next 4 hours.
CANADA_HURRICANE_WARNING (not in winter)	Hurricane Warning
CANADA_RAINFALL_WARNING	A Rainfall Warning has been issued. Heavy downpours of rain are expected.
CANADA_SEVERE_THUNDERSTORM_WARNING	A Severe Thunderstorm Warning has been issued. Evidence of wind gusts of 90 km/h or greater along with 2cm or larger hail stones and heavy rain is imminent or occurring.
CANADA_SNOWFALL_WARNING (not in summer)	A Snowfall Warning has been issued. Major accumulations of snow are expected over the next several hours.
CANADA_STRONG_WIND_WARNING	Strong Wind Warning
CANADA_TORNADO_WARNING (not in winter)	A Tornado Warning has been issued. A tornado has been reported; or when there is evidence based on radar, or from a reliable spotter that a tornado is imminent.
CANADA_TROPICAL_STORM_WARNING (not in winter)	Tropical Storm Warning
CANADA_WINTER_STORM_WARNING	A Winter Storm Warning has been issued. Severe and potentially dangerous winter weather conditions are expected, including: Major snowfall of 25 cm or more combined with other cold weather precipitation types, strong winds, blowing snow, and/or extreme cold.
GCOD_ACCUM_PRECIP_TOTAL_1HR_GTE_25.40_MM	Rainfall greater than 1 inch in the past hour.
GCOD_ACCUM_SNOW_TOTAL_1HR_GTE_0.0254_M	Snow greater than 1 inch in the past 1 hour.
GCOD_WIND_GUST_SFC_GTE_17.88_MS	Wind gusts above 40 mph occurred within the past hour.
SSDS_INGESTOR_HEARTBEAT	This product delivers a heartbeat originating in the SSDS ingestor microservice at a fixed interval for an asset at precisely 68.92, -138.2
WIND_SPEED_SFC_24HR_GTE_17.88_MS	Wind speeds above 40 mph are forecast to occur in your area over the next 24 hours.

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IV. Alert Console

Weather Perils Provisioned : Europe

Peril ID	Description
METEOALARM_DISRUPTION_DUE_TO_FLOOD	A Meteoalarm Disruption has been issued due to the possibility of extensive flooding. Be on the lookout for rising waters.
METEOALARM_DISRUPTION_DUE_TO_THUNDERSTORM	A Meteoalarm Disruption has been issued due to dangerous thunderstorms that pose a threat to life and property.
METEOALARM_DISRUPTION_DUE_TO_RAIN	Disruption due to rain
METEOALARM_DISRUPTION_DUE_TO_RAIN_AND_FLOOD	Disruption due to rain and flood
METEOALARM_DISRUPTION_DUE_TO_SNOW_AND_ICE	A Meteoalarm disruption has been issued due to dangerous conditions caused by snow and/or ice accumulations in the next 24 hours. Damage and casualties are likely to happen.
METEOALARM_DISRUPTION_DUE_TO_WIND	Disruption due to wind
ACCUM_PRECIP_TOTAL_24HR_GTE_25.40_MM	Rainfall of 1 inch or more is forecast in the next 24 hours.
ACCUM_SNOW_TOTAL_24HR_GTE_0.08_M	Snow forecast of 3 inches or more in the next 24 hours.
GCOD_ACCUM_PRECIP_TOTAL_1HR_GTE_25.40_MM	Rainfall greater than 1 inch in the past hour.
GCOD_ACCUM_SNOW_TOTAL_1HR_GTE_0.0254_M	Snow greater than 1 inch in the past 1 hour.
GCOD_WIND_GUST_SFC_GTE_17.88_MS	Wind gusts above 40 mph occurred within the past hour.
WIND_SPEED_SFC_24HR_GTE_17.88_MS	Wind speeds above 40 mph are forecast to occur in your area over the next 24 hours.
SSDS_INGESTOR_HEARTBEAT	This product delivers a heartbeat originating in the SSDS ingestor microservice at a fixed interval for an asset at precisely 68.92, -138.2

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IV. Alert Console

Weather Perils Provisioned : Global

Peril ID	Description
ACCUM_PRECIP_TOTAL_24HR_GTE_25.40_MM	Rainfall of 1 inch or more is forecast in the next 24 hours.
ACCUM_SNOW_TOTAL_24HR_GTE_0.08_M	Snow forecast of 3 inches or more in the next 24 hours.
GCOD_ACCUM_PRECIP_TOTAL_1HR_GTE_25.40_MM	Rainfall greater than 1 inch in the past hour.
GCOD_ACCUM_SNOW_TOTAL_1HR_GTE_0.0254_M	Snow greater than 1 inch in the past 1 hour.
GCOD_WIND_GUST_SFC_GTE_17.88_MS	Wind gusts above 40 mph occurred within the past hour.
WIND_SPEED_SFC_24HR_GTE_17.88_MS	Wind speeds above 40 mph are forecast to occur in your area over the next 24 hours.
SSDS_INGESTOR_HEARTBEAT	This product delivers a heartbeat originating in the SSDS ingestor microservice at a fixed interval for an asset at precisely 68.92, -138.2

IV. Alert Console

Configuring the weather Perils via interface

1. Click on the *Alert Console* card from the Main Environmental Intelligence Suite page.
2. Log in with your IBMid
3. Click the "Configure" button in the left-hand navigation to go to the Configure Service screen

   - ✓ Under Alert Types, activate the available perils by clicking the toggle switch or peril name

   - ✓ Under Alert Messages, customize the Company Name

Accessing the alerting/notification capabilities using an API

1. Click the API button in the left-hand navigation to access links to API documentation and key management.
2. For a simple use case of sending alerts to a URL endpoint, you can use the API key and secret for your account and API documentation to:

   - ✓ Add a basic auth endpoint to receive alerts. The endpoint should be configured to recognize this JSON payload format (Customer Endpoint Design section).

   - ✓ Create an Asset (location) to monitor for alerts (Create an Asset section).

   - ✓ Assets can also be created by using the web-based dashboard at https://myibm.ibm.com/.

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V. Weather APIs

There are 3 types of API Keys - Trial, Development and Production. Depending on your type of engagement, the primary contact will receive a separate email with your respective API Key(s) for security purposes. Please distribute the keys to only those individuals authorized on the provisioning instructions. Please note that paid engagements will always receive both a Development and Production Key. Please note the following:

Trial API Key - This Component provides a trial API key for 50,000 daily API Calls and 100 calls per minute for internal development, non-production use only. Once the daily trial API Call limit is reached, the key is disabled for that day.

Development API Key - This provides a separate API key for 1,000 daily API Calls for internal development, non-production use only. The API Calls do not count toward overall usage consumption. Once the daily Development API Call limit is reached, the key is disabled for that day.

Production API Key - Please see the chart below for Standard and Premium allowances.

STANDARD
INCLUDED - 1M API CALLS/MONTH
ADD-ON - PER 1M API CALLS

CORE	ENHANCED CURRENT CONDITIONS	ENHANCED FORECAST	LIFESTYLE	HOD
Site Based Current Conditions	Currents on Demand	Precipitation Forecast	Indices: Air Quality, Pollen, Flu Outbreak, Tides, Aches & Pains, Breathing, Dry Skin, Frizz, Frost Potential Golf Heating & Cooling, Leisure Travel Running Weather, Ski, Static Electricity	Historical Weather Data on Demand
10-Day Daily Forecasts	Personal Weather Station Observations	15 Minute Forecast		
48-Hr Hourly Forecasts		15 Day Hourly Forecast		**Aviation**
Weather Alerts				Core
Almanac				
Weather Imagery including Radar and Satellite				
Snow Depths				

PREMIUM
NONE INCLUDED
ADD-ON - PER 1M API CALLS

AGRICULTURE	SEVERE WEATHER	HDAT-EXT
Reference Evapo Crop specific, Reference Evapo, Model Evapo, Soil Moisture, Soil Temperature	15 Day Cyclone Forecast Shear, Hail, Rain, Snow, Ice	Solar Irradiance Evapotranspiration
RENEWABLES	**PROBABILISTIC**	
Wind Speed & Direction Air Density Irradiance	Distribution out 10 days QPF Hourly Accumulated	
SEASONAL	**GEOSPATIAL**	
Seasonal & Sub-Seasonal	Geospatial Currents & Forecast Polygon / Gridded	

DEVELOPMENT
INCLUDED
1,000 CALLS PER DAY

ALL STANDARD PREMIUM
Core
Enhanced Currents
Enhanced Forecast
Lifestyle
HOD
Agriculture
Renewables
Severe Weather
Lifestyle
…

API Package	Documentation
Environmental Intelligence Suite – Standard	ibm.co/3ddEGm5
Environmental Intelligence Suite – Premium	ibm.co/3jzc09t

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V. Weather APIs

These API endpoints tap into current and forecast conditions, seasonal and severe weather. The APIs are curated to give you only what you need in the format you need it, including alerts, notifications, forecast data, weather imagery, and damaging weather

Standard APIs

Core Access many of the most essential weather APIs, ranging from current conditions and forecasts to radar and satellite data. Current conditions include site-based current observations and time series observations.

Enhanced current conditions Leverage data from one of the highest-resolution weather observation networks in the field based on a robust network of personal weather stations (PWSs) and traditional data sources (METAR and SYNOP). Also included is a Currents on Demand solution, an observed conditions data set covering the globe at a 4-km resolution with select variables downscaled to 500 m.

Enhanced forecast Use forecast models built using leading-edge model forecasting, expertise from over 100 meteorologists, and a network of observations, radar, and satellite assimilations and modelling capabilities.

Lifestyle Indices Air quality, pollen observations, flu outbreak observations, tides, aches and pains, breathing, dry skin, frizz, static electricity, frost potential, heating and cooling, golf, leisure travel, running, skiing, mosquito activity

Historical weather data More easily understand weather's impact on your business and better manage future outcomes with the industry's most precise and accurate historical record of weather data1 that includes hourly values for surface temperature, wind speed and direction, relative humidity, atmospheric pressure, and dewpoint.

Premium APIs

Geospatial Currents and Forecast Leveraging our 4-km resolution variables for currents and forecast, request KML or GeoJSON results back to integrate into GIS platforms for mass data analysis or consumption.

Severe weather Obtain real-time severe weather data related to tornadoes, high winds and hurricanes to assist you in protecting your assets by allowing you to stay ahead of adverse weather conditions and assess trailing damage estimates.

Seasonal and subseasonal forecasts Plan for market shifts that may affect profitability with forecasts that provide a comprehensive and detailed view of the anticipated temperature and precipitation anomalies over the next 3 – 5 weeks, 1 – 4 months and 1 – 7-months timeframes.

Probabilistic Make more informed decisions with the Probabilistic Forecast that helps users understand the likelihood of various weather events happening and their potential impact.

Renewables Predict and assess key weather parameter impacts on renewable energy production and efficiency with the Renewable Weather Data Package.

Agriculture Make more informed decisions with a robust set of agricultural specific APIs providing hourly forecasts out to 15 days, built using a weighted blend of the following weather models: GFS Operational & Ensemble, ECM Operational, NAM & IBM GRAF.

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VI. Carbon APIs

The Carbon Accounting API is a collection of six endpoints in accordance with the GHG Protocol*, that can be used against a structured data set to return Scope 1, 2 and (selected) 3 emission details and calculations within a few minutes, instead of months.

- Stationary Emissions
- Fugitive Emissions
- Mobile Emissions
- Location-based Emissions
- Market-based Emission
- Transport & Distribution

[Documentation on API Hub](#)

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Have Questions?

Send us an email at

weathercustomersupport@ibm.com

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