MAXMIND®

minFraud® services comparison chart + data field descriptions

minFraud is a data return service that helps businesses prevent online fraud and manage risk by providing risk scores, and related data about online transactions.

Below is a comparison of the data fields available across the three minFraud services: Score, Insights, and Factors. It includes both input fields (data you send) and output fields (data you receive).

Compare **output** data fields by minFraud service

Data you send

Compare **input** data fields by minFraud service

Data you receive

minFraud data outputs

Output data field name	Output data field description	minFraud services comparison by data field minFraud Score	minFraud Insights	minFraud Factors
Top-level fields				
id	This is the minFraud ID, a UUID that identifies the minFraud response.	✔	✔	✔
risk_score	This field contains the risk score, from 0.01 to 99. A higher score indicates a higher risk of fraud.	✔	✔	✔
funds_remaining	The approximate US dollar value of the funds remaining on your MaxMind account.	✔	✔	✔
queries_remaining	The approximate number of queries remaining for the service before your account runs out of funds.	✔	✔	✔
warnings	Warning objects detailing issues with the request that was sent such as invalid or unknown inputs.	✔	✔	✔
Disposition				
action	This describes how the request was handled. Valid values are "accept", "reject", "manual_review".	✔	✔	✔
reason	This describes why the action was set to a particular value. The valid values are "default", "custom_rule".	✔	✔	✔
rule_label	The custom rule that was triggered. If you do not have custom rules set up, the triggered custom rule does not have a label, or no custom rule was triggered, the field will not be included in the response.	✔	✔	✔
Risk score reasons				
multiplier	The factor by which the risk score is increased (if the value is greater than 1) or decreased (if the value is less than 1) for given risk reason(s).			✔
reasons	This describes one of the reasons for the multiplier.			✔
code	A machine-readable code that identifies the risk reason, e.g., anonymous_ip, country, org_distance_risk.			✔
reason	The human-readable description of the risk reason and its effect on the overall risk score.			✔
IP address				
risk	This field contains the risk associated with the IP address.	✔	✔	✔
risk_reasons	This field contains reason codes for the risk associated with the IP address.		✔	✔
/city/confidence	The confidence that the city was correctly geolocated (1-100).		✔	✔
/city/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/city/names	The city name for this location.		✔	✔
/continent/code	The continent code for this location.		✔	✔
/continent/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/continent/names	The continent name for this location.		✔	✔
/country/confidence	The confidence that the country was correctly geolocated (1-100).		✔	✔
/country/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/country/is_in_european_union	1 if the country associated with the location is a member state of the European Union, 0 otherwise.		✔	✔
/country/is_high_risk	This value is true if the IP country is high risk and false if the country is not high risk.		✔	✔
/country/iso_code	A two-character ISO 3166-1 country code for the country associated with the location.		✔	✔
/country/names	The country name for this location.		✔	✔
/location/accuracy_radius	The approximate accuracy radius, in kilometers, around the latitude and longitude for the geographical entity associated with the IP address.		✔	✔
/location/average_income	The average annual income associated with the IP address in US dollars.		✔	✔

minFraud data outputs

Output data field name	Output data field description	minFraud services comparison by data field		
		minFraud Score	minFraud Insights	minFraud Factors
IP address (continued)				
/location/latitude	The approximate latitude of the location associated with the network.		✔	✔
/location/longitude	The approximate longitude of the location associated with the network.		✔	✔
/location/population_density	The estimated number of people per square kilometer.		✔	✔
/location/time_zone	The time zone associated with location, as specified by the IANA Time Zone Database.		✔	✔
/postal/code	The postal code associated with the IP address.		✔	✔
/postal/confidence	The confidence that the postal code was correctly geolocated (1-100).		✔	✔
/registered_country/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/registered_country/is_in_european_union	This is true if the registered country is a member state of the European Union. Otherwise, the key is not included.		✔	✔
/registered_country/iso_code	A two-character ISO 3166-1 country code for the registered country.		✔	✔
/registered_country/names	The registered country name for this location.		✔	✔
/represented_country/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/represented_country/is_in_european_union	This is true if the represented country is a member state of the European Union. Otherwise, the key is not included.		✔	✔
/represented_country/iso_code	A two-character ISO 3166-1 country code for the represented country.		✔	✔
/represented_country/names	The represented country name for this location.		✔	✔
/represented_country/type	The type of represented country. Currently limited to military but may include other types in the future.		✔	✔
/subdivisions/confidence	The confidence that the most specific subdivision was correctly geolocated (1-100).		✔	✔
/subdivisions/geoname_id	A unique identifier for the network's location as specified by GeoNames.		✔	✔
/subdivisions/iso_code	A string of up to three characters containing the region-portion of the ISO 3166-2 code for the region associated with the IP address.		✔	✔
/subdivisions/names	The subdivision (region) name for this location.		✔	✔
/traits/autonomous_system_number	The autonomous system number associated with the IP address.		✔	✔
/traits/autonomous_system_organization	The organization associated with the registered autonomous system number for the IP address.		✔	✔
/traits/is_anycast	1 if the IP address is part of an anycast network.		✔	✔
/traits/domain	The second level domain associated with the IP address.		✔	✔
/traits/ip_address	The requested IP address.		✔	✔
/traits/isp	The name of the ISP associated with the IP address.		✔	✔
/traits/mobile_country_code	The mobile country code (MCC) associated with the IP address and ISP.		✔	✔
/traits/mobile_network_code	The mobile network code (MNC) associated with the IP address and ISP.		✔	✔
/traits/network	The largest network, in CIDR notation, where all of the fields besides ip_address have the same value.		✔	✔
/traits/organization	The name of the organization associated with the IP address.		✔	✔
/traits/static_ip_score	A number from 0 to 99.99 that is an indicator of how static or dynamic an IP address is.		✔	✔
/traits/user_count	The estimated number of users sharing the IP/network during the past 24 hours.		✔	✔
/traits/user_type	The user type associated with the IP address. See https://dev.maxmind.com/minfraud/ for valid values.		✔	✔
/traits/ip_risk_snapshot	This field contains the historical risk associated with the IP address.		✔	✔
/location/local_time	The date and time of the transaction in the time zone associated with the IP address.		✔	✔

minFraud data outputs

Output data field name	Output data field description	minFraud services comparison by data field		
		minFraud Score	minFraud Insights	minFraud Factors
Anonymizer				
confidence	A score ranging from 1 to 99 that represents our percent confidence that the network is currently part of an actively used VPN service.		✔	✔
network_last_seen	The last day that the network was sighted in our analysis of anonymized networks. This is in the ISO 8601 date format (YYYY-MM-DD).		✔	✔
provider_name	The name of the VPN provider (e.g., nordvpn, surfshark) associated with the network.		✔	✔
is_anonymous	1 if the IP address belongs to any sort of anonymous network. Blank if not.		✔	✔
is_anonymous_vpn	1 if the IP address belongs to an anonymous VPN system. Blank if not.		✔	✔
is_hosting_provider	1 if the IP address belongs to a hosting provider. Blank if not.		✔	✔
is_public_proxy	1 if the IP address belongs to a public proxy. Blank if not.		✔	✔
Credit card				
brand	The card brand, such as “Visa”, “Discover”, “American Express”, etc.		✔	✔
country	The two letter ISO 3166-1 alpha-2 country code associated with the location of the majority of customers using this credit card as determined by their billing address.		✔	✔
is_issued_in_billing_address_country	This field is true if the country of the billing address matches the country of the majority of customers using that IIN. It is false if both countries are available but do match.		✔	✔
is_prepaid	This field is true if the issuer ID number is for a prepaid card. It is false if the issuer ID number is for a non-prepaid card.		✔	✔
is_virtual	This field is true if the issuer ID number is for a virtual card. It is false if the issuer ID number is for a non-virtual card.		✔	✔
is_business	This field is true if the issuer ID number is for a business card. It is false if the issuer ID number is for for a non-business card.		✔	✔
type	The card’s type, such as "charge", "debit", or "credit".		✔	✔
/issuer/name	The name of the bank which issued the credit card.		✔	✔
/issuer/matches_provided_name	This field is true if the name matches the name provided in the request for the card issuer. It is false if the name does not match.		✔	✔
/issuer/phone_number	The phone number of the bank which issued the credit card.		✔	✔
/issuer/matches_provided_phone_number	This field is true if the phone number matches the number provided in the request for the card issuer. It is false if the number does not match.		✔	✔
Device				
confidence	A number from 0.01 to 99 representing the confidence that the /device/id refers to a unique device as opposed to a cluster of similar devices.		✔	✔
id	A UUID that MaxMind uses for the device associated with this IP address.		✔	✔
last_seen	The date and time of the last sighting of the device.		✔	✔
local_time	The local date and time of the transaction in the time zone of the device.		✔	✔
Email				
first_seen	A date string (e.g. 2017-04-24) to identify the date an email address was first seen by MaxMind.		✔	✔
/domain/first_seen	A date string (e.g. 2019-01-01) to identify the date an email address domain was first seen by MaxMind.		✔	✔
/domain/classification	A classification of the domain such as business or education.		✔	✔
/domain/risk	Contains the risk associated with the domain.		✔	✔
/domain/volume	Indicates how much activity we see on an email domain across the minFraud network, expressed in sightings per million.		✔	✔
/domain/visit/has_redirect	This is true if the domain in the request has redirects (configured to automatically send visitors to another URL).		✔	✔
/domain/visit/last_visited_on	A date string that corresponds to when the automated visit was completed. This is expressed using the ISO 8601 date format YYYY-MM-DD.		✔	✔
/domain/visit/status	A classification of the status of the domain based on an automated visit at a previous point in time.		✔	✔

minFraud data outputs

Output data field name	Output data field description	minFraud services comparison by data field: minFraud Score	minFraud Insights	minFraud Factors
Email (continued)				
is_disposable	This field is true if MaxMind believes that the email address is from a disposable email provider. It is false if the address is not from a known disposable email provider.		✔	✔
is_free	This field is true if MaxMind believes that this email domain is for a free email provider such as Gmail or Yahoo! Mail. It is false if the domain is not for a known free email provider.		✔	✔
is_high_risk	This field is true if MaxMind believes that this email address is likely to be used for fraud. It is false if MaxMind does not believe the address is used for fraud.		✔	✔
Shipping address				
is_high_risk	This field is true if the shipping address is an address associated with fraudulent transactions. The field is false when the address is not associated with increased risk.		✔	✔
is_postal_in_city	This field is true if the postal code provided with the address is in the city for the address. The field is false when the postal code is not in the city.		✔	✔
latitude	The approximate latitude associated with the address.		✔	✔
longitude	The approximate longitude associated with the address.		✔	✔
distance_to_ip_location	The distance in kilometers from the address to the IP location.		✔	✔
distance_to_billing_address	The distance in kilometers from the shipping address to billing address.		✔	✔
is_in_ip_country	This field is true if the shipping address is in the IP country. The field is false when the address is not in the IP country.		✔	✔
Shipping phone				
country	A two-character ISO 3166-1 country code for the country associated with the shipping phone number.		✔	✔
is_voip	This is true if the shipping phone number is a Voice over Internet Protocol (VoIP) number allocated by a regulator. It is false if the shipping phone number is not a VoIP number allocated by a regulator.		✔	✔
network_operator	The name of the original network operator associated with the shipping phone number.		✔	✔
number_type	One of the following values: fixed or mobile. Additional values may be added in the future.		✔	✔
matches_postal	This is true if the phone number prefix is commonly associated with the shipping postal code. It is false if the prefix is not associated with the postal code.		✔	✔
Billing address				
is_postal_in_city	This field is true if the postal code provided with the address is in the city for the address. The field is false when the postal code is not in the city.		✔	✔
latitude	The approximate latitude associated with the address.		✔	✔
longitude	The approximate longitude associated with the address.		✔	✔
distance_to_ip_location	The distance in kilometers from the address to the IP location.		✔	✔
is_in_ip_country	This field is true if the address is in the IP country. The field is false when the address is not in the IP country.		✔	✔
Billing phone				
country	A two-character ISO 3166-1 country code for the country associated with the billing phone number.		✔	✔
is_voip	This is true if the billing phone number is a Voice over Internet Protocol (VoIP) number allocated by a regulator. It is false if the billing phone number is not a VoIP number allocated by a regulator.		✔	✔
network_operator	The name of the original network operator associated with the billing phone number.		✔	✔
number_type	One of the following values: fixed or mobile. Additional values may be added in the future.		✔	✔
matches_postal	This is true if the phone number prefix is commonly associated with the billing postal code. It is false if the prefix is not associated with the postal code.		✔	✔

minFraud data inputs

Input data field name	Input data field description	minFraud services comparison by data field: minFraud Score	minFraud Insights	minFraud Factors
Device				
ip_address	The IP address associated with the device used by the customer in the transaction.	✔	✔	✔
user_agent	The HTTP “User-Agent” header of the browser used in the transaction.	✔	✔	✔
accept_language	The HTTP “Accept-Language” header of the device used in the transaction.	✔	✔	✔
session_age	The number of seconds between the creation of the user’s session and the time of the transaction.	✔	✔	✔
session_id	An ID that uniquely identifies a visitor’s session on the site.	✔	✔	✔
Event				
transaction_id	Your internal ID for the transaction.	✔	✔	✔
shop_id	Your internal ID for the shop, affiliate, or merchant this order is coming from.	✔	✔	✔
time	The date and time the event occurred.	✔	✔	✔
type	The type of event being scored. See https://dev.maxmind.com/minfraud/ for valid types.	✔	✔	✔
party	The party submitting the transaction, either agent or customer.	✔	✔	✔
Account				
user_id	A unique user ID associated with the end-user in your system.	✔	✔	✔
username_md5	An MD5 hash as a hexadecimal string of the username or login name associated with the account.	✔	✔	✔
Email				
address	This field must be either be a valid email address or an MD5 of the lowercase email used in the transaction.	✔	✔	✔
domain	The domain of the email address used in the transaction.	✔	✔	✔
Billing				
first_name	The first name of the end user as provided in their billing information.	✔	✔	✔
last_name	The last name of the end user as provided in their billing information.	✔	✔	✔
company	The company of the end user as provided in their billing information.	✔	✔	✔
address	The first line of the user’s billing address.	✔	✔	✔
address_2	The second line of the user’s billing address.	✔	✔	✔
city	The city of the user’s billing address.	✔	✔	✔
region	The ISO 3166-2 subdivision code for the user’s billing address.	✔	✔	✔
country	The two character ISO 3166-1 alpha-2 country code of the user’s billing address.	✔	✔	✔
postal	The postal code of the user’s billing address.	✔	✔	✔
phone_number	The phone number without the country code for the user’s billing address.	✔	✔	✔
phone_country_code	The country code for phone number associated with the user’s billing address.	✔	✔	✔
Shipping				
first_name	The first name of the end user as provided in their shipping information.	✔	✔	✔
last_name	The last name of the end user as provided in their shipping information.	✔	✔	✔
company	The company of the end user as provided in their shipping information.	✔	✔	✔
address	The first line of the user’s shipping address.	✔	✔	✔

minFraud data inputs

Input data field name	Input data field description	minFraud services comparison by data field: minFraud Score	minFraud Insights	minFraud Factors
Shipping (continued)				
address_2	The second line of the user's shipping address.	✔	✔	✔
city	The city of the user's shipping address.	✔	✔	✔
region	The ISO 3166-2 subdivision code for the user's shipping address.	✔	✔	✔
country	The two character ISO 3166-1 alpha-2 country code of the user's shipping address.	✔	✔	✔
postal	The postal code of the user's shipping address.	✔	✔	✔
phone_number	The phone number without the country code for the user's shipping address.	✔	✔	✔
phone_country_code	The country code for phone number associated with the user's shipping address.	✔	✔	✔
delivery_speed	The shipping delivery speed for the order. See https://dev.maxmind.com/minfraud/ for valid values.	✔	✔	✔
Payment				
method	The payment method associated with the transaction. See https://dev.maxmind.com/minfraud/ for valid values.	✔	✔	✔
processor	The payment processor used for the transaction. See https://dev.maxmind.com/minfraud/ for valid values.	✔	✔	✔
was_authorized	The authorization outcome from the payment processor.	✔	✔	✔
decline_code	The decline code as provided by your payment processor.	✔	✔	✔
Credit card				
issuer_id_number	The first 6 digits of the credit card number.	✔	✔	✔
last_4_digits	The last four digits of the credit card number.	✔	✔	✔
token	A token uniquely identifying the card.	✔	✔	✔
bank_name	The name of the issuing bank as provided by the end user.	✔	✔	✔
bank_phone_country_code	The phone country code for the issuing bank as provided by the end user.	✔	✔	✔
bank_phone_number	The phone number, without the country code, for the issuing bank as provided by the end user.	✔	✔	✔
avs_result	The address verification system (AVS) check result, as returned to you by the credit card processor.	✔	✔	✔
cvv_result	The card verification value (CVV) code as provided by the payment processor.	✔	✔	✔
was_3d_secure_successful	Whether the outcome of 3-D Secure verification (e.g. Safekey, SecureCode, Verified by Visa) was successful.	✔	✔	✔
Order				
amount	The total order amount for the transaction before taxes and discounts.	✔	✔	✔
currency	The ISO 4217 currency code for the currency used in the transaction.	✔	✔	✔
discount_code	The discount code/s applied to the transaction.	✔	✔	✔
affiliate_id	The ID of the affiliate where the order is coming from.	✔	✔	✔
subaffiliate_id	The ID of the sub-affiliate where the order is coming from.	✔	✔	✔
referrer_uri	The URI of the referring site for this order.	✔	✔	✔
is_gift	Whether order was marked as a gift by the purchaser.	✔	✔	✔
has_gift_message	Whether the purchaser included a gift message.	✔	✔	✔
Shopping cart				
category	The category of the item.	✔	✔	✔

minFraud data inputs

Input data field name	Input data field description	minFraud services comparison by data field		
		minFraud Score	minFraud Insights	minFraud Factors
Shopping cart (continued)				
`item_id`	Your internal ID for the item.	✔	✔	✔
`quantity`	The quantity of the item in the shopping cart.	✔	✔	✔
`price`	The per-unit price of this item in the shopping cart.	✔	✔	✔
Custom inputs				
`Custom input data fields`	Custom inputs are available to users of all of the minFraud services for use with custom rules and for display on the minFraud transaction review screen. Custom inputs all have a data type, a human readable label, and a parameter key used in the API requests.	✔	✔	✔

For more information, contact your MaxMind representative or email sales@maxmind.com.

You can also visit us online, and explore our minFraud service plans and pricing.