



Account Opening Express API 1.1

Source Development Guide

Document History

Date	Changes
11 November 2025	Update: Update wording on ERM entries
6 May 2025	Update: API source documentation for email.domain_creation_date; Overview updated to show requirements added for phone, email and IP.
11 December 2024	Update: Included disclaimer for usage of Identity Risk Model
10 October 2024	Update: Included ERM; Branding update to remove Ekata and reflect Mastercard

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Account Opening Express API 1.1 Overview

To establish best practices of API requests, this document should be used with the associated Integration Guide. The Integration Guide provides additional accepted formats for the following:

- Account signup ID and time (both are required)
- Phone (required if no email is present)
- Email address (required if no phone is present)
- IP address (required)

Account Opening Express API assesses the overall risk of an applicant for a new account. Using an IP address and phone number and/or email address, the API returns 15 highly predictive identity verification features from Ekata's Identity Graph and Identity Network to assist in faster, smarter decisions during customer sign-up flows.



Account Opening Express API 1.1

Query Parameters

All parameters are string unless noted.

Query Parameters	Description
account_signup_id <i>required</i>	Desc: The identifier associated with the account sign-up. Please use the same identifier when submitting another query for the same account sign-up.
account_signup_time <i>required</i>	Desc: Timestamp must be in UTC time zone and date format. See the Integration Guide for additional information
email_address <i>required</i>	Format requirement: emailaddress@domain.topleveldomain Example: email_address=waidong@gmail.com Desc: The email address of the person. Note: This field is required only if phone is not provided. See the Integration Guide for additional information.
phone <i>required</i>	Desc: The phone number in E.164 or local format. Note: This field is required only if email is not provided. See the Integration Guide for additional information.
phone.country_hint	Example: phone.country_hint=GB Desc: The ISO-3166 alpha-2 country code associated with the phone number. See the Integration Guide for additional information.
ip_address <i>required</i>	IPv4 and IPv6 are the only valid IP versions accepted. Desc: The IP address associated with the event.



Responses

[200]

Response Schema: application/json

Email Checks

Signals	Description
email.domain_creation_date	<i>string or null</i> The date that the email domain was registered. Example: Gmail domain is dated to 2005-08-26 (YYYY-MM-DD)
email.first_seen_days	<i>integer or null <int64></i> Count of days since the email address was first observed in Ekata's Identity Network. If the email address has not been observed before, first_seen_days will be 0.
email.valid	<i>boolean or null</i> True if the email address is valid.
email.risk_score	<i>number <double> [0 .. 1]</i> Highly performant risk score that assesses the risk level of an email address. The score is derived from a model that leverages features from the Identity Network and new features on email tumbling detection, email linkages to other PII elements, and a new disposable domain list service. A number between 0 and 1 rounded to three decimal places. To return a score, the only required input is an email address. To have the best performance, IP address, phone, or address is recommended.
email.mailbox_velocity	<i>integer <int64> [0 .. ∞]</i> Returns an integer value for the velocity (frequency) a mailbox has been seen in the past 180 days. A mailbox is the un-tumbled name part of an email address. E.g., johndoe@gmail.com, john.doe@gmail.com, and johndoe+123abc@gmail.com all have the same mailbox.
email.is_disposable	<i>boolean or null</i> True if the email domain is disposable. Disposable emails are generally associated with fraudulent activities. If true, this is one of the strongest risk indicators and the transaction should be flagged for further review.
email.velocity	<i>integer or null</i> Count of times the email has been observed in Ekata's Identity Network over the past 90 days. If the email has not been observed in the network in the past 90 days, velocity will be 0.



Signals	Description
email.volatility	<i>integer or null</i> The greatest number of observed pairings between the input email address and any of three identity elements—physical address, phone number, and IP address—observed in Ekata's Identity Network over the past 90 days. If the email has not been observed with another identity element in the past 90 days, volatility will be 0.

IP Checks

Signals	Description
ip.risk_score	<i>string or null <double> [0 .. 1] ^0\.[0-9]{1,3}/1\.</i> 0 Comprehensive risk score associated with an IP address, with a higher score indicating a riskier IP address. A number between 0 and 1 rounded to three decimal places.
ip.geolocation_country_code	<i>string or null</i> The ISO-3166 alpha-2 country code associated with the geolocation of the individual's IP address. See the Integration Guide for additional information
ip.velocity	<i>integer or null <int64></i> Count of times the IP has been observed in Ekata's Identity Network over the past 90 days. If the IP has not been observed in the network in the past 90 days, velocity will be 0.
ip.volatility	<i>integer or null <int64></i> The greatest number of observed pairings between the input IP address and any of three identity elements—physical address, phone number, and email address—observed in Ekata's Identity Network over the past 90 days. If the email has not been observed with another identity element in the past 90 days, volatility will be 0.
ip.phone_distance	<i>integer or null <int64></i> The distance (in miles) between the IP address and the closest physical address associated with the phone number.



Phone Checks

Signals	Description
phone.line_type	<i>string or null</i> Enum: "non-fixed-VoIP" "premium" "voicemail" "landline" "fixed-VoIP" "toll-free" "other" "mobile" The line type of the phone number • landline - Traditional wired phone line • fixed-VoIP - VOIP-based fixed line phones • mobile - Wireless phone line • voicemail - Voicemail-only service • toll-free - Callee pays for call • premium - Caller pays a premium for the call—e.g., 976 area code • non-fixed-VoIP - Skype, for example • other - Anything that does not match the previous categories
phone.carrier	<i>string or null</i> The company that provides voice and/or data services for the phone number. Carriers are returned at the MVNO level.
phone.email.first_seen_days	<i>integer or null <int64></i> Count of days since the combination of phone and email was first observed in Ekata's Identity Network. If that combination has not been observed before, first_seen_days will be 0.
phone.velocity	<i>integer or null <int64></i> Count of times the phone has been observed in Ekata's Identity Network over the past 90 days. If the phone has not been observed in the network in the past 90 days, velocity will be 0.

Scores

Signals	Description
identity_network_score	<i>number <double> [0 .. 1]</i> Comprehensive network score built on behavioral insights such as velocity, popularity, volatility, and age of an attribute, with a higher score indicating a riskier account sign-up. A number between 0 and 1 rounded to three decimal places.
identity_risk_score	<i>integer <int64> [0 .. 500]</i> Comprehensive identity risk score with a higher score indicating a riskier account sign-up.



Request

GET

/1.1/account_opening_express

Request Sample

cURL

URL

```
curl --get -H "Authorization: Bearer <API_KEY>"
'https://api.ekata.com/1.1/account_opening_express' \
--data-urlencode 'account_signup_id= 95285489a80b059a7f0be7147ba211f1' \
--data-urlencode 'account_signup_time= 2020-12-31 13:45' \
--data-urlencode 'phone= 67340062' \
--data-urlencode 'email_address= martinchang@gmail.com' \
--data-urlencode 'ip_address= 54.190.251.42'
```

Response Sample: 200

```
{
  "email.domain_creation_date": "2011-06-29",
  "email.is_disposable": false,
  "email.first_seen_days": 234,
  "email.risk_score": 0.23,
  "email.mailbox_velocity": 4,
  "email.velocity": 10,
  "email.volatility": 4,
  "ip.risk_score": 0.117,
  "ip.geolocation_country_code": "US",
  "ip.velocity": 16,
  "ip.volatility": 8,
  "ip.phone_distance": 150,
  "phone.line_type": "non-fixed-voip",
  "phone.carrier": "Ekata Telco",
  "phone.first_seen_days": 127,
  "phone.velocity": 14,
  "identity_network_score": 0.364,
  "identity_risk_score": 375
}
```



Error Handling

Ekata uses conventional HTTP response codes to indicate success or failure of a request. Codes in the 2xx range indicate a successful response. Codes in the 4xx range indicate an error that resulted from the API request. Codes in the 5xx range indicate an error within Ekata's system. Contact support@ekata.com for help on errors that can't be resolved.

HTTP Code	Error Name	Error Message(s)	Likely Cause
401 Unauthorized	AuthError	invalid-auth-token	API key is not provided in the API request.
402 Payment Required	QuotaExceededError	quota-exceeded	API key has exceeded its lifetime quota of requests.
403 Forbidden	AuthError	action-unauthorized	Configuration issue on Ekata's end or invalid input sent.
403 Forbidden	AuthError	invalid-auth-token	API key provided is invalid.
403 Forbidden	AuthError	ip-blocked	API request is from an IP address that isn't on the permitted IPs list.
403 Forbidden	AuthError	token-archived	API key has been archived.
403 Forbidden	AuthError	token-disabled	API key is not valid yet.
403 Forbidden	AuthError	token-expired	API key has expired.
404 Not Found	InvalidResourceURI	Invalid resource URI	API request has been made to an invalid URI/endpoint
429 Too Many Requests	-	-	API key has exceeded its rate limit.
500 Internal Server Error	InternalError	internal-error	Internal error on Ekata's end.

How to Respond to Error Codes

- 4xx error code is returned, review and correct the input.
- 429 error code is returned, the call will *not* automatically retry the query. Retry requests once the rate of 429 responses has returned to normal.

For Account Opening Express API, it is recommended to configure timeouts at 400ms.



Disclaimers

This model is designed to be an informational tool only. This model is provided as a rough estimate of authentication-based risk decisioning performance. The analysis performed by this model is a series of general estimates which are based upon the underlying information and assumptions now available. That information may change over time, and the analysis would need to be updated to reflect those changes for the analysis to be useful. The assumptions regarding authorization rates are hypothetical and there can be no guarantee that they will be achieved. Actual results may vary substantially from the figures shown. Mastercard accepts no responsibility for any losses arising from any use of or reliance upon any calculations or conclusions reached using this Model.

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