**Status**

**API Technical Specification**

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# **Introduction**

Open Insurance is a concept that aims to create an open architecture for insurance companies to work together to improve the products delivered to their customers. For this purpose, Open Insurance uses the concept of sharing its customers' data, when there is explicit customer permission for such sharing. In this way, policyholders would receive the best product according to their profile and needs.

In this document, we discuss how to enable this data sharing through API, at this first moment, still public about the participating societies. In the description of each API, the domains of each data group are considered, as well as the documentation of standardization of calls to APIs.

# **Goal**

/status

These available APIs are intended to display and share non-sensitive data of the companies participating in Open Insurance, making available to the public information about their service channels and the characteristics of the products and services they offer.

\*Use ALT+left or ALT+right to navigate between links

# **API – Admin**

Admnistrative APIs are resources that can only be consumed by the evaluation and the provided (by the insurance companies) services quality control directory.

## Metrics

GET /admin/v1/metrics

**Overview**

This endpoint enables the directory to consult operational statistics of the APIs made available by the insurance companies in order to evaluate the quality of the provided services to the final consumer. For compatibility purposes, the same Open Banking standard is kept.

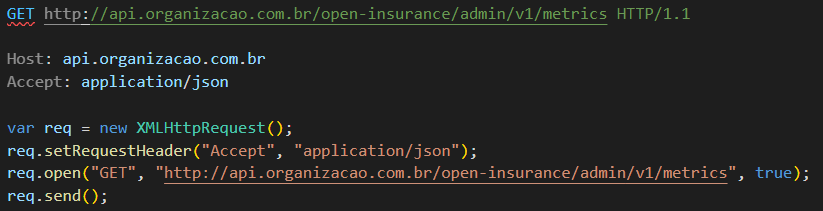
**Entry Parameters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Origin** | **Type** | **Mandatory** | **Description** |
| period | Query | [Enum AdminMetricsPeriod](#EnumAdminMetricsPeriod) | No | The period to be taken back. If not informed, the standard shall be ALL. |

**Response**

|  |  |  |  |
| --- | --- | --- | --- |
| **Status** | **Meaning** | **Description** | **Schema** |
| 200 | OK | Success | [ResponseMetricsList](#ResponseMetricsList) |

**Request example:**

**Return example:**

{

    "data": {

      "requestTime": "2022-04-18T19:24:40.842Z",

      "availability": {

          "uptime" : {

              "generalUptimeRate" : "",

              "endpoints" : [

                  {

                      "url" : "",

                      "uptimeRate" : ""

                  }

              ]

          },

          "downtime" : {

              "generalDowntime" : 0,

              "scheduledOutage" : 0,

              "endpoints" : [

                  {

                      "url" : "",

                      "partialDowntime" : 0

                  }

              ]

          }

      },

      "invocations": {

        "unauthenticated": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "highPriority": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "mediumPriority": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "unattended": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

      },

      "averageResponse": {

        "unauthenticated": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "highPriority": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "mediumPriority": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

        "unattended": {

          "currentDay": 0,

          "previousDays": [

            0

          ]

        },

      },

      "averageTps": {

        "currentDay": 0,

        "previousDays": [

          0

        ]

      },

      "peakTps": {

        "currentDay": 0,

        "previousDays": [

          0

        ]

      },

      "errors": {

        "currentDay": 0,

        "previousDays": [

          0

        ]

      },

      "rejections": {

        "currentDay": 0,

        "previousDays": [

          0

        ]

      }

    },

    "links": {

      "self": "string"

    },

    "meta": {}

  }

# **Schemas**

**Errors**

|  |  |  |
| --- | --- | --- |
| **Property** | **Code** | **Definition** |
| >>code | String | Specific endpoint error code. |
| >>title | String | Legible human title of this specific error. |
| >>detail | String | Legible human description of this specific error. |
| meta | String | Meta information referring to the requested API. |

**ResponseDiscoveryStatusList**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| Data | object | Yes |  |
| >> Status | [DiscoveryStatus](#DiscoveryStatus) | Yes | API status code list |
| Links | [LinksPaginated](#LinksPaginated) | Yes |  |
| Meta | [MetaPaginated](#MetaPaginated) | Yes |  |

**Enum AdminMetricsPeriod**

|  |  |  |
| --- | --- | --- |
| **Property** | **Code** | **Definition** |
| Period | CURRENT | Current Metrics |
| Period | ALL | All Available Periods Metrics. |

**BranchAvailability**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Description** |
| standards | Array | Yes | Dependency standard availability list by weekdays. |
| weekday | Enum WeekDay | Yes | In text format, following the presented domain, must contain the weekdays. |
| openingTime | TimeString | Yes | Standard Dependency’s service opening time. (A string that represents the time according to RFC-3339 specification, always with the use of UTC time format. E.g., '10:00:57Z') |
| closingTime | TimeString | Yes | Standard Dependency’s service closing time. (A string that represents the time according to RFC-3339 specification, always with the use of UTC time format. E.g., '16:00:57Z') |
| exception | string | Yes | All the exceptions to the nonservice must be recorded, in text field. E.g., “Except for city, national or state holidays”. |
| isPublicAccessAllowed | boolean | No | Indicates if the Dependency installment has access restricted to customers. E.g., “false” (restricted). |

**Enum StatusCode**

|  |  |  |
| --- | --- | --- |
| **Property** | **Value** | **Description** |
| Status | OK | The implementation is totally functional. |
| Status | PARTIAL\_FAILURE | One or more endpoints are unavailable. |
| Status | UNAVAILABLE | The complete implementation is unavailable. |
| Status | SCHEDULED\_OUTAGE | A scheduled outage is ongoing. |

**ResponseDiscoveryOutagesList**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| data | object | Yes |  |
| outages | [DiscoveryOutage](#DiscoveryOutage) | Yes | List of planned outages |
| links | [LinksPaginated](#LinksPaginated) | Yes |  |
| meta | [MetaPaginated](#MetaPaginated) | Yes |  |

**DiscoveryStatus**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Restriction** | **Definition** |
| code | [StatusCode](#EnumStatusCode) | Yes |  | Current API’s condition. |
| explanation | string | Yes | It shall be mandatory to fill out if the code has a value that is not OK. | Provides an explanation of the current outage that might be displayed to a final customer. |
| detectionTime | DateTimeString | No | It shall be mandatory to fill out if the property code is PARTIAL\_FAILURE or UNAVAILABLE. | Date and time when the current outage was detected. |
| expectedResolutionTime | DateTimeString | No | It shall be mandatory to fill out if code is a value that is not OK. | Date and time for when the complete service must be continued. (if known) |
| updateTime | DateTimeString | No |  | Date and time for when this status is updated for the last time by the data holder. |
| unavailableEndpoints | array | No |  | Endpoints with unavailability. |

**DiscoveryOutage**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| outageTime | DateTimeString | Yes | Planned date and time of unavailability start. |
| duration | DurationString | Yes | Expected duration of unavailability. |
| isPartial | boolean | No | Flag indicating whether the unavailability is partial (reaching only some endpoints) or total (reaching all endpoints). |
| explanation | String | Yes | Explanation of the reasons for the unavailability. |
| unavailableEndpoints | array | No | Endpoints with unavailability |

**LinksPaginated**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Type** | **Definition** | **Requirement** | **Restriction** |
| self | URIString | Complete URI that generated the current response. | Mandatory |  |
| first | URIString | First page URI that led to this results list. | Optional | Mandatory when it is not the first response page |
| prev | URIString | Previous page URI of this results list. | Optional | Mandatory when it is not the first response page |
| next | URIString | Next page URI of this results list. | Optional | Mandatory when it is not the last response page |
| last | URIString | Last page URI of this results list. | Optional | Mandatory when it is not the last response page |

**MetaPaginated**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Type** | **Definition** | **Requirement** | **Restriction** |
| totalRecords | integer | Total number of records in the result | Mandatory |  |
| totalPages | integer | Total number of pages in the result | Mandatory |  |

**ResponseMetricsList**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| data | object | Yes |  |
| » requestTime | DateTimeString | Yes | Date and time the metrics were requested. |
| » availability | [AvailabilityMetrics](#AvailabilityMetrics) | Yes | API availability indexes. |
| » invocations | [InvocationMetrics](#InvocationMetrics) | Yes | Number of calls at each level and priority. |
| » averageResponse | [AverageMetrics](#AverageMetrics) | Yes | Average response time in milliseconds at each level and priority. |
| » averageTps | [AverageTPSMetrics](#AverageTPSMetrics) | Yes | Average transactions per second. |
| » peakTps | [PeakTPSMetrics](#PeakTPSMetrics) | Yes | Maximum number of transactions per second. |
| » errors | [ErrorMetrics](#ErrorMetrics) | Yes | Number of calls that resulted in an error due to the server. |
| » rejections | [RejectionMetrics](#RejectionMetrics) | Yes | Number of calls rejected due to the limits. |
| links | [Links](#Links) | Yes |  |
| meta | [Meta](#Meta) | No |  |

**AvailabilityMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| uptime | object | Yes | Uptime times per endpoint |
| » generalUptimeRate\* | RateString | Yes | Availability fee (considering all services active at the same time). |
| » endpoints | EndpointUptime | Yes | Uptime times per endpoint. |
| downtime | object | Yes | Downtime times per endpoint. |
| » generalDowntime | number | Yes | Number of downtime seconds (considering any downtime api). |
| » scheduledOutage | number | Yes | Number of seconds of scheduled downtime. |
| » endpoints | EndpointDowntime | Yes | Downtime times per endpoint. |

**InvocationMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| unauthenticated | object | Yes | Number of unauthenticated calls. |
| » currentDay | number | Yes | Number of unauthenticated calls in the current day. |
| » previousDays | [number] | Yes | Number of unauthenticated calls in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| highPriority | object | Yes | Number of calls to high priority level. |
| » currentDay | number | Yes | Number of calls in current day for high priority level. |
| » previousDays | [number] | Yes | Number of calls in previous days to high priority level. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| mediumPriority | object | Yes | Number of calls to medium priority level. |
| » currentDay | number | Yes | Number of calls in current day for medium priority level. |
| » previousDays | [number] | Yes | Number of calls in previous days for medium priority level. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| unattended | object | Yes | Number of calls to untracked level. |
| » currentDay | number | Yes | Number of calls in current day for untracked level. |
| » previousDays | [number] | Yes | Number of calls in previous days for untracked level. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**AverageMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| unauthenticated | object | Yes | Average response time in milliseconds for unauthenticated calls. |
| » currentDay | integer | Yes | Average response time in milliseconds for calls in the current day. |
| » previousDays | [integer] | Yes | Average response time in milliseconds for calls in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| highPriority | object | Yes | Average response time in milliseconds for calls to high priority level. |
| » currentDay | integer | Yes | Average response time in milliseconds for calls in the current day. |
| » previousDays | [integer] | Yes | Average response time in milliseconds for calls in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| mediumPriority | object | Yes | Average response time in milliseconds for calls to medium priority level. |
| » currentDay | integer | Yes | Average response time in milliseconds for calls in the current day. |
| » previousDays | [integer] | Yes | Average response time in milliseconds for calls in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |
| unattended | object | Yes | Average response time in milliseconds for calls to the untracked level. |
| » currentDay | integer | Yes | Average response time in milliseconds for calls in the current day. |
| » previousDays | [integer] | Yes | Average response time in milliseconds for calls in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**AverageTPSMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| currentDay | number | Yes | Average number of calls per second in the day. |
| previousDays | [number] | Yes | Average number of calls per second in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**PeakTPSMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| currentDay | Number | Yes | Peak calls per second for the day. |
| previousDays | [number] | Yes | Peak calls per second in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**ErrorMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| currentDay | Number | Yes | Number of calls with error in the current day. |
| previousDays | [number] | Yes | Number of calls with error in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**RejectionMetrics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Definition** |
| currentDay | number | Yes | Number of rejected calls for the current day. |
| previousDays | [number] | Yes | Number of calls rejected in previous days. The first item in the array refers to yesterday, and so on. Must be returned within a maximum of seven days if available. |

**Links**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Description** |
| self | string(uri) | TRUE | Full URI that generated the current response. |
| first | string(uri) | FALSE | URI of the first page that originated this list of results. Restriction - Required when not the first page of the answer |
| prev | string(uri) | FALSE | URI of the previous page of this list of results. Restriction - Required when not the first page of the answer |
| next | string(uri) | FALSE | URI of the next page of this list of results. Restriction - Required when not the last page of the answer |
| last | string(uri) | FALSE | URI of the last page of this results list. Restriction - Required when not the last page of the answer |

**Meta**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Mandatory** | **Description** |
| totalRecords | integer(int32) | TRUE | Total number of records in the result |
| totalPages | integer(int32) | TRUE | Total number of pages in result |
| requestDateTime | string(date-time) | TRUE | Query date and time, as per specification RFC-3339, UTC format. |

# **HTTP Request and Response headers**

**Request Header**

|  |  |  |
| --- | --- | --- |
| **Header name** | **Description** | **Mandatory** |
| Content-Type | Represents the request payload format, by default/default defined as application/json; charset UTF-8. Required for PUT and POST calls. Transmitters may implement handling for other standards, with only standard support being mandatory. | No |
| Accept | Specifies the type of response. If specified, must be set to application/json unless the endpoint explicitly supports another format. If a value not supported by the endpoint is set, HTTP code 406 is returned. If not specified, the default is application/json. | No |
| Accept-Encoding | Specifies the types of encoding (usually compression algorithm) that are supported by the client, with gzip expected to be supported by the transmitters, with the default being the transmission of uncompressed data and this guidance applies to Open Data. | No |
| If-Modified-Since | It conditions the result of the request so that the resource is only sent if it has been updated after the given date. It uses the standard of RFC 7232, section 3.3: If-Modified-Since of the HTTP protocol. | No |
| x-fapi-auth-date | Date the user last logged in with the receiver | Conditional |
| x-fapi-customer-ip-address | The user's IP address if currently logged in with the receiver | Conditional |
| x-fapi-interaction-id | An RFC4122 UUID used as a correlation ID. If provided, the sender must "play" this value in the response header | No |
| Authorization | Default HTTP header. Allows credentials to be provided depending on the type of resource requested | Yes |
| x-idempotency-key | Custom HTTP header. Unique request identifier to support idempotence | Conditional |
| x-jws-signature | Header containing a JWS signature separate from the payload body | Conditional |
| x-customer-user-agent | Indicates the user agent the user uses | Conditional |

**Reply Header**

|  |  |  |
| --- | --- | --- |
| **header name** | **Description** | **Mandatory** |
| Content-Encoding | Header that indicates the type of encoding (usually compression algorithm) that was used to send the response. | No |
| Content-Type | Represents the format of the response payload. It should be application/json unless the requested endpoint supports another format, and this format was requested through the Accept header at the time of the request. | Yes |
| xv | Header that indicates the version of the API implemented by the participating company. Must be filled in completely, for example: xv: 1.0.2 | Yes |
| Retry-after | Header that indicates the time (in seconds) that the client must wait to make a new call attempt. This header must be present when the HTTP return code is 429 Too many requests | No |
| Last-Modified | Reports the date and time the resource was last modified. It uses the standard of RFC 7232, section 2.2: Last-Modified of the HTTP protocol. | No |
| x-jws-signature | Header containing a JWS signature separate from the payload body. | Conditional |
| x-fapi-interaction-id | An RFC4122 UUID used as a correlation ID. The sender must use the same value received in the request for the response header received in the request, if not provided, an RFC4122 UUID must be used. | No |
| x-rate limit | Indicates the limit of requests in the API over time | Conditional |
| x-rate-limit-remaining | Indicates the number of requests remaining | Conditional |
| x-rate-limit-time | Inform the limit time or time to reset this limit | Conditional |

# 

# **HTTP Response Codes**

HTTP response codes should be used as per the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Situation** | **HTTP code** | **Grades** | **POST** | **GET** | **DELETE** |
| Query successfully completed. | 200 OK. | In the case of POST, return 200 only when it does not change the resource | Yes | Yes | No |
| Normal execution. The request was successful. | 201 Created. | The operation results in the creation of a new resource. | Yes | No | No |
| Delete operation completed successfully. | 204 No Content. |  | No | No | Yes |
| The answer has not changed since the last call. | 304 Not Modified |  | No | Yes | No |
| The request was malformed, omitting mandatory attributes, either in the payload or through attributes in the URL. | 400 Bad Request. | The requested operation will not be performed. | Yes | Yes | Yes |
| Missing/Invalid Authentication Header or Invalid Token. | 401 Unauthorized. | The operation was refused due to an authentication issue. | Yes | Yes | Yes |
| Token is scoped incorrectly, or a security policy has been violated. | 403 Forbidden. | The operation was refused due to lack of permission to execute. | Yes | Yes | Yes |
| The requested feature does not exist or has not been implemented. | 404 Not Found. |  | Yes | Yes | Yes |
| The consumer attempted to access the resource with an unsupported method. | 405 Method Not Allowed. |  | Yes | Yes | Yes |
| The request contained an Accept header other than the allowed media types or a character set other than UTF-8. | 406 Not Acceptable. |  | Yes | Yes | Yes |
| Indicates the feature is no longer available. | 410 Gone. |  | Yes | Yes | Yes |
| The operation was refused because the payload is in a format not supported by the endpoint. | 415 Unsupported Media Type. |  | Yes | No | No |
| The request was well formed but could not be processed due to the specific business logic of the request. | 422 Unprocessable Entity. | If applicable to the endpoint, this error is expected to result in an error payload. | Yes | Yes | No |
| The operation was refused because too many requests were made within a certain period or the global limit of concurrent requests was reached. | 429 Too Many Requests. |  | Yes | Yes | Yes |
| An error occurred in the API gateway or in the microservice. | 500 Internal Server Error. | The operation failed. | Yes | Yes | Yes |
| The service is currently unavailable. | 503 Service Unavailable. |  | Yes | Yes | Yes |
| The server was unable to respond in a timely manner. | 504 Gateway Timeout. | Returned if a timeout occurred but a resubmission of the original request is feasible (otherwise use 500 Internal Server Error). | Yes | Yes | Yes |

# **Naming Conventions**

Standard Lower Camel Case is adopted as standard. In addition to following the standard to avoid redundancy of terms and use self-explanatory names.

Ex.:

"userEmailAddress"

"userTelephoneNumber"

# **Common Data Types**

**Properties**

|  |  |  |
| --- | --- | --- |
| **Type** | **Description** | **valid examples** |
| AmountString | - A string representing a monetary value. | "1.37" |
| - A positive, zero or negative number. | "54.85" |
| - Without the currency symbol. | "3456928.98" |
| - With at least 1 and maximum 16 digits before the decimal point. | "-2387.02" |
| - With at least 2 digits (more digits are allowed, but not required). |  |
| - No additional formatting. Ex: Thousand separator. |  |
| Boolean | - Default boolean value. | TRUE |
| FALSE |
| currencystring | - A string representing the currency abbreviation as per ISO-4217 specification. | "BRL" |
| "USD" |
| "EUR" |
| DateTimeString | - A string with date and time according to RFC-3339 specification, always using UTC timezone (UTC time format). | "2020-07-21T08:30:00Z" |
| DurationString | - A string representing a duration period as per ISO-8601 specification. | "P23DT23H" |
| "PT2H30M" |
| Enum | - A string representing a domain of values | "FIRST OPTION" |
| - All possible values ​​are defined. | "OTHER\_EXISTENT\_OPTION" |
| - Values ​​must be in capital letters. |  |
| - White spaces must be replaced by \_. |  |
| - Articles and prepositions must be removed. |  |
| - Must not have accented characters. |  |
| Integer | - Whole numbers. | -1, 0, 1 |
| RateString | - A string that represents a percentage value, having as a reference that 100% is equal to the value 1. | "0.01" |
| - With at least 1 and maximum 16 digits before the decimal point. | "0.1" |
| - With a maximum of 16 digits after the decimal point. | "-0.05" |
| - No additional formatting. Ex: Thousand separator. | "-0.98365" |
| page | the numberthe page being requested. | 3 |
| page-size | Number of records per page | 10 |
| string | - UTF-8 text pattern with no content restriction. | "A random string." |
| TimeString | - A string that represents the time according to RFC-3339 specification, always using the UTC timezone (UTC time format). | "00:39:57Z" |
| URIString | - A string representing a valid URI. | "http://www.google.com.br" |
| CountryCode | - Country code according to the “alpha3” code of ISO-3166. | "BRA" |

|  |  |  |
| --- | --- | --- |
| **Field name** | **Description** | **Value Example** |
| page | the number of the page being requested. | 3 |
| page-size | Number of records per page | 10 |
| IbgeCode | - IBGE Municipality Code. The IBGE Municipal Code Table presents the list of Brazilian municipalities associated with a code composed of 7 digits, the first two referring to the code of the Federation Unit. | "3550308" |
| DateString | - A string with date as per RFC-3339 specification | "2014-03-19" |

# **Pagination**

As standard APIs they can contain the paging feature. This feature is used in case the number of records justifies paging.

When paging, query parameters should be used in the following format:

GET {uri}?page=3&page-size=10

**Paging Rules**

For proper paging operation a maximum page size of 1000 records is required. In case of a request with a quantity greater than what is supported, the code 422 Unprocessable Entity will be returned.

As requested in the August 11, 2021 Tech WG, the default values ​​for page equal to 1 and for page-size equal to 10.

# **Error body**

As requested in the Technology GT of August 11, 2021, the error body must follow the standard of the Open Banking model with the following fields: Object (errors), code, title, detail and meta. Here's the json example of the error body below:

{

"errors": [

{

"code": "string",

"title": "string",

"detail": "string"

}

],

"meta": {

"totalRecords": 1,

"totalPages": 1,

"requestDateTime": "2021-05-21T08:30:00Z"

}

}

# **Non-functional requirements**

**Availability of APIs**

Availability is checked on the GET endpoint /discovery/status, as documented in the Status API item.

The status API will receive the request every 30 seconds with a timeout of 1s. Will be considered as uptime if the return is "OKAY" and Downtime for returns:

* PARTIAL\_FAILURE
* SCHEDULED\_OUTAGE

1. If the request is made between the period of 01:00 and 07:00, the SCHEDULED\_OUTAGE counter starts with 30 seconds added.
2. Each new request adds 30 seconds more to the SCHEDULED\_OUTAGE counter, until a request returns another value, or the request is made after 07:00.

* UNAVAILABLE

1. If the request is made between the period of 07:00 and 01:00.
2. If service does not respond to request.
3. The downtime counter starts with 30 seconds plus.
4. Each new request will add 30 seconds more to the downtime counter, until a request returns OK.

Rules for calculating downtime

* Downtime refers to the period of unavailability within 24 hours, starting and ending at midnight. Any unavailable endpoint being counted.
* Downtime is counted as the total number of simultaneous seconds per request.
* The downtime percentage is calculated by dividing the total seconds counted downtime divided by 86,400 (24 hours in seconds).
* Availability is a result of 100% minus the downtime percentage.
* Errors of the 5xx http error family are counted as outages as they are considered API server errors.

**Not counted as downtime**

* Errors of the 4xx http error family not accounted for, as they are usually receiver failures.
* One downtime per month, for 3h between 01h and 07h, it is necessary to report 7 days in advance to the directory.
* In case of security maintenance, previously approved by the directory.

**Classification of Performance Levels**

Performance will be measured in milliseconds, being measured from receipt of request to response to request.

APIs are classified as:

1. High priority APIs within 95th percentile in 1000ms maximum. (status/outages).
2. Medium priority APIs within the minimum 95th percentile in 1500ms maximum. (Channels/Service Products).
3. Low priority APIs within 95th percentile in maximum 4000ms. (Admin metrics).

**Service Level (SLA)**

To ensure the availability of the APIs and the Open Insurance system, the following availability metrics are adopted:

1. 85% of the time every 24 hours.
2. 95% of the time every 1 month.
3. 99.5% of the time every 3 months.

**Request Limit**

To ensure system usability and establish availability requirement metrics, participating companies must guarantee the minimum limits, with control via IP.

If the requests exceed the limits, these requests may be queued or rejected (Use of HTTP code 429 Too Many Requests). Not impacting availability requirements.

Adopted the SUSEP manual requisition limit standard

* Minimum limit of 250 requests per minute originating from the same IP address.
* Minimum limit of 150 requests per second, globally.

**\*Central Structure identification verification by Metrics APIs**

According to the Technology WG, a central structure suggestion model should be defined to identify calls made to the metrics APIs. As a suggestion, this control can be done at the gateway layer of the APIs, receiving calls from the defined host.

# **Safety**

According to the security WGs, headers were required to increase security when calling the APIs. The identification of the headers and their respective functions follows.

Cache-Control: Cache control to prevent sensitive information from being cached.

Content-Security-Policy: Field for protection against drag and drop-style clickjack attacks.

Content-Type: Specify the content type of the response.

Strict-Transport-Security: Field to require HTTPS connections and protect against spoofed certificates.

X-Content-Type-Options: Field to prevent browsers from performing MIME detection and improperly interpreting responses as HTML.

X-Frame-Options: Field indicates whether the browser should render a frame.

**Changelog**

|  |  |  |  |
| --- | --- | --- | --- |
| **CHANGELOG** | | | |
| Data | Página Alterada | Alteração (De > para) | Responsável |
| 04/02/2022 | 11 | Adição do pattern de validação no swagger | Peterson Luciano |
| 19/08/2022 | 5 | Exemplo de “requestTime”: “string” para ”2022-04-18T19:24:40.842Z” | Vinícius Graciliano |
| 14/02/2023 | 5 | URL para requisições HTTP refatorado | Pedro  Araujo |