Data Standards Body

Technical Working Group

Decision Proposal 164 - Endpoint Metrics

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Context

The current Get Metrics API, as part of the Admin APIs in the CDR standards, returns data about operational statistics of data holder CDR compliant implementations. This is orientated to the non-functional requirements of the CDR regime. It currently does not support metrics for a specific API endpoint. As the CDR regime expands it is expected that specific endpoint metrics will be required to support dashboards, reporting and to get analysis of industry specific APIs. This proposal discusses options on supporting endpoint metrics.

More context on the purpose of this consultation and the previous feedback leading to the current options being proposed can be found in the previous consultation on the strategy for CDR metrics. Details of this consultation can be found at:

https://github.com/ConsumerDataStandardsAustralia/standards/issues/145Decision To Be Made

Decision To Be Made

Are endpoint API metrics required to be supported and if so, what is the best alternative to add them to existing Get Metrics interface.

Identified Options

This section outlines the options that have been identified for endpoint metrics. Note that, for options 1 to 3, the input parameters would include:

Parameter	Description
period	The period of metrics to be requested. Values can be CURRENT (meaning metrics for current day), HISTORIC (meaning metrics for previous days or months) or ALL. If absent the default is ALL.

And the details of the API endpoint metrics to be returned is listed below.

Metric	Description
availability	Percentage availability of the API in the CDR platform over time
performance	Percentage of API calls within the performance thresholds
invocations	Number of API endpoint calls
averageResponse	Average endpoint response time in seconds
averageTps	Transactions per second over time
peakTps	Maximum recorded transactions per second over time
errors	Number of calls resulting in error due to server execution over time
rejections	Number of endpoint calls rejected

Option 1 - Create a new metrics endpoint API (bulk)

This option creates a new endpoint in the Admin API's and returns all metrics in single API call.

GET /admin/metrics/endpoint

Would return all supported endpoints metrics.

E,g ResponseMetricsAPIList

Option 2 - Create a new metrics endpoint API to retrieve individual endpoint metrics

This option creates a new endpoint in the admin API's and support for endpoint metrics for a specific API.

GET /admin/metrics/endpoint/{operationId}

e.g GET /admin/metrics/endpoint/getCustomer

Option 3 - Modify existing Get Metrics API to include endpoint metrics

This option uses the existing Get Metrics API but adds an additional data object to be returned which includes endpoint metrics.

Include API Metrics object in new version of GetMetrics (v3). Update schema to include ResponseMetricsListV3 and new object EndpointMetrics list.

```
    "ResponseMetricsListV3": {

      "type": "object",

      "required": [

        "data",
```

```
     "links"
   ],
   "properties": {
     "data": {
       "type": "object",
…
         "endpoints": {
           "$ref": "#/definitions/EndpointMetricsList"
...
         }
       }
     },
```

Option 4 – Don't implement endpoint metrics and keep current metrics API as is.

This option is to leave the current metrics as is and not introduce endpoint metrics.

Current Recommendation

The current recommendation is for Option 2 and alternatively implement both Options 1 and 2. This would provide the flexibility to invoke Get Metrics for a single API or return metrics for all API's. This might place additional burden on implementors. However, from a reporting perspective and implementing dashboard type functionalities provides the most flexibility.

Implementation Considerations

All options will require additional implementation for current data holders except for option 4, which represents no change.

Feedback is invited on the likely lead time for implementation that would be required, for each of the options.