Prometheus
DDS + Billing
API

Brief description

Prometheus node should be the fully functional node with external API interface which allows users to get any related information such as any file stored into it. This node should allow to store data only in the case Billing allowed to do so. So, the main case scenario is the following:

➢ Prometheus requests to upload a file
➢ DDS stores file locally and calls Billing API to calculate the costs
➢ Billing connects to 3 other nodes to confirm the calculations
➢ DDS returns the cost of the storage
➢ As soon as payment processed, Prometheus calls the Billing with payment processed data
➢ Billing receives confirmation the invoice was paid
➢ Billing tells back to the DDS to confirm upload
➢ DDS stores file in the network

Prometheus DDS API

Description

DDS Api could be two types:
➢ Internal API – which is used for inter-node communications
➢ External API – which is used for user interacting with the DDS network

External API

Description

The external DDS API could be done using HTTP protocol with [json:api](#) specification.

Methods

Upload a new file

Request

HTTP Method: POST
HTTP Path: /files
JSON Data:
- ➔ type: file
- ➔ attributes:
    - ◆ name: <filename>
    - ◆ data: <base64_encoded_file_data>
    - ◆ duration: <duration_of_storage_in_seconds> (optional: default is one month)
    - ◆ additional: <map of additional attributes for the file, embeded metadata>

Response

Payment needed:

HTTP Status: 402 Payment Required
JSON Data:
- ➔ type: file
- ➔ id: Generated file UUID
- ➔ attributes:
    - ◆ name: <string, filename>
    - ◆ price: <double, price in tokens>
    - ◆ duration: <int, duration for store>
    - ◆ additional: <map, additional attibutes>
- ➔ links:
    - ◆ self: <link_to_this_object>

Extend storage term

Request

HTTP Method: PATCH
HTTP Path: /files/<id>
JSON Data:
- ➔ type: file
- ➔ attributes:
    - ◆ duration: <int, new duration of storage in seconds>
    - ◆ additional: <map of additional attributes for the file to change>

Response

Payment needed:

HTTP Status: 402 Payment Required
JSON Data:
- ➔ type: file
- ➔ id: Generated file UUID
- ➔ attributes:
  - ◆ name: <string, filename>
  - ◆ price: <double, price in tokens>
  - ◆ duration: <int, duration for store>
  - ◆ additional: <map, additional attibutes>
- ➔ links:
  - ◆ self: <link_to_this_object>

Get the file

HTTP Method: GET
HTTP Path: /files/<id>

HTTP Status: 200 OK
Header Content-Length: Showing the size of the file
Response Body: Binary Data

Get the file info

HTTP Method: GET
HTTP Path: /files/<id>/info

HTTP Status: 200 OK
JSON Data:
- ➔ type: file
- ➔ id: file UUID
- ➔ attributes:
  - ◆ name: <string, filename>
  - ◆ price: <double, price in tokens>
  - ◆ duration: <int, duration for store>
  - ◆ additional: <map, additional attibutes>
- ➔ links:
  - ◆ self: <link_to_this_object>

Prometheus Billing API

Description

Billing Api could be two types:
- ➢ Internal API – which is used for inter-node communications
- ➢ External API – which is used for user interacting with the Billing

External API

Description

The external DDS API could be done using HTTP protocol with [json:api](#) specification.

Methods

Payment successful

Request

HTTP Method: POST
HTTP Path: /payments
JSON Data:
- ➔ type: file
- ➔ attributes:
  - ◆ file_id: <uuid, ID of file>
  - ◆ status: <success | error>
  - ◆ amount: <double, paid amount>

Response

HTTP Status: 201 Created
Header: Location: /payments/<payment_id>
JSON Data:
- ➔ type: payment
- ➔ id: payment UUID
- ➔ attributes:
  - ◆ file_id: <uuid, file id>
  - ◆ status: <success | error>
  - ◆ amount: <double, price in tokens>
- ➔ links:
  - ◆ self: <link_to_this_object>

Payment needed in month

HTTP Method: GET
HTTP Path: /payments/local?from=<yyyymmdd>&to=<yyyymmdd>

Response

HTTP Status: 200 OK
JSON Data:
- ➔ type: local_payment
- ➔ attributes:
  - ◆ amount: <double, amount to be paid>
  - ◆ size: <int, storage size in bytes>
- ➔ links:
  - ◆ self: <link_to_this_object>