Minutes of the second HTTP REST TAPE API meeting (30th of April 2021)

Indico link and useful documents

- This meeting: https://indico.cern.ch/event/1033942/

- Previous meeting (16th of April 2021): https://indico.cern.ch/event/1033956/

- Document on which we based our discussions on:
  https://codimd.web.cern.ch/s/oQ3b9E0hm#

Goals we wanted to achieve for this meeting

- Discussion about conflict resolution process
- Agree on a common REST API discovery mechanism
- Agree on common limitations to impose to the users of the API and their exposure
- Agree on common authentication mechanisms

Q&A about the previous meeting

FILEINFO activity

1st question: Should this command be asynchronous or synchronous ?

We all agreed that the `FILEINFO` activity will be **asynchronous** as the other ones. The main reason is that it is for simplicity.

The future version of the API will probably provided a synchronous mode. To be seen…

2nd question: Should `FILEINFO` accept directories and do a recursive call for each files in the directory ?

No, it will accept a list of files. To be discussed in the future: what do we do if a directory is given ?

Conflict resolution process

This item covered the fact that we are talking about technical stuff, and it is not trivial to reach a consensus.

The idea of our common API is **NOT** to put one of our stakeholders in a bad situation. We are currently discussing functionalities, use cases, but not implementation details. If a functionality appears to be impossible to implement for one of us (EOSCTA, dCache, StoRM), we will remove it from the common API.

If such a situation happens, the stakeholder should inform the others as soon as possible.

REST API discovery mechanism

We all agree to use the `.well-known` mechanism. The content and the URL to access it have to be defined.

For the version 1 of the API, this well-known mechanism will only contain the API endpoint the client has to reach to talk to it.

Here is a link that contains the standard definition of the `Well-Known Uniform Resource Identifiers (URIs)` mechanism: https://tools.ietf.org/html/rfc8615

Limitations to impose to the users of the API and their exposure

After multiple discussions, we finally agreed that, **for the version 1**, we do not want to have any common limitation imposed to the users of the API.

We will actually see, from the usage of the version 1 of the API, if we need to define such limitations in common. Each storage providers will implement their own limitations according to their needs in term of protection and performances.

Authentication mechanisms

The authentication mechanisms we all want to support at minimum are the following: - x509+VOMS - VO-issued token (WLCG JWT tokens) - Storage-issued token (aka macaroon)

To be discussed in the future

- API discovery mechanism: what content, what URL ? We can inspire from the standard: https://tools.ietf.org/html/rfc8615
- Errors handling for our API, ideas can be inspired from this link: https://tools.ietf.org/html/rfc7807

Food for thought for the version 2 of the API

From the previous meeting (16th of April 2021):
- Support for synchronous operations
- PAUSE, UNPAUSE bulk-requests

Common limitations to impose to the users

- In flight staging at the same time
- Max number of entries in a bulk request
- Minimum time between two polls (GET)
- Maximum time for which we will keep the bulk request on our system (automatic cleaning). Defined by the client and this value will have a maximum allowed.

New organization for the meetings

Every **two weeks**, a recurring meeting to discuss this API will take place on **fridays at 3pm**.

Next meeting will be the **28th of May 2021** Holidays + CHEP. The agenda will be sent by Cedric soon.

A codimd document will be created and be sent to each participant at the latest the monday before the meeting. This will allow each stakeholder to work ahead of the meeting so that we are ready to share our point of views and reach a common agreement.