TAP-fostered AuthN

IVOA Interop -- Paris 2019

DAL / Apps / GWS / Reg

History and Context
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Goals

- Approve TAP 1.1

- To support A&A in the IVOA in the same, non-intrusive way across all standards

History and Context

- Discussions about authentication and TAP began in Shanghai, 2017

- Continued through Santiago, Victoria, College Park, Trieste… now here.

Capabilities and Interfaces

- Authentication tags placed inside the Interfaces of a Capability

```
INTERFACE {
    ACCESS_URL = http://www.example.org/tap
    SECURITY_METHOD = X509-CLIENT-CERTS
    SECURITY_METHOD = COOKIE
}
```

Basic Authentication Problem

- Problem: Basic Auth needs separate access URLs

- This means two interfaces for one capability
- Awkward for clients to parse capabilities.

- No single URL for TAP
- can't simply append 'sync' and 'async' to a base URL.

2 Interfaces for 1 Capability

```
INTERFACE {
    ACCESS_URL = http://www.example.org/tap
    SECURITY_METHOD = X509-CLIENT-CERTS
    SECURITY_METHOD = COOKIE
}
INTERFACE {
    ACCESS_URL = http://www.example.org/auth/tap
    SECURITY_METHOD = BASIC-AUTH
}
```

Santiago - Victoria

- We explored using separate standardIDs for 'sync' and 'async' to get around rules stated in DALI

- We explored using a different interface type 'UWS' to communicate that there are 'sync' and 'async' functions available (UWSRegExt)

Trieste

- Asterics meeting on IVOA A&A hosted by INAF in Trieste January 2019

- One URL to a TAP is a MUST, so…

  Drop support for Basic Auth in TAP!

Username / Password Support?

But how can users authenticate with username/password?

Answer: Reusable Tokens

"We suggest ... to implement a local authentication based on Transport Layer Security (TLS) with passwords, that allows a reasonable security framework for exchanging authentication tokens."

TAP 1.1 and Authentication

How should TAP communicate that it supports authentication (including username/password)?

How can clients (eg TOPCAT) interact with TAP and authenticate it's users?

Standards Involved

SSO 2.0
VOSI 1.1
VOResource 1.1
DALI 1.1
TAP 1.1

And after these...

All the other VO services
that may need authentication

Agenda

20' - Pat Dowler -- TAP 1.1 (wide interest)

20' - Mark Taylor - TOPCAT support for authentication in TAP-1.1

7' - Markus Demleitner - Registry perspective

30' - Discussion

5' - Conclusions