



## TOKEN-BASED AUTHENTICATION FOR CHORUS CONTENT API

V 1.0, October 2015

[Purpose](#)

[Basic Mechanism](#)

[Fields](#)

[Token Validation API](#)

[Examples](#)

[API Change Log](#)

[Change Notification Process](#)

[Issues/Questions](#)

### **Purpose**

The CHORUS membership agreement states that members must -

*“Permit the publicly accessible AM or VOR, or a VOR behind a paywall, to be available for indexing from the date of publication by Participating Funding Agencies.”*

For each article made publicly accessible under CHORUS, publishers must deposit into CrossRef an appropriate URL to be used for the purpose of authentication (see the CHORUS Implementation Guide for details). Publishers often separate syndication or harvesting traffic from their usual website traffic to avoid issues with subscription download statistics, automated systematic downloading monitors, and server loads. In addition, publishers desire a clear method for identifying specific requests coming from a particular funding agency. While IP authentication can serve this purpose, IP's can change and part of CHORUS' goal is to minimize the overhead of coordination among funding agencies and

publishers. This document describes an alternative, token-based method for authorizing agency access to publisher content.

## **Basic Mechanism:**

To use this document, you should be familiar with API concepts. All APIs return response as JSON by default. In case a response is need in XML the Content-Type of the request header needs to be set to either text/xml or application/xml.

The token-based authentication scheme described here borrows heavily from CrossRef's TDM implementation (see <http://www.crossref.org/tdm/> with links to <http://tdmsupport.crossref.org/publishers/> and <http://tdmsupport.crossref.org/researchers/>).

The token validation scheme involves the following elements:

- CHORUS will issue a token to each funding agency that becomes a CHORUS Partner. This process is, at least for now, envisioned to be a manual process through an admin tool.
- Funders will use the URLs in the publisher metadata deposited at CrossRef to request the version of the article to be used for full text indexing. In making the HTTP request, the funder will add a CHORUS-specific header with the token issued.
- The publisher will validate the token using an API provided by CHORUS. The API will return information about the requesting agency in addition to whether or not the token is valid.
- Once validated, the publisher will then conduct any further authorization (for example, ensuring the requested article was indeed funded by the requesting agency) and make the content available as appropriate.

Optional elements include rate limiting and content negotiation. CrossRef uses headers that begin with CR-. CHORUS will use the same headers, but with CHOR- in place of CR-.

## Fields

- **fundref\_id** – String value which shows the fully qualified DOI for the FundRef ID of the agency or sub-organization which was issued the token
- **fundref\_parent\_id** – String value which shows the fully qualified DOI for the FundRef ID of the top-level agency to which the authorized agency belongs
- **agent\_for** – Array of string values of all agencies that are part of the overall parent Funder
- **valid\_until** – Expiration date (timestamp) of the token - ISO-8604 format (“2014-09-22T00:00:00Z”)

## Token Validation API

Description: This API is provided by CHORUS to be used by publishers to check whether a token is valid for a specific agency or not and to get a profile associated with the token.

URL:

GET <https://api.chorusaccess.org/agency-auth/token/validate/{token}>

(Use POST instead so that the token is encrypted?)

Response Statuses:

200 –Token valid

401 –Token invalid

500 –Server Error

Response payload: JSON object with following in fields: fundref\_id, fundref\_parent\_id, agent\_for, valid\_until

### Examples:

1. **Agency queries CrossRef for full text URL publisher deposited with syndication property**

For example:

```
https://harvest.aps.org/content/journals/articles/10.1103/PhysRevB.88.155325
```

2. **Agency accesses URL presenting token:**

```
curl -H "CHORUS-Agency-Auth-Token: hZqJDcbKSSRgRG_PJxSBax" -k 'https://harvest.aps.org/content/journals/articles/10.1103/PhysRevB.88.155325' -D - -L -O
```

*With (optional) content-negotiation:*

```
curl -H "CHORUS-Agency-Auth-Token: hZqJDcbKSSRgRG_PJxSBax" -H "Accept: text/xml;q=1.0, application/pdf;q=0.5, text/plain;q=.2" -k 'https://harvest.aps.org/content/journals/articles/10.1103/PhysRevB.88.155325' -D - -L -O
```

3. **Publisher checks token against CHORUS API** (this would be in the code of course, not a curl call; publisher would likely cache tokens for some length of time or number of requests):

```
curl -k -L -O 'https://api.chorusaccess.org/agency-auth/token/validate/ede73089451fa1c1d958a20347237ce4'
```

Response:

HTTP/1.1 200 OK

Content-Type: application/json

{

- **fundref\_id:** "<http://dx.doi.org/10.13039/100000161>",
- **fundref\_parent\_id:** "<http://dx.doi.org/10.13039/100000190>",
- **agent\_for:**

```
[  
  ○ "http://dx.doi.org/10.13039/100007761",  
  ○ "http://dx.doi.org/10.13039/100007763",  
  ○ "http://dx.doi.org/10.13039/100007762",  
  ○ "http://dx.doi.org/10.13039/100007764",  
  ○ "http://dx.doi.org/10.13039/100007767",  
  ○ "http://dx.doi.org/10.13039/100007769",  
  ○ "http://dx.doi.org/10.13039/100007768"  
],  
• valid_until: "2016-01-16T00:00:00.000Z"  
}
```

or

HTTP/1.1 401 Unauthorized  
Content-Type: application/json

```
{  
  "fundref_id": "http://dx.doi.org/10.13039/100000015",  
  "fundref_parent_id": "http://dx.doi.org/10.13039/100000015",  
  "agent_for": [http://dx.doi.org/10.13039/100000001],  
  "valid_until": '2014-09-21T00:00:00Z'  
}
```

- 4. Publisher returns full text to agency if token valid *and* agency is authorized for requested resource; else publisher returns 401 Unauthorized**

**API Change Log:**

Revisions Date	Change	Reason for change

**Change Notification Process:**

Changes and/or updates will be communicated by notifying the technical representative noted in the CHORUS participant account details.

**Issues/questions:**

If you find a bug in this documentation or would like to propose an improvement to the API, please send an email to ([support@chorusaccess.org](mailto:support@chorusaccess.org)). If you have a suggestion how to fix it, include that as well.