TECHNICAL INTRODUCTION TO THE ORCID API

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ORCID | Connecting Research and Researchers

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ORCID.org

IMPLEMENTATIONS

INTEGRATING WITH THE ORCID API

- PLAN
- DEVELOPE/ TEST

+

ENGAGING COMMUNITIES

- COMMUNICATE!

ORCID ENABLES

Organizations use the ORCID API to authenticate, collect, display, and connect persistent identifiers for people, places, and things in research workflows

PLAN

- Are you already using any of the enabled systems that support ORCID?
- Which system(s) would you like to connect to ORCID? Where does ORCID fit within your existing systems & workflows?
- What information do you want to obtain from/add to your researchers' records?
- What resources do you need? Who is the right people to involve?
- How to communicate your implementation?

1. ENABLED SYSTEMS

Publishing

- Open Journal Systems (PKP)
- Editorial Manager
- ScholarOne Manuscripts
- eJournalPress
- ReView

Repositories

- Eprints
- Fedora (Elements)
- Haplo

More in the future!

CRIS Systems

- DSpace CRIS
- Vivo
- Converis
- Digital Measures
- Elements
- Faculty180
- InfoEd
- IRMA
- Pure
- Haplo
- Worktribe

https://members.orcid.org/orcid-enabled-systems

2. CUSTOM INTEGRATIONS

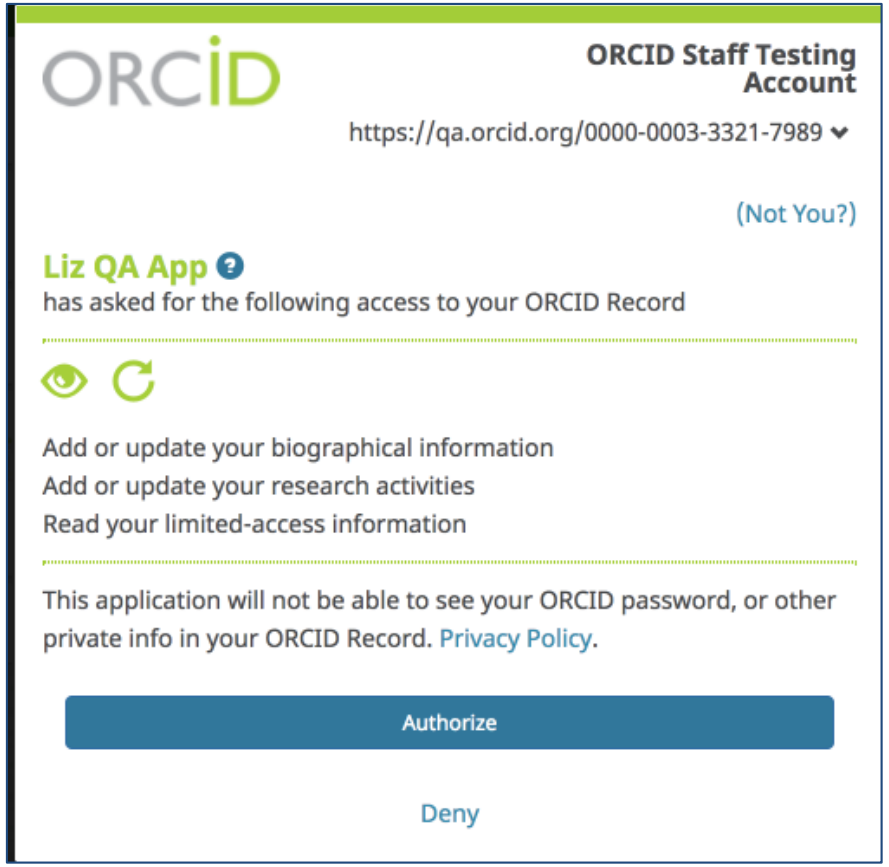
- Check our technical documentation
- Request Sandbox / Production credentials
- Decide how you will use the API and permissions needed
- Test & demonstrate your implementation

Case examples: https://members.orcid.org/resources

Code examples: https://members.orcid.org/api/resources/code-examples

RESPECT RESEARCHER CONSENT & PRIVACY

- AUTHENTICATION is quick, easy & accurate
- Request & obtain permission to read / write to the ORCID record (trusted parties)
- Sign in + Authorize> ORCID API pushes the iD to your system
- No manual entry!

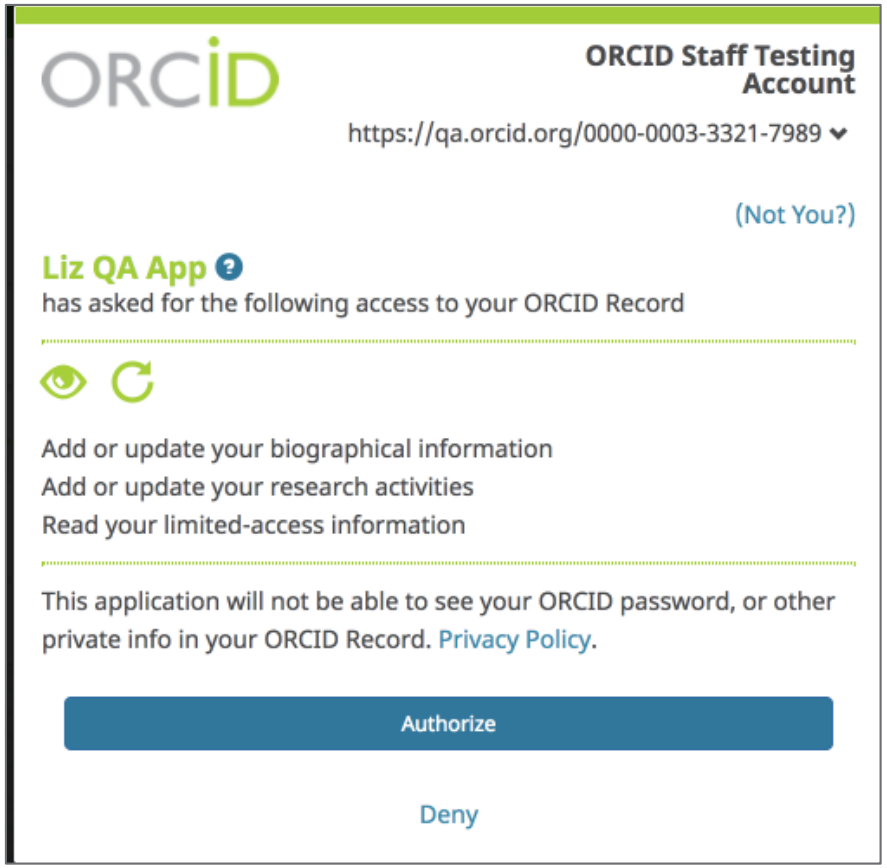


https://orcid.org/blog/2017/02/20/whats-so-special-about-signing

GET PERMISSION

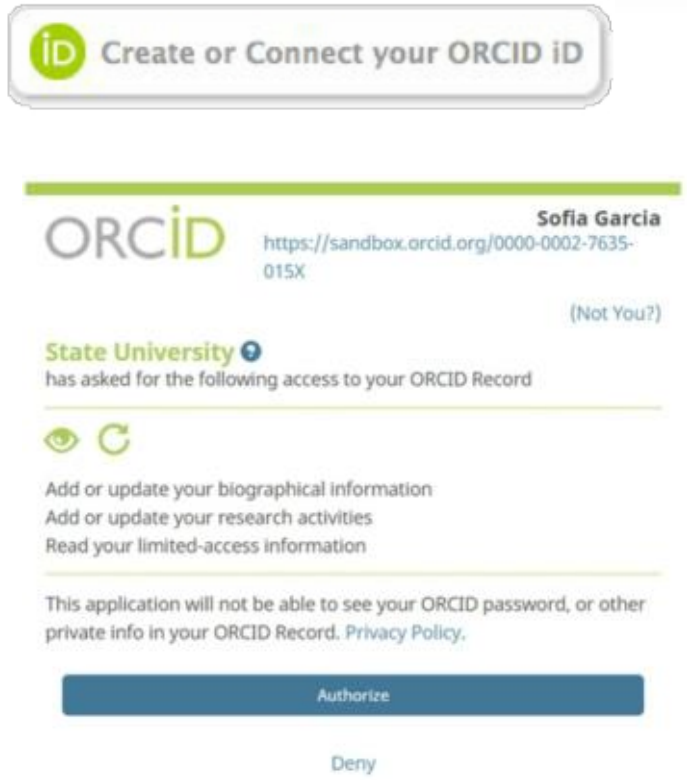
ORCID registry depends on user-based permissions:
Can I...

- get your iD *(/authenticate)*
- read limited-access data on your record *(/read-limited)*
- interact with the activities on your record *(/activities/update)*
- interact with your biographical information *(/person/update)*



AUTHENTICATE

Authenticate ORCID iDs to ensure researchers are correctly identified in your systems



- Use ORCID branded button
- Build authorization URL
- Exchange auth code for an access token
- Store the full token exchange
- Explain why you AUTHENTICATE iDs

https://orcid.org/content/collect-connect

STEP 1: AUTHORIZATION URL

The OAuth call: part I

the base URL, displays ORCID sign in screen

```
https://sandbox.orcid.org/oauth/authorize? \
client_id=APP-E422WM33OPZWKKMQ& \
response_type=code& \
scope=/read-limited%20/activities/update& \
redirect_uri=https://my.URL.org& \
family_names=Researcher&given_names=Bob&email=bobresearche
r@mailinator.com&state=UNI-ID
```

who's asking?

what permissions?

where the user goes next

extra info to identify user to your system

personalize the experience

STEP 2: AUTH CODE & USER FEEDBACK

ORCID sends the user to your redirect, with a code (and any state parameter) appended to end

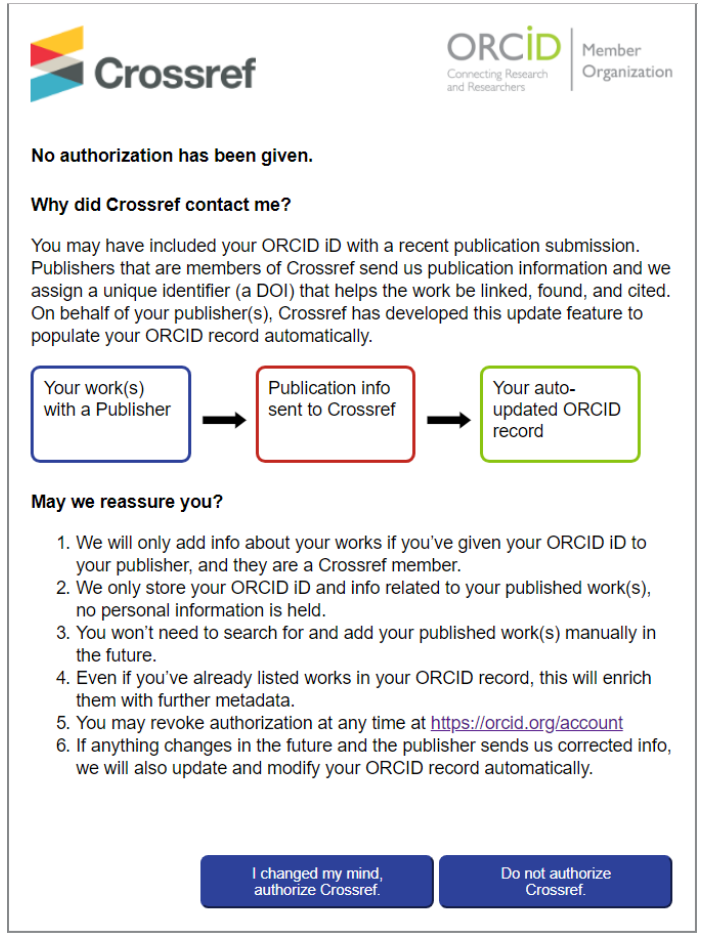
https://my.URL.org?htA3yE&state=UNI-ID

the auth code

- Save the code – you need it for the next step
- Display something useful to the user
  - Authorize: *thanks for your permission!*
  - Deny: *are you sure you don't want to give permission?*

authorize message

deny message



STEP 3A: TRANSFORM THE CODE INTO A TOKEN

our API calls always look like URLs (RESTful)

Use the code to gain access using the ORCID API

https://sandbox.orcid.org/oauth/token

HEADER: accept:application/json

what format?

DATA:

client_id=APP-XT8FBKJRO3MR8WDR

client_secret=e285575c-4794-464b-a807-6f1c06b63

grant_type=authorization_code

code=htA3yE

the auth code

redirect_uri=https%3A%2F%2Fmy.URL.org

confirms that you are the right one to get this information

STEP 3B: STORE THE RESULT

The result of the call

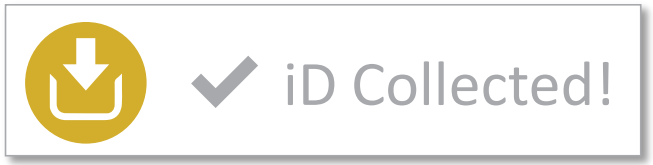
your permission – executed contract

```
"access_token"   :'6710dfee-6aab-445b-a266-205dd9085273",
"token_type"     :"bearer",
“refresh_token“  :'2d76d8d0-6fd6-426b-a017-61e0ceda0ad2",
"expires_in"     :631138518,
"scope"          :"/read-limited /activities/update",
"orcid"          :"0000-0002-0491-7882",
"name"           :"Bob Researcher"
```

when permission expires (in seconds)

what you can do

iD & name for the person who gave permission



store the response with user’s info in your system

DISPLAY

Display iDs to signal to researchers that your systems support the use of ORCID

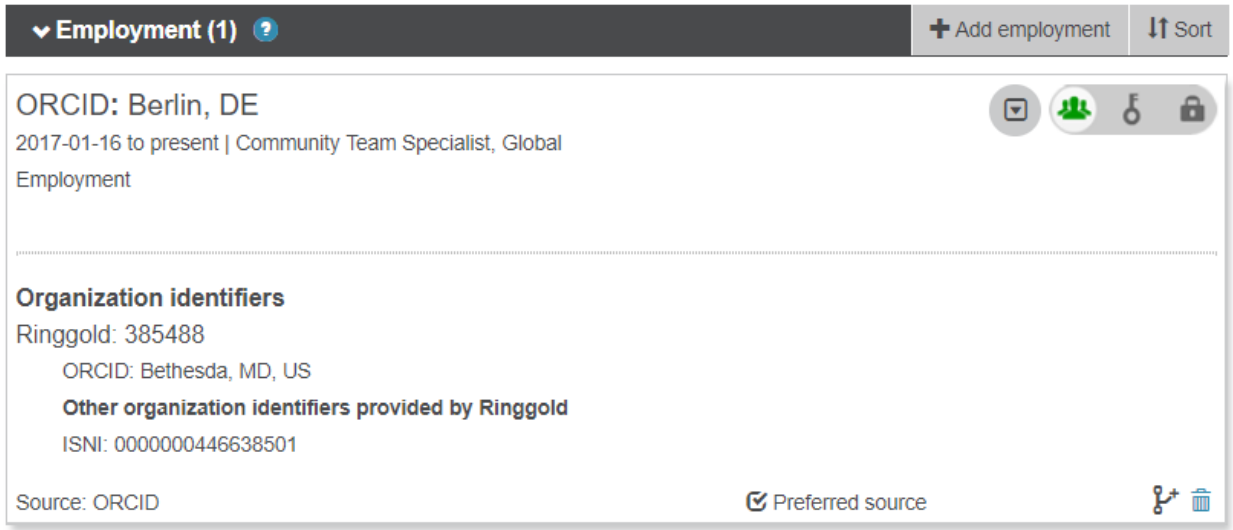
https://orcid.org/0000-0001-2345-6789

```
<person_name>
      <given_name>Karl</given_name>
      <surname>Ward</surname>
      <ORCID authenticated="true">
            http://orcid.org/0000-0002-4121-9960
      </ORCID>
</person_name>
```

- Store and DISPLAY authenticated iDs following our guidelines
- DISPLAY the authenticated ORCID iDs in metadata
- Explain why you display iDs

CONNECT

Connect information to ORCID records for trusted sharing with others



- CONNECT information from your system to ORCID records
  - Affiliations: Org. name & address. Recommended: start date & Org. ID
  - Works: Title, work type, work identifier
- Store put codes
- Explain your system connections with ORCID and benefits to researchers

COLLECT

Collect information from ORCID records to fill forms and support research reporting

```
Method: GET
 Accept: application/vnd.orcid+xml or application/vnd.orcid+json
 Authorization type: Bearer
 Access token: [Stored access token]
 URL: https://api.sandbox.orcid.org/v2.1/[ORCID iD]/record
```

- COLLECT information from ORCID records, including Trusted Parties data
- Use the data to populate your system, online forms, etc.
- Explain why you collect ORCID information

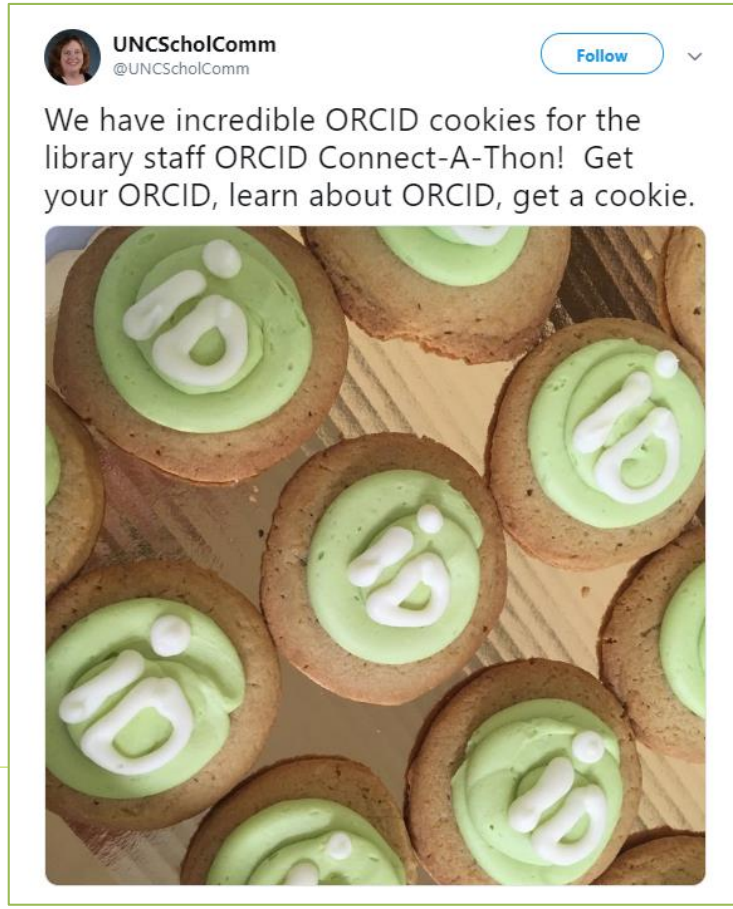
SYNCHRONIZE

Synchronize information between ORCID records and your systems for reporting accuracy and speed

- Make CONNECTions and COLLECTions over time using long-lasting permissions, updating information as it changes *webhooks*
- Provide a mechanism to accept and act on correction requests from ORCID users
- Explain the benefits for researchers of synchronization

ENGAGE & COMMUNICATE

- Use our outreach resources
- Link to our Help page & video tutorials
- Launch & let everybody know: email, social media, newsletter, etc.
- Regular updates & reminders
- Obtain & display your Collect & Connect badges
- ORCID cookies



https://members.orcid.org/outreach-resources

NEW AFFILIATION TYPES!

- Qualifications
- Invited positions and Distinctions
- Membership and Service

Available in the UI

Looking for Beta testers! (API 3.0 rc1)

https://github.com/ORCID/ORCID-Source/tree/master/orcid-model/src/main/resources/record_3.0_rc1
https://orcid.org/blog/2018/10/09/new-feature-alert-upgraded-affiliation-types

NEW – RESEARCH RESOURCES

- Infrastructure
- Collection
- Equipment
- Service

Join the pilot program! (API 3.0 rc1)

https://orcid.org/blog/2018/11/02/research-resources-live

THANK YOU!

Member Support Centre: Collect & Connect, resources

https://members.orcid.org

API documentation, tutorials, sample workflows

https://members.orcid.org/api

API XSD, example calls and XML (Github)

https://git.io/vDRy0

ORCID API users listserv

https://groups.google.com/group/orcid-api-users

ORCID message (XSD) (Github)

https://git.io/vXw5w

Bootcamp: ORCID API (Searches, OAuth, create on demand)

https://orcid.github.io/niso-workshop-2017

Questions?

https://support.orcid.org