BCO Portal and BCODB

BioCompute Objects

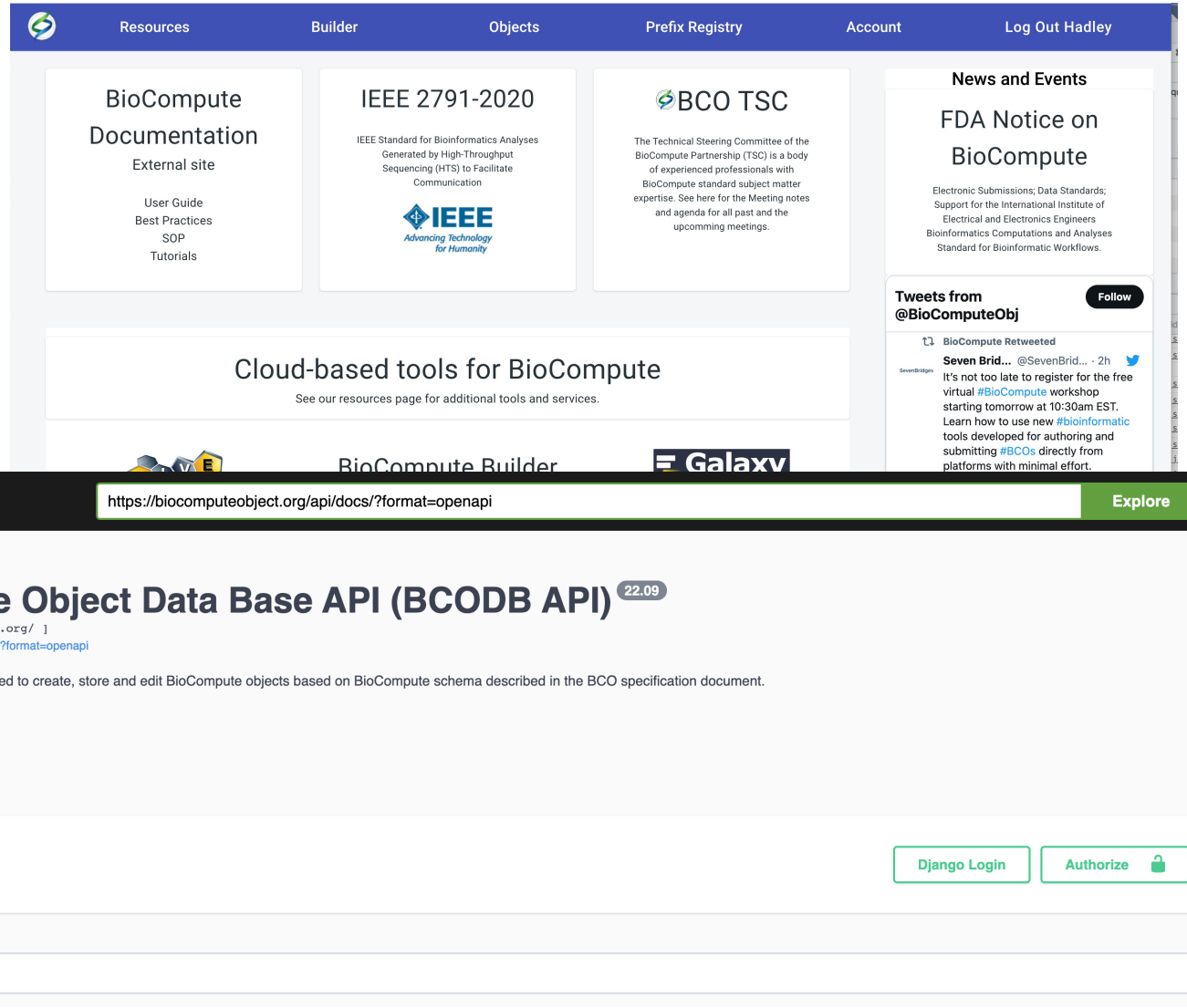
BCO Portal and BCODB

BCO PORTAL

- Aggregate of BioCompute resources
- Possible to have multiple instances of BCODB associated with one account

BCO DB

- Independent of the BCO Portal
- BCODB instance attached to the BCO Portal is available for the public
- Code is available via GitHub and anyone can set up an independent instance



BioCompute Objects

BCO Portal and BCODB

BioCompute Portal 22.09 | BCODB 22.09 | Portal UserDB 22.09 | Contact Us | Report bug or request feature



Open Source

- All source code is available via GitHub
- Contributions WELCOME!!

BCO PORTAL

- JavaScript (React) front end

https://github.com/biocompute-objects/portal

BCO DB

- Python (Django) with SQLite 3 database

https://github.com/biocompute-objects/bco_api

BCO DB

- Python (Django) with SQLite 3 database

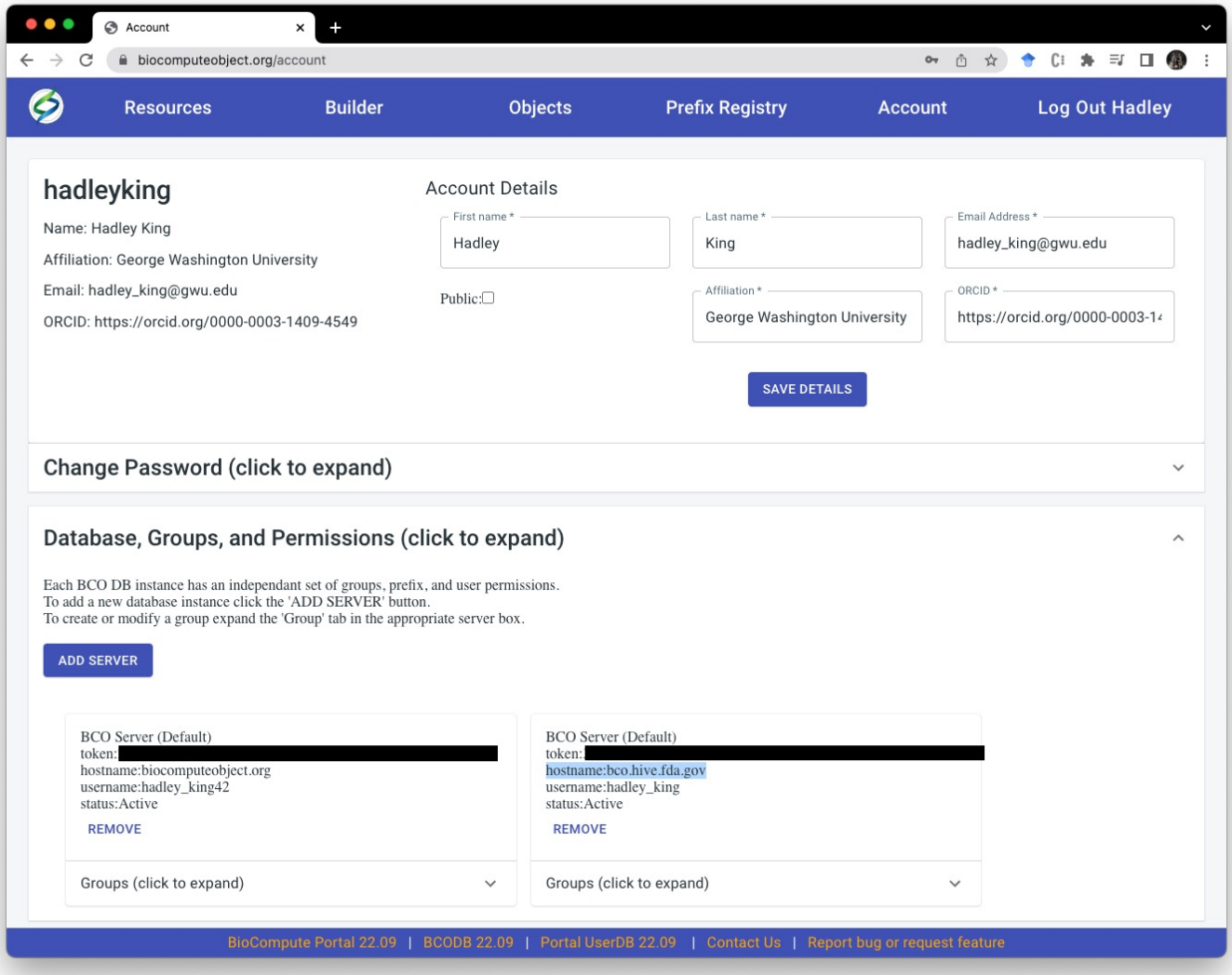
https://github.com/biocompute-objects/userdbi

BioCompute Objects

BCO Portal and BCODB

Server Information - Account Page

- BCOs, prefixes, groups, and permissions are SERVER specific (BCODB instance)
- BCO Portal users can have multiple “servers” associated with their account.

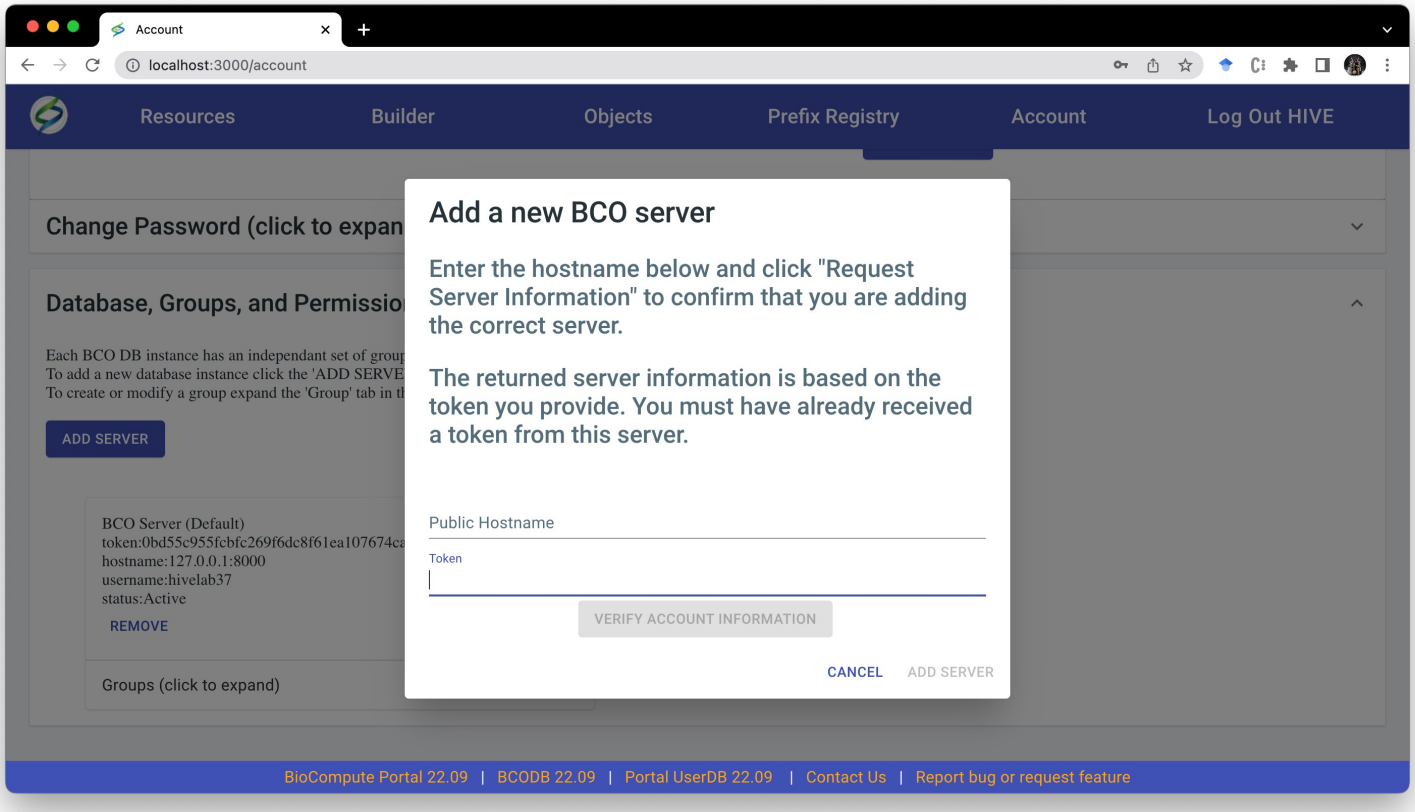


BioCompute Objects

BCO Portal and BCODB

Adding a New Server (BCODB)

- Requires a Token and the URL
- “Verify Account Information” checks for access to provided URL via provided token
- Once an additional server is added the user has access to that BCODB via BCO portal

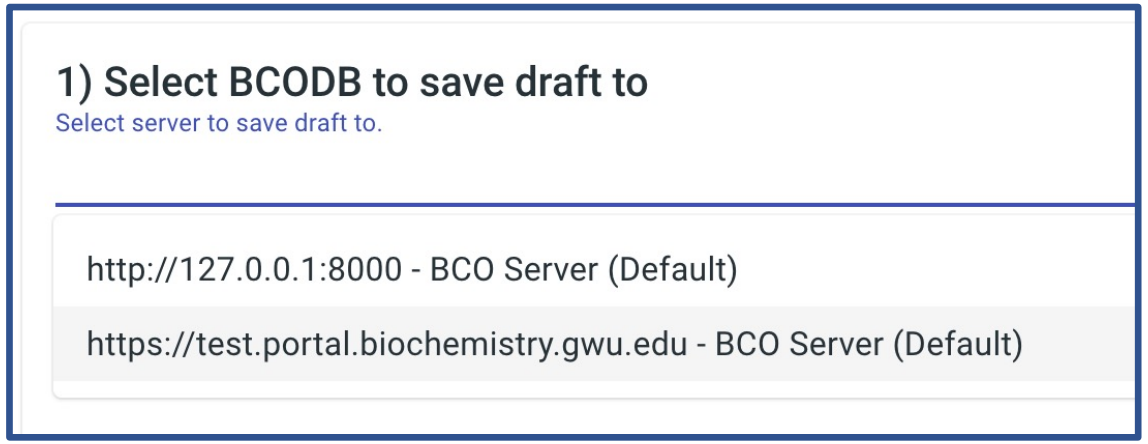


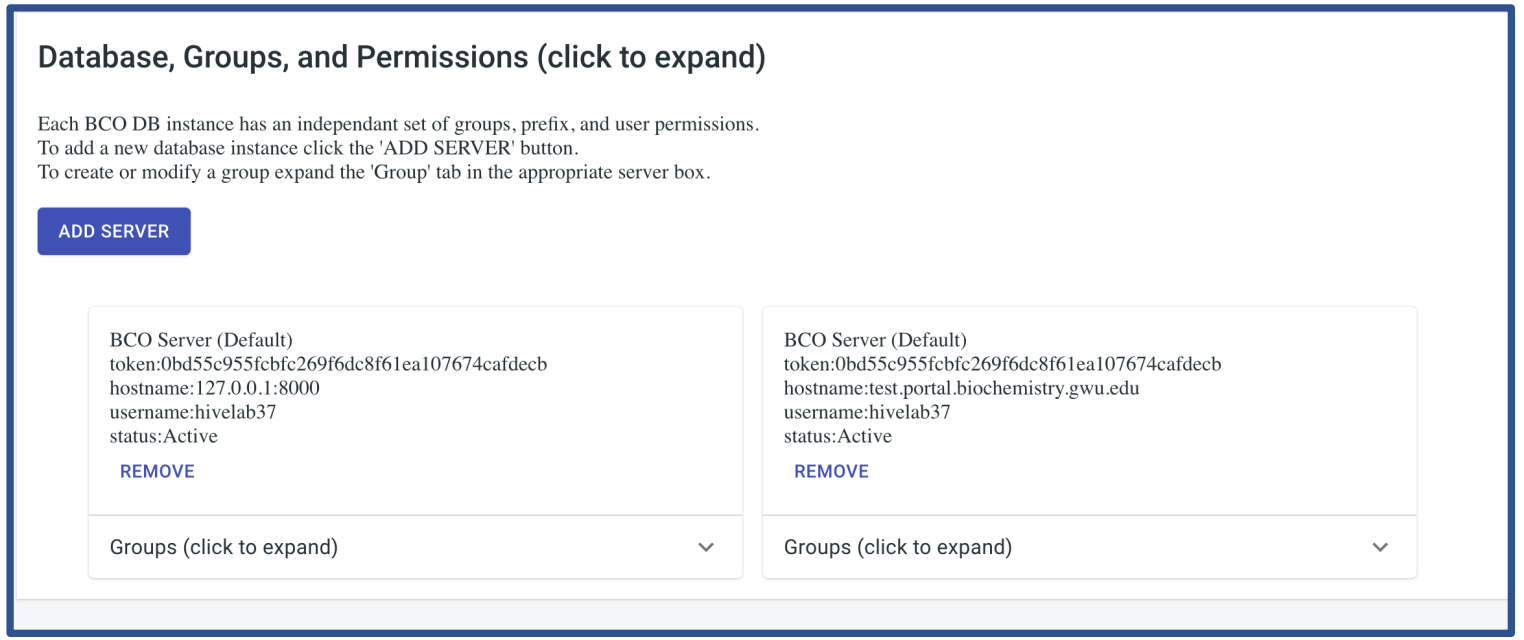
BioCompute Objects

BCO Portal and BCODB

Adding a New Server (BCODB)

- When creating a new draft object the user can select from all available BCODB instances
- The user also has access to the groups function from the account page



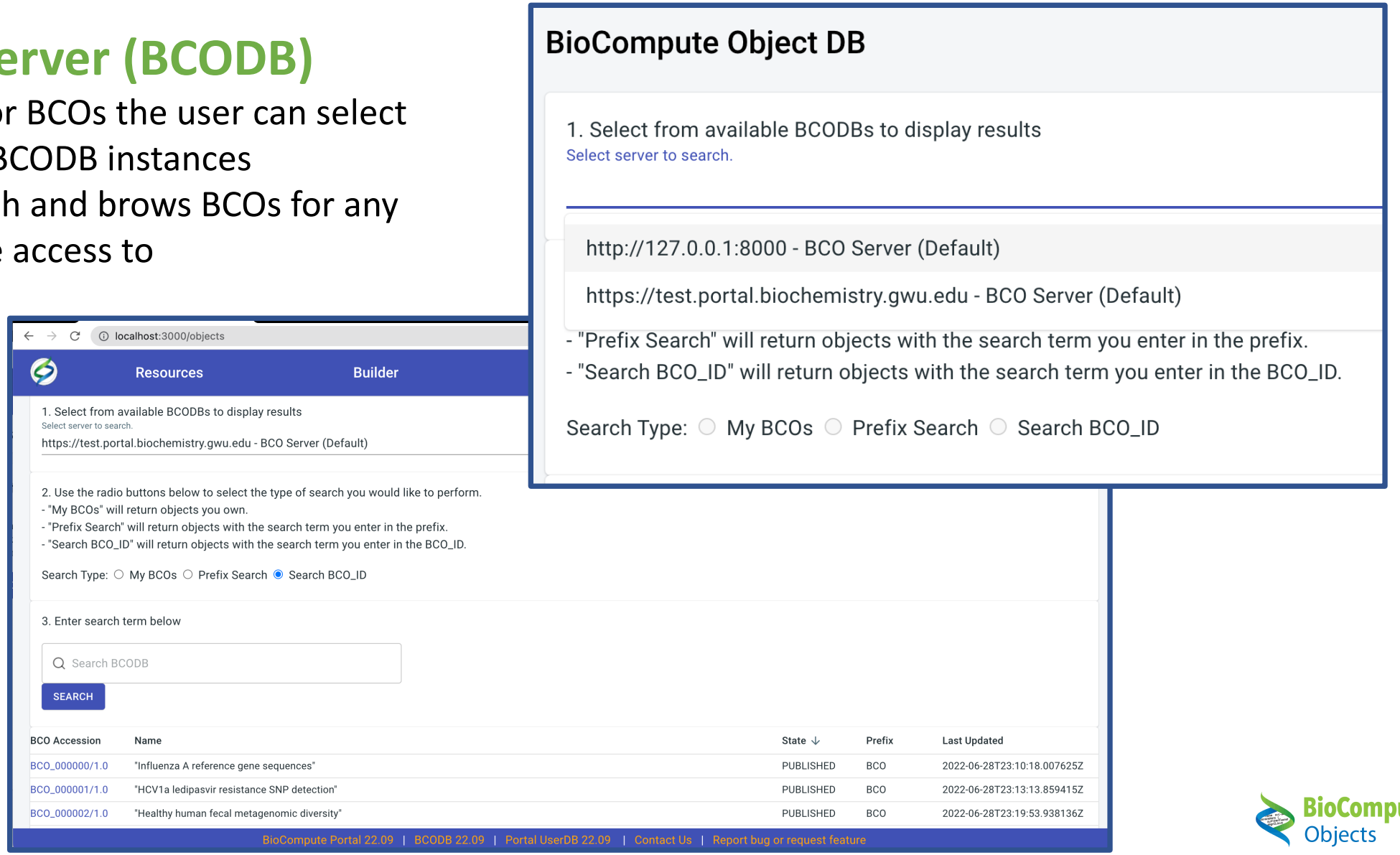


BioCompute Objects

BCO Portal and BCODB

Adding a New Server (BCODB)

- When searching for BCOs the user can select from all available BCODB instances
- The user can search and brows BCOs for any instance they have access to

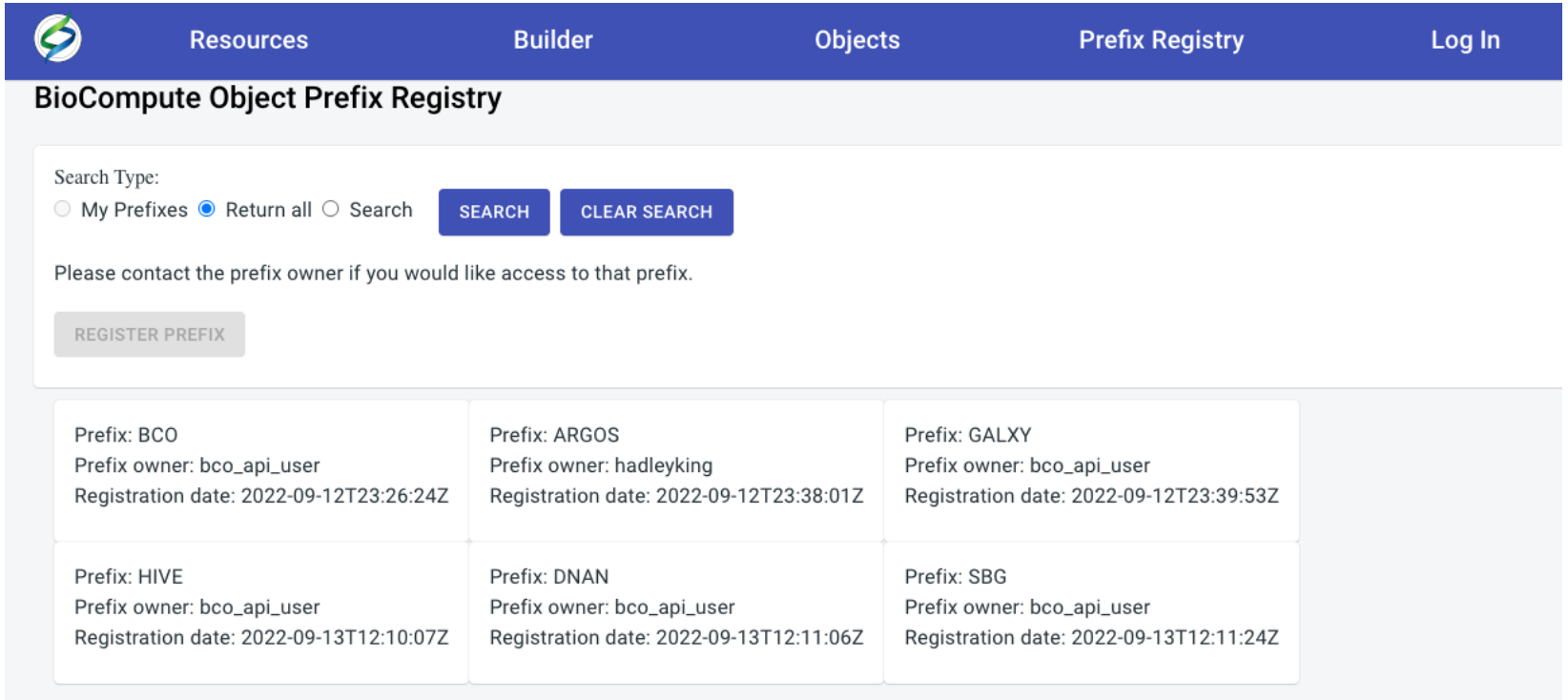


BioCompute Objects

Prefix Registry

BioCompute Objects

Prefix Registry

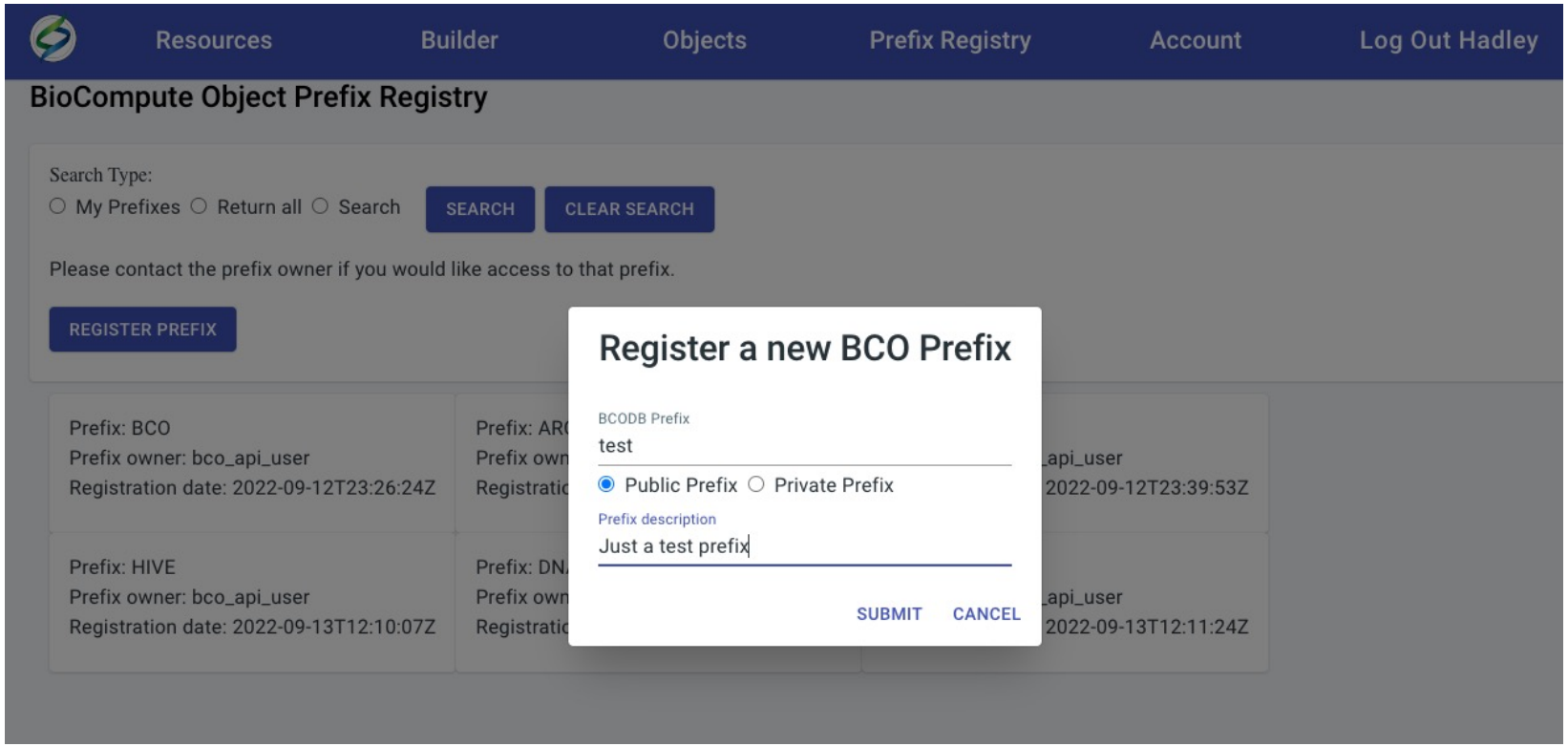


BCO Prefix Registry

- https://biocomputeobject.org/prefix
- No account required to browse
- Any user can register a prefix (must be logged in)

BioCompute Objects

Prefix Registry

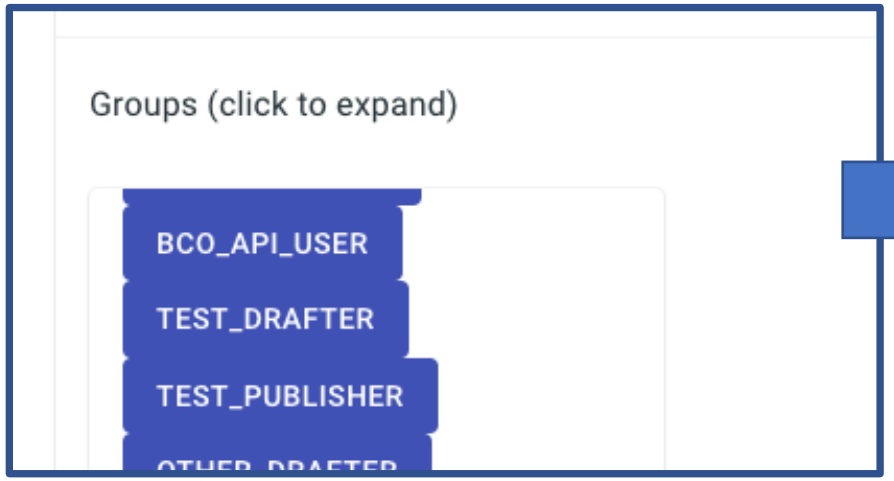


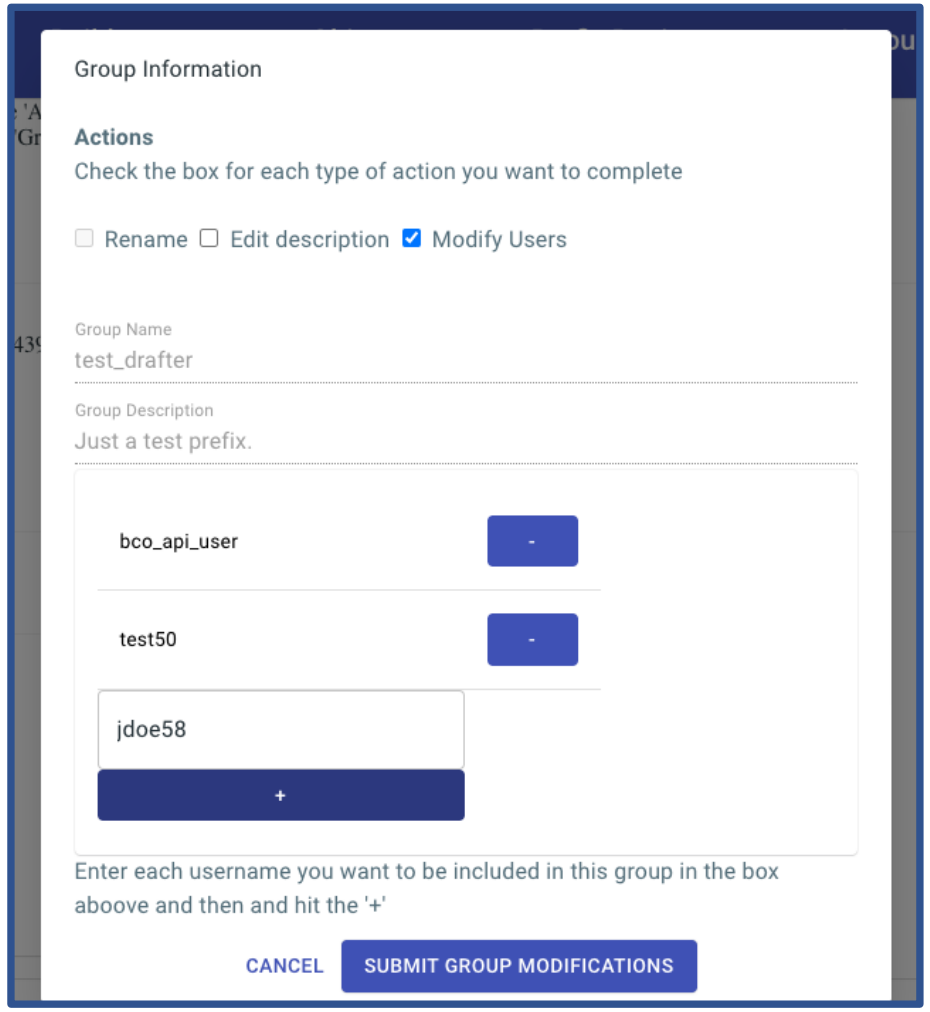
Create Prefix

- Users logged in can register a prefix
- Can choose public or private
- Public prefixes are available to all other users to create DRAFTs and publish

BioCompute Objects

Prefix Registry





Prefix access control

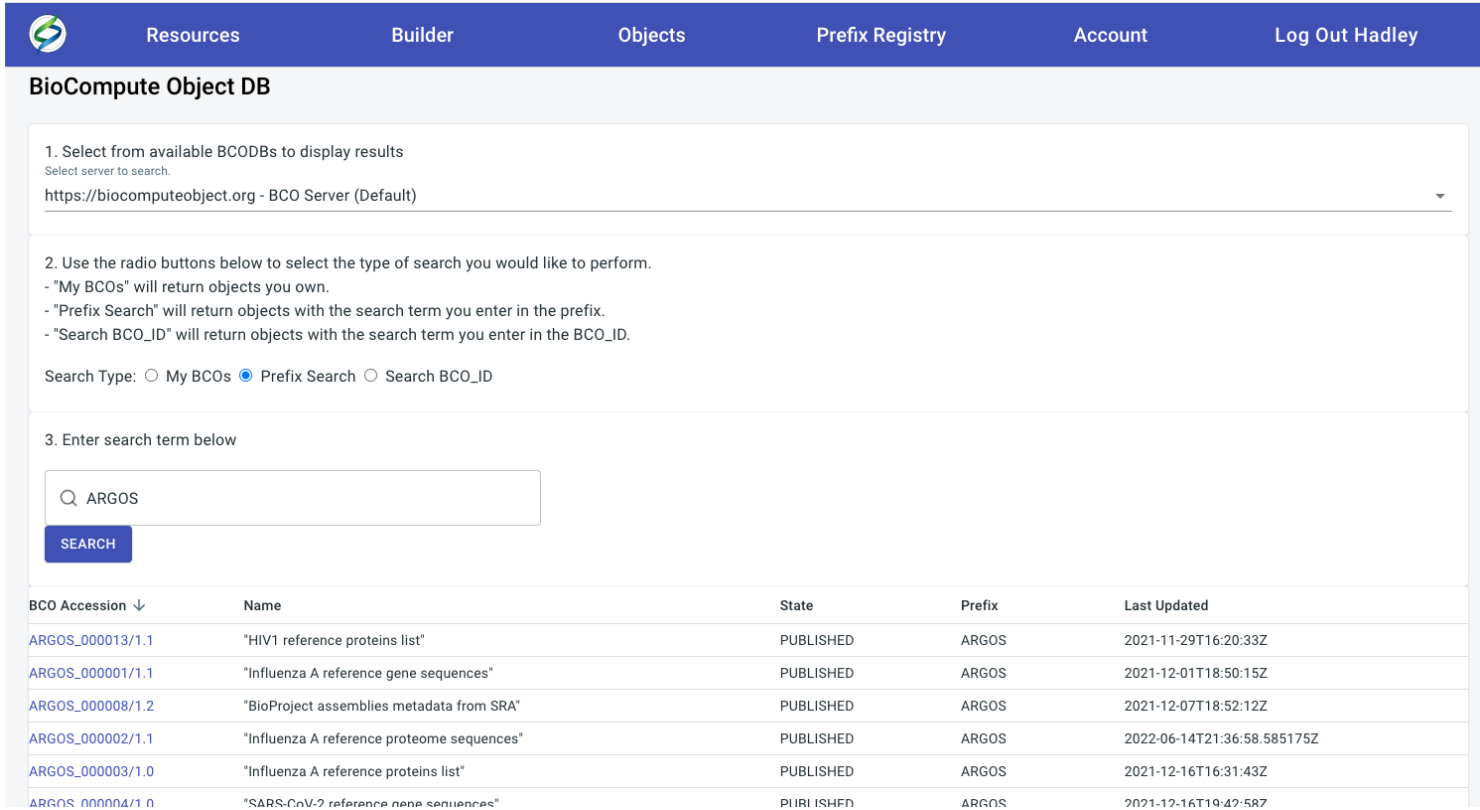
- Each PRIVATE prefix will spawn two user groups
  - <PREFIX>_DRAFTER and <PREFIX>_PUBLISHER
- Prefix owner must add other users to the group
- SERVER SPECIFIC
- Must use BCODB username

BioCompute Objects

Prefix Registry

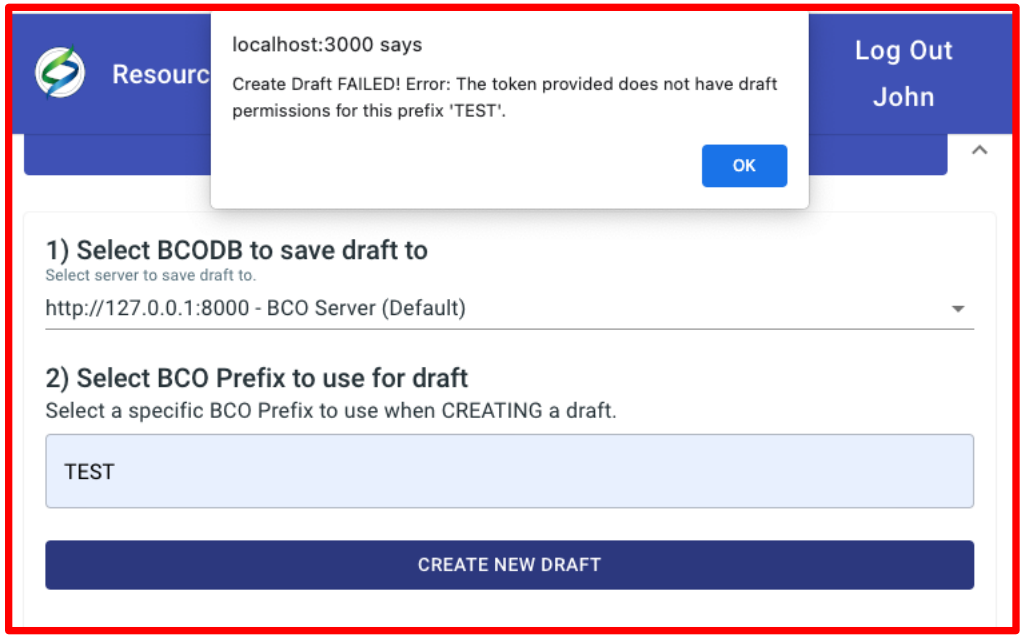
Searching for a prefix

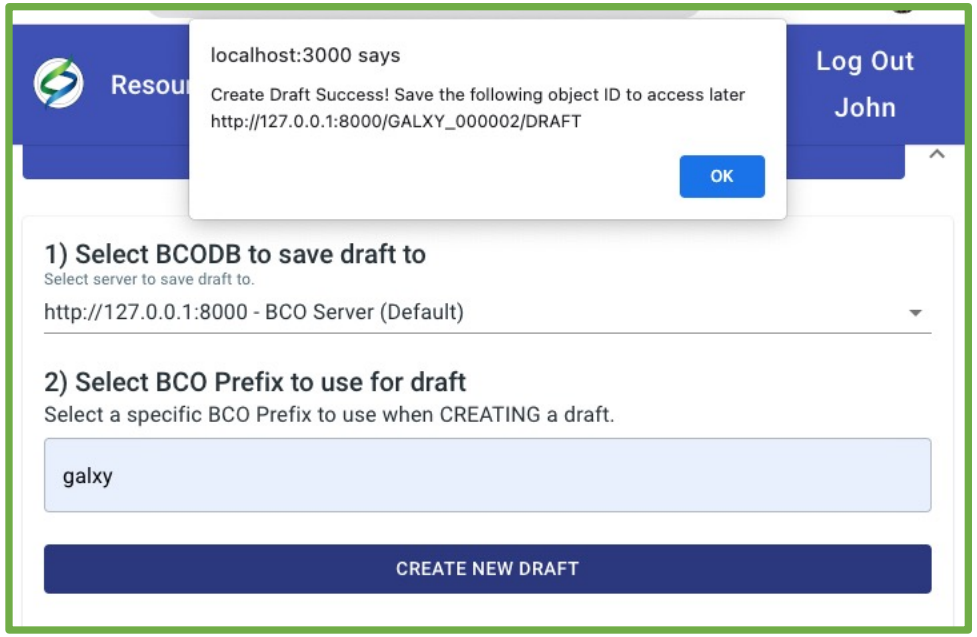
- SERVER specific
- Can sort by:
  - state (DRAFT/PUBLISHED)
  - Accession
  - Name
  - Last updated (date)
- Prefixes can organize BCOs into categories



BioCompute Objects

Prefix Registry





Creating a BCO with a prefix

- Once server is selected users can enter a prefix
- If they are in the <PREFIX>_DRAFTER group they will get a success message.
- This functionality also applies to the <PREFIX>_PUBLISHER group.

BioCompute Objects

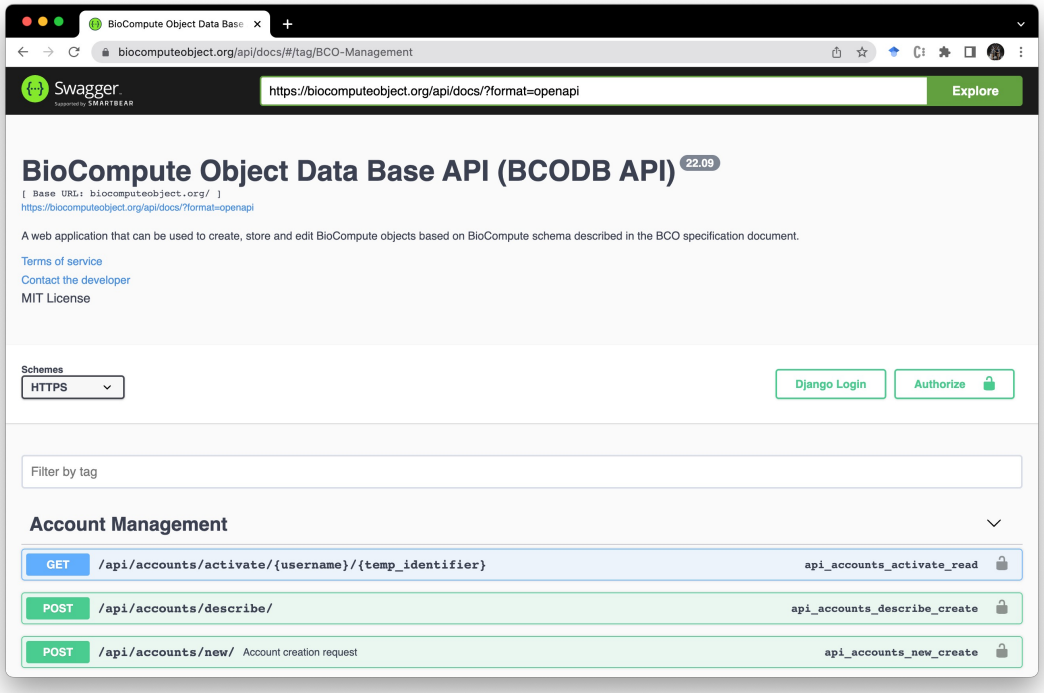
BCODB API

BioCompute Objects

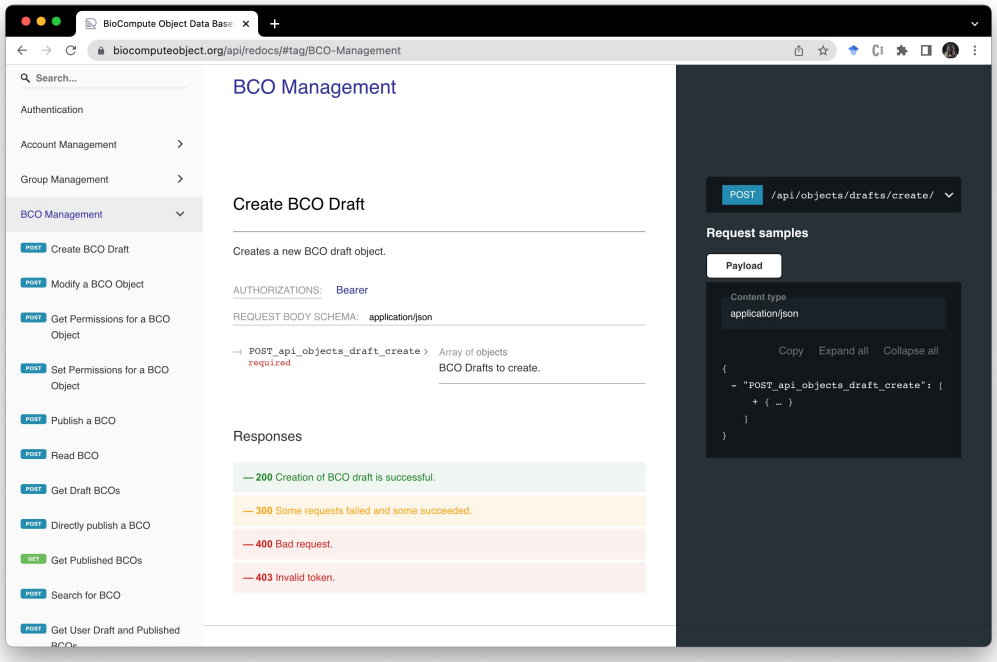
BCODB API

BCODB API docs

- Two ways to view available API commands
- Out-of-the-box availability



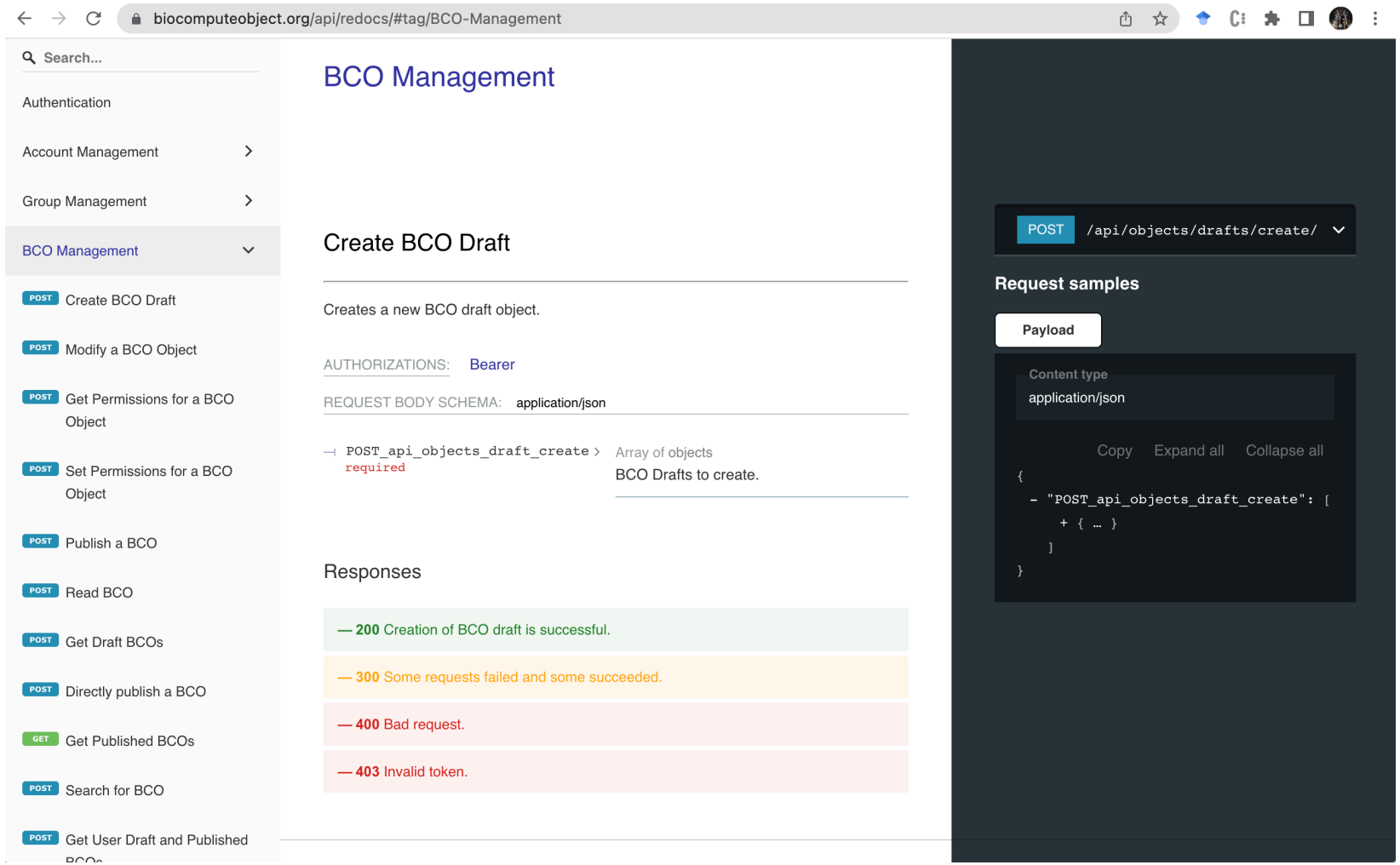
https://biocomputeobject.org/api/docs/



https://biocomputeobject.org/api/redocs/

BioCompute Objects

BCODB API

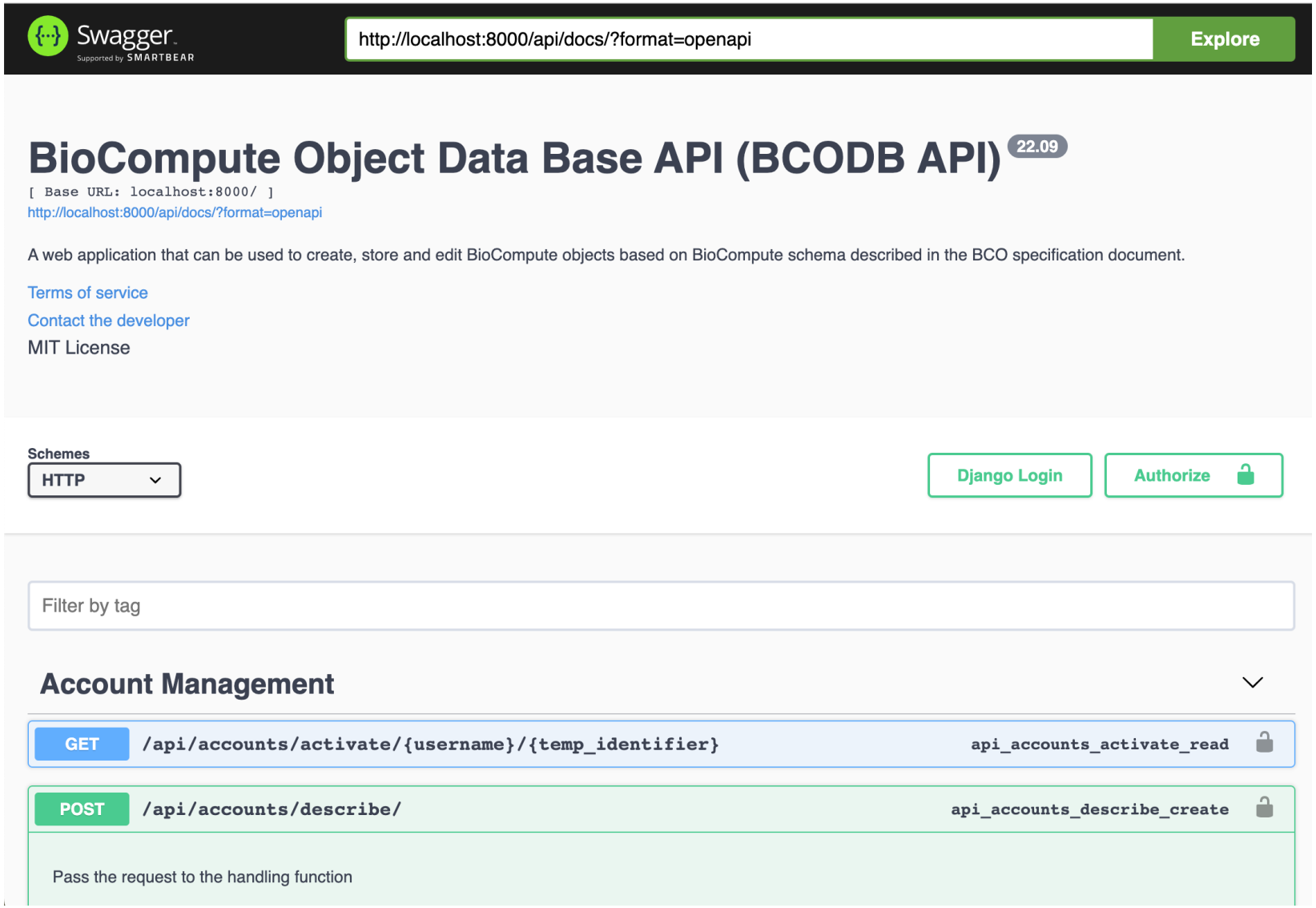


BCODB API ReDocs

- Designed for readability
- Standard layout for all API commands
- Three panel layout makes navigation easy

BioCompute Objects

BCODB API

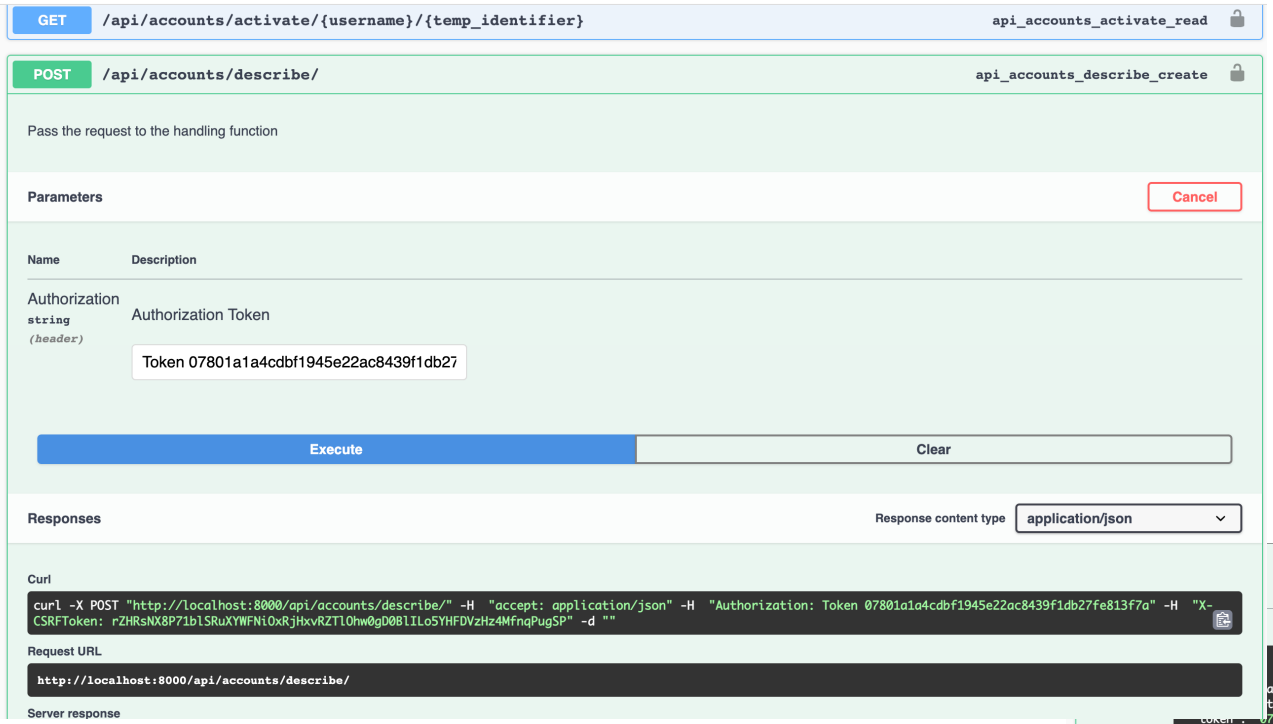


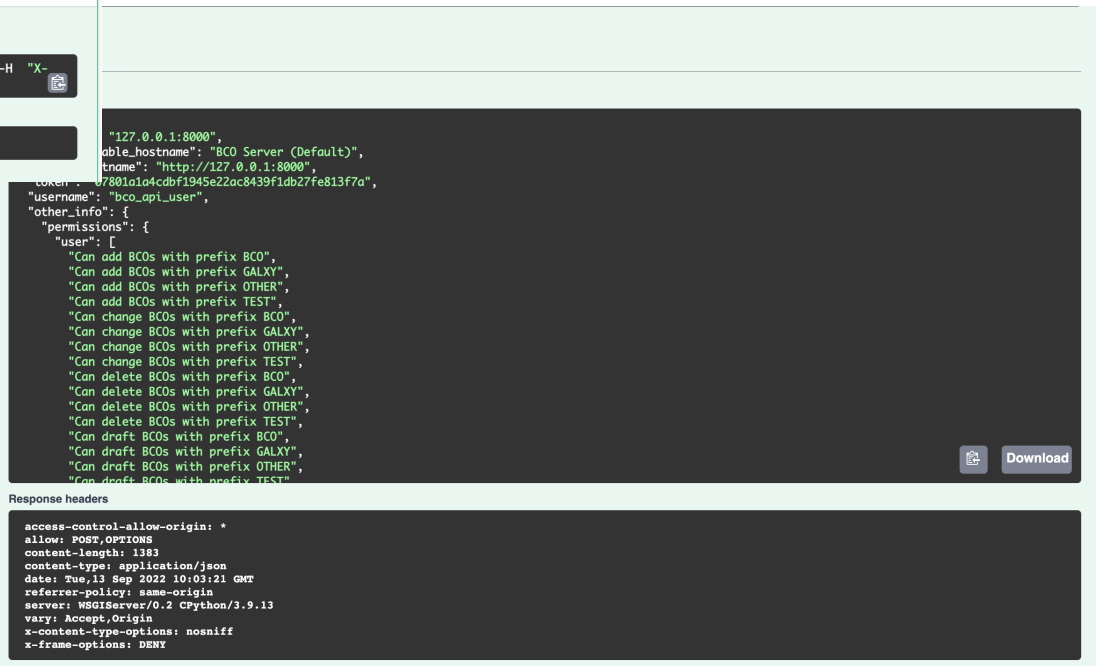
BCODB API Swagger Docs

- Designed for usability
- Standard layout for all API commands
- Organized by collapsible endpoints
- Can test out API functions in browser

BioCompute Objects

BCODB API





BCODB API Swagger Docs

- Each function can be used in a browser
- Easy authentication when required
- FULL Request and full response displayed in browser

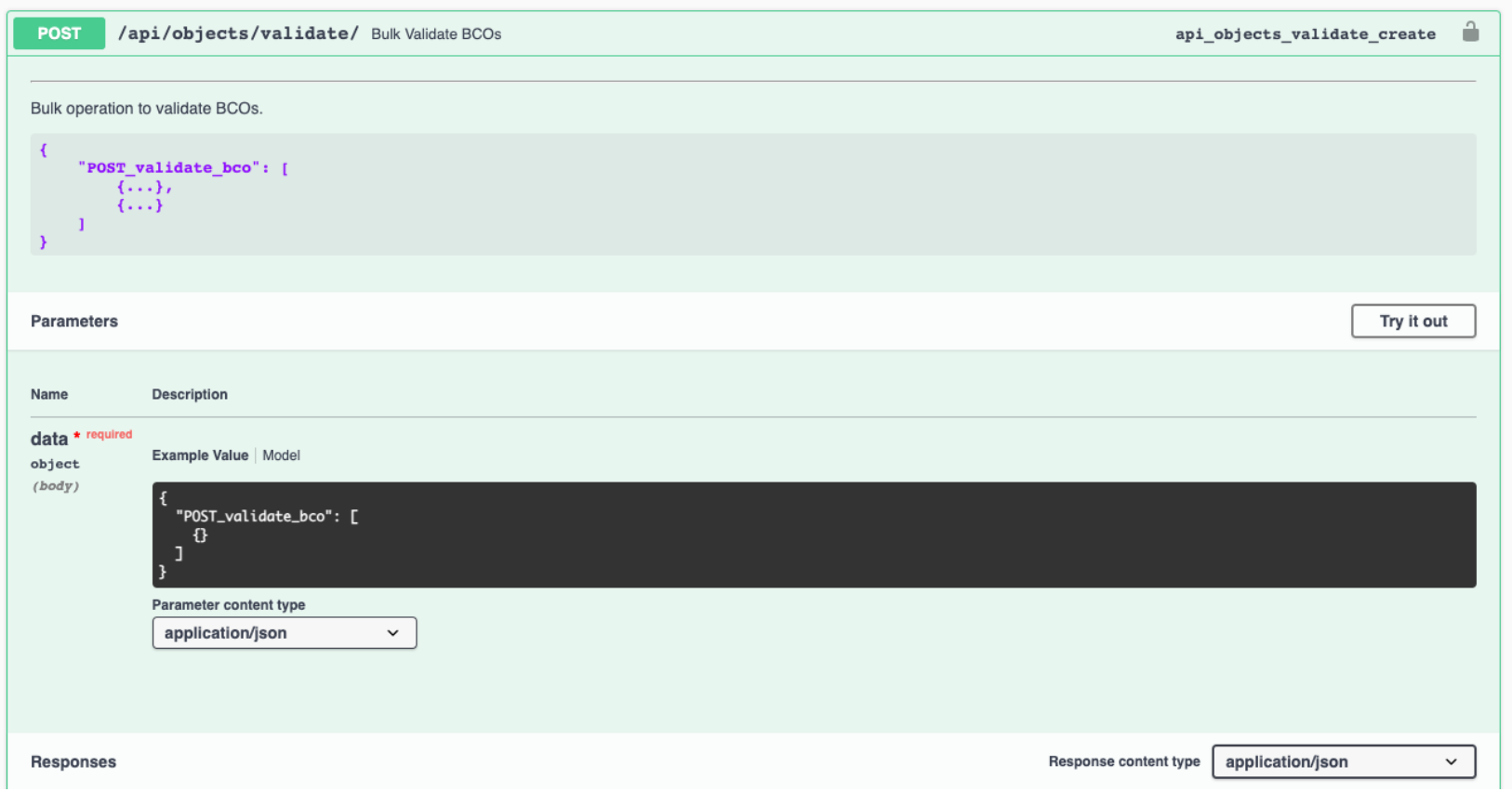
BioCompute Objects

BCODB API

https://biocomputeobject.org/api/objects/validate/

OR

https://biocomputeobject.org/api/docs/#/BCO%20Management/api_objects_validate_create



Bulk BCO Validation

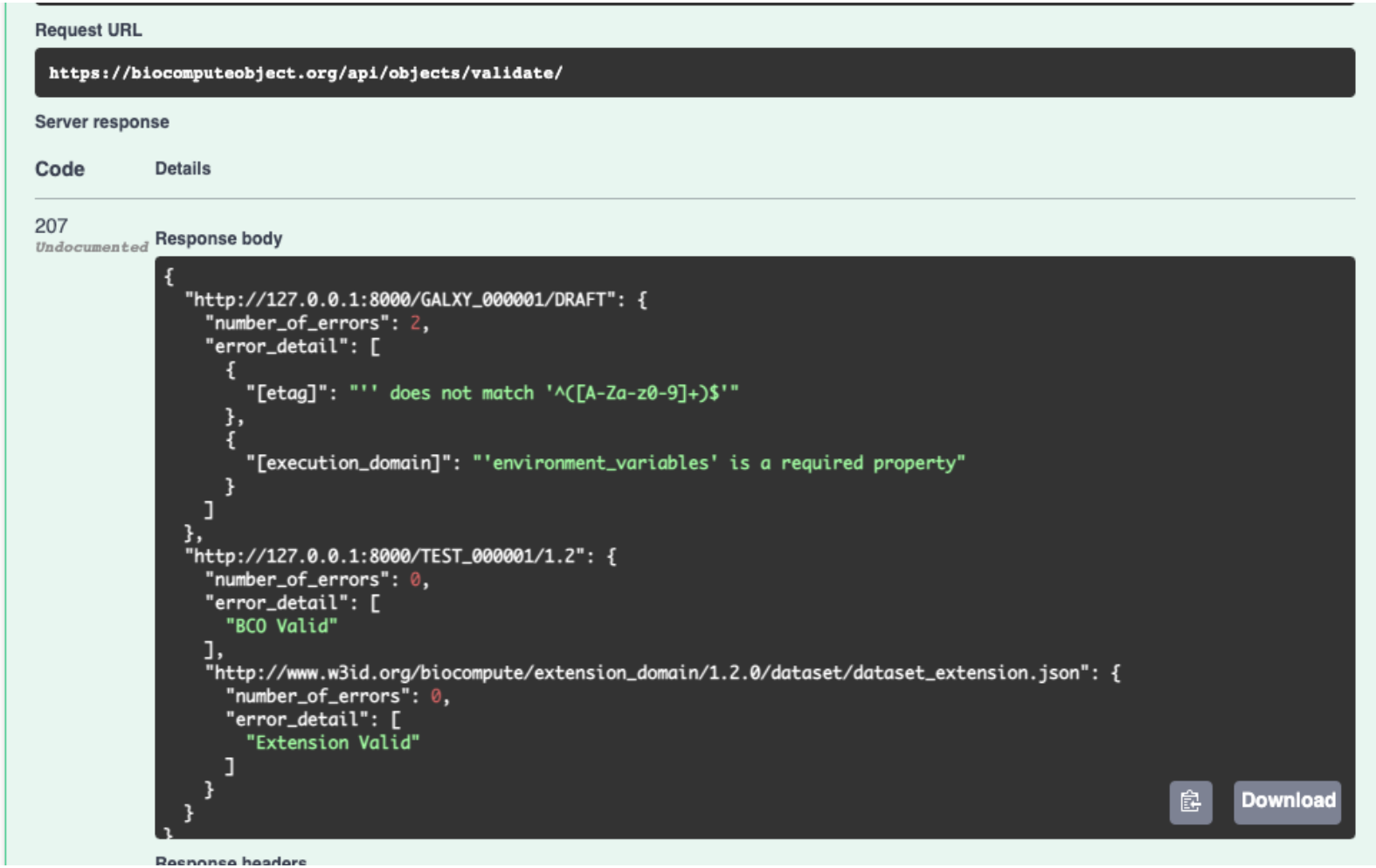
- No authentication required
- Can submit many BCOs at once
- Results are returned for each BCO

BioCompute Objects

BCODB API

Bulk BCO Validation: Results

- Response is a JSON object.
- Results for each BCO returned based on object_id
- Each error is listed separately
- Also checks validity of extension_domain



BioCompute Objects