Open Referral Validator and Dashboard specification

Version	Scope	Date
1.0	Initial release	24 July 2023
1.1	Addition of wireframe diagrams	3 August 2023
1.2	Section 5.1.1 “Notification of non-compliance” added	9 August 2023

1. Purpose

This document sets out short and longer term requirements for a Validator of Open Referral compliant API feeds and an associated Dashboard of feeds.

The aim of these tools is to allow a non-technical person commissioning an API feed to check it is compliant with the Open Referral API standard. The tools will remove any ambiguity as to what constitutes compliance and hence remove risk from developers who are commissioned to provide feeds. They avoid publishers professing compliance without this having been verified.

The initial UK requirement is to support *both* the original Open Referral UK (ORUK) API format *and* the UK profile of the international Human Services Data API (HSDA) version 3.0.

Longer term, just the current and future versions of HSDA needs to be supported for a range of profiles. We expect to phase out the current ORUK format by an agreed date - say 31 March 2025.

2. Reference links

The current ORUK API is specified by these Swagger pages. The current validator and current dashboard only check the /services and /services GET endpoints.

HSDA version 3.0 is specified by these API Reference pages and these Swagger pages.

The DRAFT UK profile is specified by these Swagger pages which are to be moved to the main OpenReferral Github repository when finalised.

3. Supporting the old and new API standard in the UK

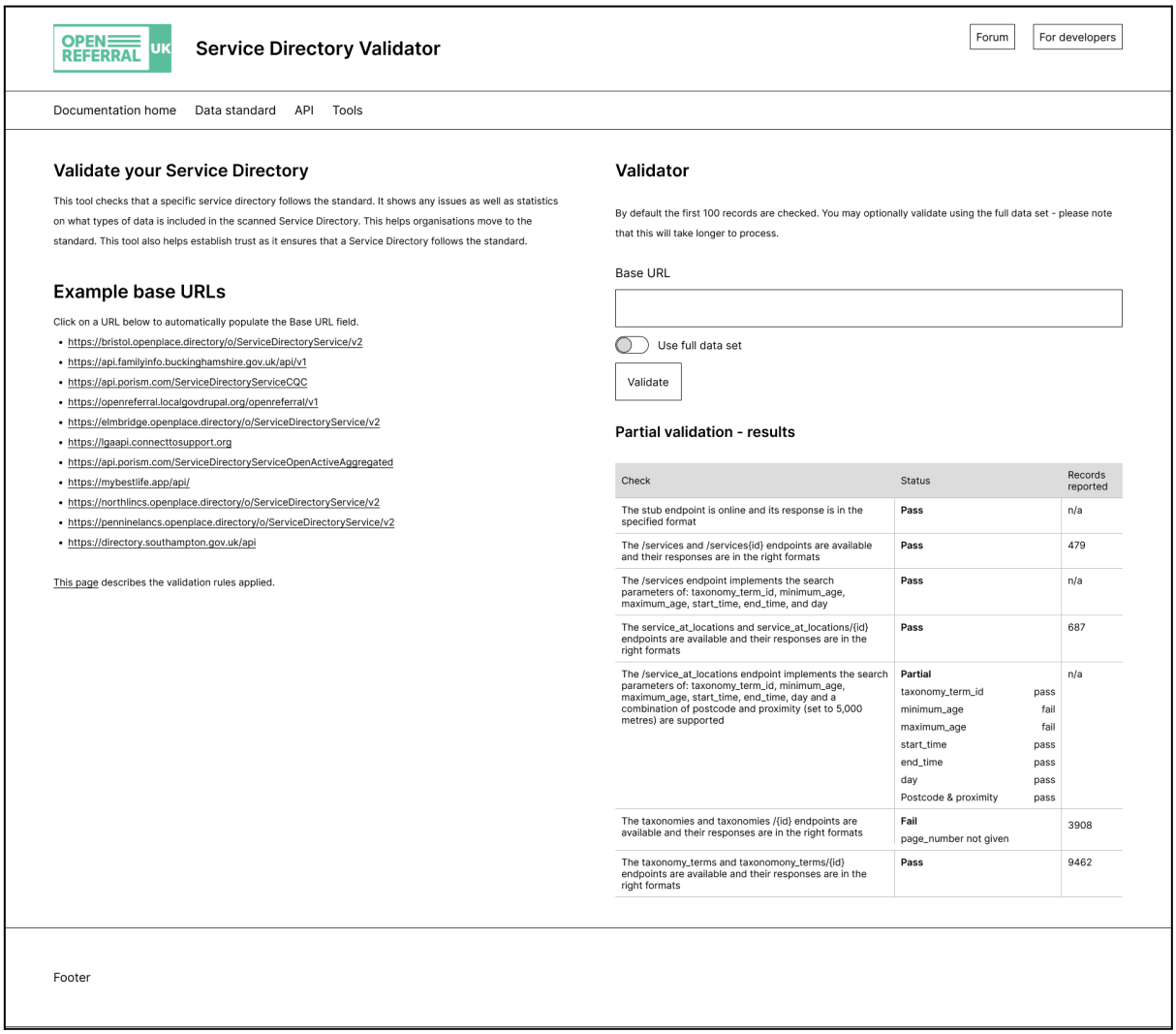
For simplicity, the new validator and associated dashboard will be kept separate. Porism can amend the current ORUK dashboard page to present a tabbed notebook with different tabbed pages for the current dashboard (as is) and the new Dashboard (defined below).

Hence, the remainder of this document is concerned with a validator that supports the full HSDA and profiles thereof. Support for the UK profile is the most immediate requirement. That can be seen as a forerunner of tools that support the full standard and other profiles.

4. Validator

The Validator will offer full and partial versions. The partial version will be the default, it will perform the same validations as the full version but for a smaller number of records.fail

The Validator will run from a web page in which the stub API endpoint is specified via a text input control. The page will present a, non-default, option to make the validation “full”. The validation will be initiated by a “Validate” button and is expected to run while the user waits, subject to provisions in section 4.3.1 below for asynchronous validation.



4.1 Partial validation

The partial validation will check 100 random records (or fewer if there are fewer than 100 in the response).

The following validations will be performed. The Validator will expect all endpoints to be open without access tokens or authentication. It will take account of any reasonable throttling of end points (e.g. limiting of one call per second from the same IP address).

- The stub endpoint is online and its response is in the specified format. If it is not online the validation will abort showing all other validations as failed
- The /services and /services{id} endpoints are available and their responses are in the right formats
- The /services endpoint implements the search parameters of: taxonomy_term_id, minimum_age, maximum_age, start_time, end_time, and day are supported. These searches will be tested on the most suitable records within the random sample validated. The Validator will show partial compliance if some but not all of the searches can be shown to work
- The service_at_locations and service_at_locations/{id} endpoints are available and their responses are in the right formats
- The /service_at_locations endpoint implements the search parameters of: taxonomy_term_id, minimum_age, maximum_age, start_time, end_time, day and a combination of postcode and proximity (set to 5,000 metres) are supported. These searches will be tested on the most suitable records within the sample validated. The Validator will show partial compliance if some but not all of the searches can be shown to work
- The taxonomies and taxonomies /{id} endpoints are available and their responses are in the right formats
- The taxonomy_terms and taxonomony_terms/{id} endpoints are available and their responses are in the right formats

Note that checks for responses in a valid format will include checks that properties which are required in the profile are present and populated.

For each of the above validations, the Validator page will show a pass or fail or (in the case of search tests) a partial pass. For fails it will show basic text on why it failed (e.g. page_number not given). For partial fails, it will show which search parameters passed and which failed or could not be tested.

For each list endpoint (e.g. /services, /service_at_locations, /taxonomies) the page will show the number of records reported.

4.2 Full validation

The full validation will perform the same tests as the partial validation but for all records returned.

In addition to the results shown for the partial validation, the page will give the number of records that exist for each object in the profile. For example:

> Count of service: 479
> Count of service_taxonomy: 3908
> Count of service_at_locations: 687
> Count of service_area: 456

Count of language: 0
Count of accessibility_for_disabilities: 1126

4.3 Optional enhancements

4.3.1 Asynchronous validation

To cope with large, time consuming validations or to protect against overload of the Validator server, the Validator may be made asynchronous, in which case it will prompt for an email address to which validation results are sent on completion.

Asynchronous validations can be queued in one or more threads on the Validator server.

Asynchronous validation can be implemented:

- for all feeds OR
- as a user-selected option OR
- as an option that is automatically used with feeds above a certain size

4.3.2 Configuration for different profiles and HSDS versions

As an optional enhancement, the Validator (and so also the Dashboard specified below) will be configurable to work with different versions and profiles, as given by the “version” and “profile” properties of stub API endpoints.

For each supported profile and endpoint an administrator will configure a link to the API profile definition and will specify which (if any) search parameters (or combinations of parameters) should be tested.

The Validator will report the version and profile. If the version and profile combination is not supported, the Validator will say that and abort validation.

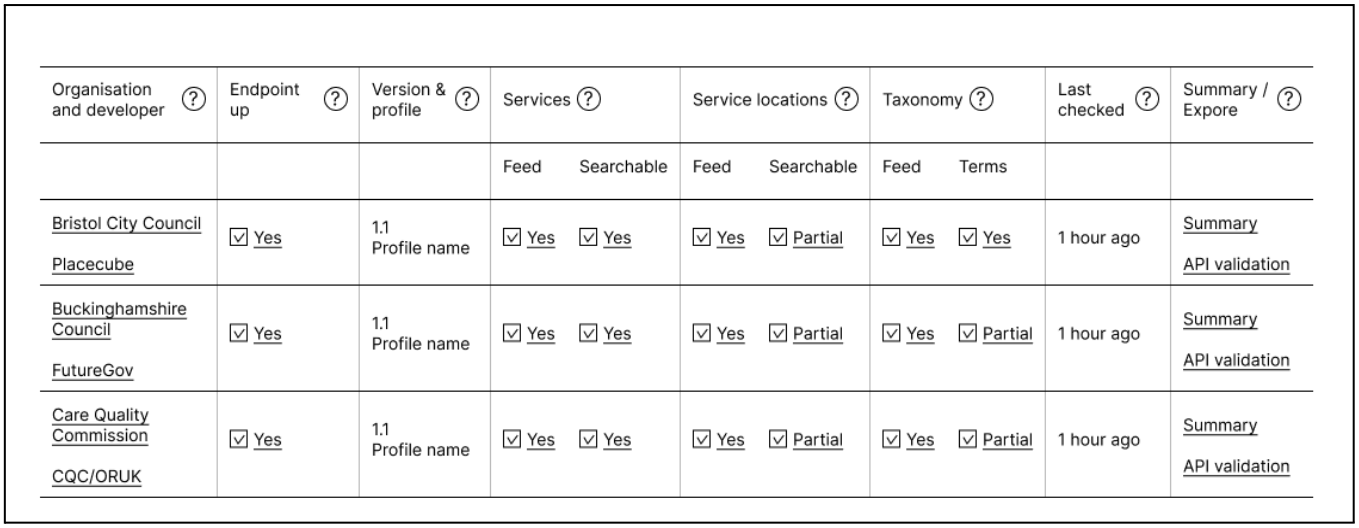
4.3.3 Up-to-dateness checks

Where an assured_date property exists within a profile for any object, the full validation will provide a breakdown of the number of records in each of the following groups:

- assured_date not given
- Assured within the last three months
- Assured within the last three to six months
- Assured within the last six to 12 months
- Assured more than a year ago

5. Dashboard

A dashboard similar to the current ORUK dashboard will be made available. The table part of the Dashboard will be available such that it can be embedded in one or more other dashboard pages with surrounding text separately authored.



Organisation and developer	Endpoint up	Version & profile	Services		Service locations		Taxonomy		Last checked	Summary / Expore
			Feed	Searchable	Feed	Searchable	Feed	Terms		
Bristol City Council Placecube	☑ Yes	1.1 Profile name	☑ Yes	☑ Yes	☑ Yes	☑ Partial	☑ Yes	☑ Yes	1 hour ago	Summary API validation
Buckinghamshire Council FutureGov	☑ Yes	1.1 Profile name	☑ Yes	☑ Yes	☑ Yes	☑ Partial	☑ Yes	☑ Partial	1 hour ago	Summary API validation
Care Quality Commission CQC/ORUK	☑ Yes	1.1 Profile name	☑ Yes	☑ Yes	☑ Yes	☑ Partial	☑ Yes	☑ Partial	1 hour ago	Summary API validation

The Dashboard will be configurable by an authorised Open Referral administrator who will manually add and amend details of API feeds.

A scheduled service will perform a partial validation (as defined above) on each configured API endpoint within each 24 hour period.

It will populate results to be shown in tabular format with the following columns:

- Organisation - name of the organisation publishing the services data with a link to that organisation's chosen site. Configured by an administrator
- Developer - name of the developer of the API feed with a link to the developer's chosen site. Configured by an administrator
- Endpoint up - showing yes, no or partial (if the endpoint is up but the response is not valid)
- Version and profile - the values of the version and profile properties returned by the stub API endpoint
- Services feed - showing yes or no dependent on whether the /services and /services/{id} feeds are available and responses are valid. A partial response may be shown if some but not all /services validations pass the tests
- Services searchable - showing yes, no or partial dependent on the results of the /services search results specified above
- Service locations feed - showing yes or no dependent on whether the /service_at_locations and /service_at_locations/{id} feeds are available and responses are valid. A partial response may be shown if some but not all /services_at_locations validations pass the tests
- Service at locations searchable - showing yes, no or partial dependent on the results of the /service_at_locations search results specified above
- Taxonomies feed - showing yes or no dependent on whether the /taxonomies and /taxonomies/{id} feeds are available and responses are valid. A partial response may be shown if some but not all /s validations pass the tests
- Taxonomy terms feed- showing yes or no dependent on whether the /s and /s/{id} feeds are available and responses are valid. A partial response may be shown if some but not all /s validations pass the tests
- Last checked - showing how long ago the API feed was last checked

- Summary - link to a pop-up with further information on the feed. Configured by an administrator
- Explore - short text and links to any hosted tools which take the API stub endpoint as a parameter (such as the Validator). Configured by an administrator with the API endpoint parameter automatically added.

Where partial compliance is shown, a popup or equivalent should be available explaining what is compliant and what is not. Accessible alternatives will be available for any popup and hover-over text.

5.1 Optional Enhancements

5.1.1 Notification of non-compliance

The Dashboard will store a list of names and email addresses against each entry. These will be the addresses to which email messages will be sent describing any failed validation encountered during each scheduled validation.

6. Support and maintenance

The supplier of the Validator and Dashboard will monitor for up time and usage. 95% uptime per month will be guaranteed.

The tools will support up to 100 API feeds and a total of up to 250,000 service and service_at_location records across all feeds.

The supplier will provide a support service at a published email address and by response on the Forum to advise reasons for non-compliance of feeds and give basic advice on how compliance can be achieved.

The supplier will feed back basic performance data and notable user issues to the Open Referral organisation every three months or, if it chooses, monthly.

7. Work scope

The supplier will develop the Validator and Dashboard within one month of them being commissioned. They will be available for beta review, fixes, minor revisions and acceptance testing for a further month before release live.

As part of the development process, the supplier will provide sample layouts of the web pages for both tools for review and acceptance by the Open Referral organisation.

Source code will be placed in the Open Referral Github repository under the Creative Commons Attribution 4.0 International (CC BY 4.0) license.

Prospective suppliers will be asked to quote for the work scope in parts which may be commissioned separately or together. This will allow for more complicated costly parts of the scope to be excluded if necessary.