

Tripoli: Presentation API Validation

Alex Parmentier

a.g.parmentier@gmail.com

Andrew Hankinson

andrew.hankinson@bodleian.ox.ac.uk

Ichiro Fujinaga

ichiro.fujinaga@mcgill.ca

Distributed Digital Music Archives and Libraries Lab, CIRMMT, Schulich School of Music, McGill University
Bodleian Libraries, University of Oxford

Overview

Tripoli is a IIIF manifest validator designed to identify issues with manifests and handle validation failures through customizable failure modes.

In developing a search engine for IIIF manifests, we were often presented with manifests that were invalid, but not always unreadable.

The errors in encoding were often systematic so, once identified, they could be ignored or fixed “on the fly” to yield a usable manifest.

Tripoli provides a flexible validation system that can be configured to be as strict or as lenient as necessary while ensuring minimally-viable manifests.

```
>>> curl "https://validate.musiclibs.net/?manifest=${MANIFEST_URL}" -H "Accept: application/json"
{
  "errors": [
    "Error: '@context' must be set to 'http://iiif.io/api/presentation/2/context.json' @ data['@context']",
    "Error: URI is not valid: 'http://webpage.org' @ data['@context']",
    "Error: '@context' field not allowed in embedded sequence. @ data['sequences']['@context']",
    "Error: Key 'on' is required in 'annotation' @ data['sequences']['canvases']['images']['on']",
    "Error: If field contains HTML, it must start with character '<'. @ data['attribution']",
    "Error: Forbidden tag '<style>' in html. @ data['description']"
  ],
  "is_valid": false,
  "manifest_url": "${MANIFEST_URL}",
  "warnings": [
    "Warning: thumbnail SHOULD be IIIF image service. @ data['thumbnail']",
    "Warning: manifest SHOULD have description field. @ data['description']",
    "Warning: logo SHOULD be IIIF image service. @ data['logo']",
    "Warning: Unknown key '@context' in 'sequence' @ data['sequences']['@context']",
    "Warning: Unknown key '@context' in 'annotation' @ data['sequences']['canvases']['images']",
    "Warning: SHOULD upgrade to 2.0 IIIF image service. @ data['sequences'][0]['canvases'][0]['images']",
    "Warning: Unknown key '@context' in 'sequence' @ data['sequences'][0]['@context']"
  ]
}
```

Figure 1. API Validation

Project Goals

- Assist developers in producing robust and valid IIIF Presentation API manifests.
- Enable IIIF discovery services to parse, correct, and index manifests even when they contain errors.
- Generate errors and warnings that are detailed and helpful, and capture as many of the rules of the API as possible.
- Allow customizable validation behaviours.
- Integrate into new and existing discovery service workflows.

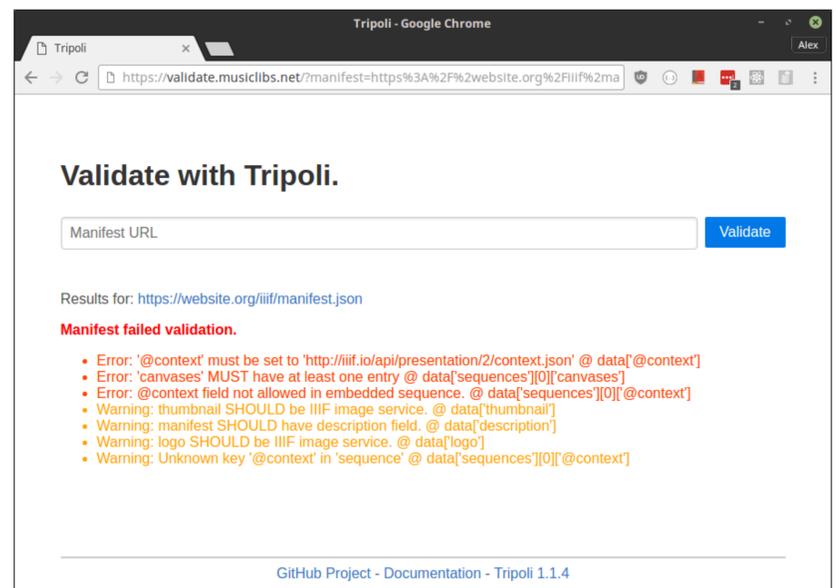


Figure 2. Online validator at <https://validate.musiclibs.net>

Features

- Easy to install with `pip install tripoli`.
- Online API and web interface.
- Find all issues in one pass or stop at the first. For use in an extensive debugging workflow or as an efficient production-ready validation step.
- Violations of requirements in the API ('MUST') or recommendations ('SHOULD') are presented as Errors and Warnings, respectively.
- Over 350 error and warning checks.
- Automatically correct systematic errors in manifests through customized validation behaviours.
- Validate entire manifests or individual sequences, canvases, or annotations.
- Open-source and MIT licensed.

Try it out

<https://validate.musiclibs.net>

Acknowledgments

This project was supported by the Social Sciences and Humanities Research Council of Canada.

