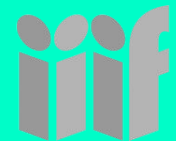


# EXPERIMENTAL IIIF KITCHEN USING ARCHIPELAGO

COMMUNITY COOKBOOKS, FAMILY RECIPES AND SERENDIPITOUS MANIFEST BAKING USING A  
FULLY STOCKED KITCHEN AND YOUR OWN FRESH INGREDIENTS

[DOCS.ARCHIPELAGO.NYC/](https://docs.archipelago.nyc/)  
[GITHUB.COM/ESMERO](https://github.com/esmero)

Workshop Session for IIIF Annual Conference June 2023  
Presented by Allison Sherrick and Diego Pino Navarro  
Metropolitan New York Library Council



# WORKSHOP AGENDA

- HOUSEKEEPING
  - LOCAL OR SHARED DEPLOYMENT
- ARCHIPELAGO OVERVIEW
- LIVE EDITING SHOWCASE
- INTERMISSION (ESPRESSO DOPPIO)
- HANDS-ON ARCHIPELAGO WORK + LOCAL DEPLOYMENT TROUBLESHOOTING
  - INGEST YOUR OWN OBJECT
  - TEST AN EXISTING RECIPE AGAINST YOUR OWN METADATA



# ARCHIPELAGO

- Development home at the Metropolitan New York Library Council (METRO)

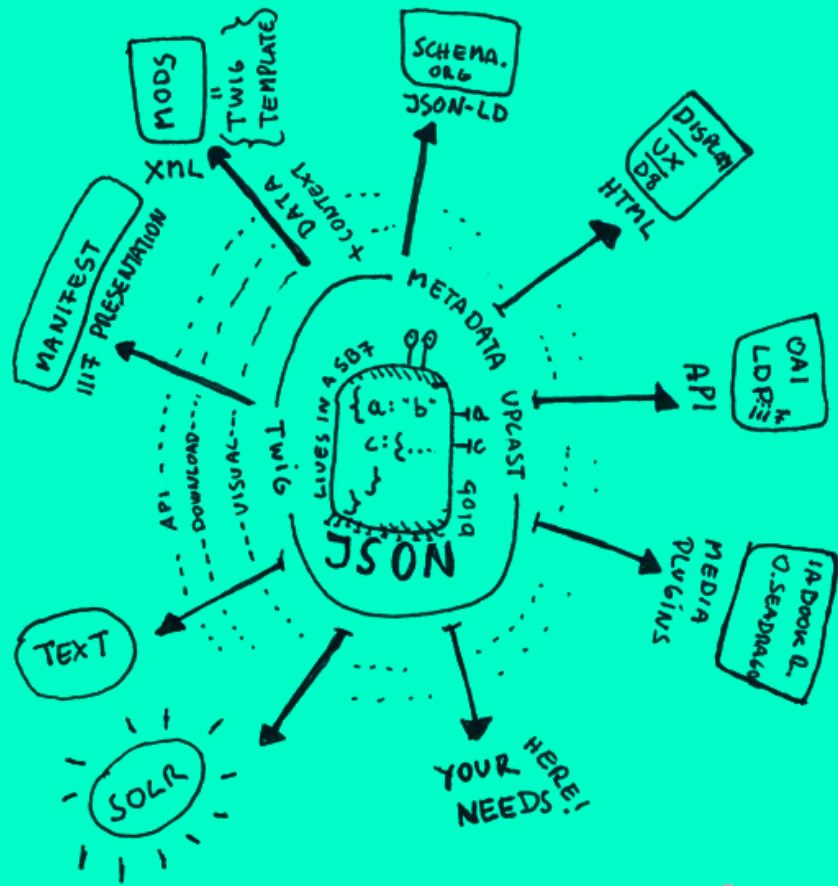
- Slim, empathic, smart **open source** repository software built on top of Drupal 9/10
- **Dockerized** Deployment
- Curated list **Community built software/services**
- Our Custom **Strawberry Field modules**



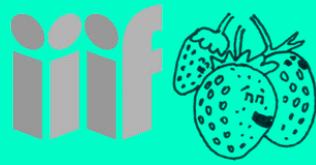
# ARCHIPELAGO AND IIIF (BEST FRIENDS)

Infinite Schemas! Infinite  
APIs.

Unified Source of (meta)data to  
build/learn/explore on



ARCHIPELAGO IS A REPOSITORY  
BUT IT IS ALSO A (META)DATA  
SYNTHESIZER ( **b** #BASS LINE HERE)  
AND A *PERFECT* IIIF API PLAYGROUND

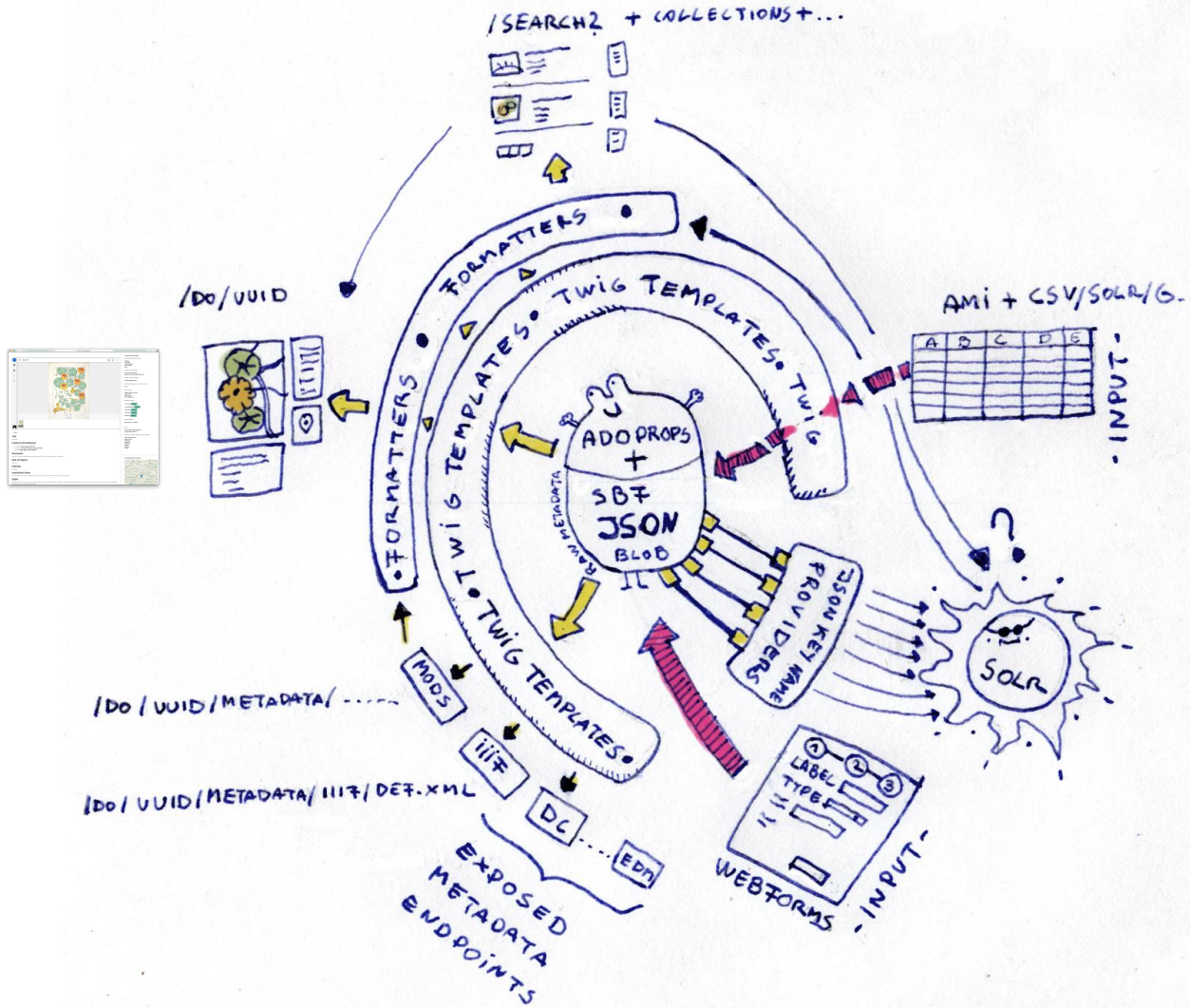


ARCHIPELAGO AND *IIIF* COOKBOOK

SHARE MOTIVATIONS

ARCHIPELAGO = LOCAL SOURCED  
INGREDIENTS + EVOLVING RECIPES  
COOKBOOK = FIXED INGREDIENTS +  
PROVEN RECIPES





# ARCHIPELAGO IS:

Custom Drupal Modules that take care of the complete ADO Lifecycle

- **Strawberry Field** (Everything data logic/persistence/API)
  - **Webform Strawberry Field** (UI/UX {Meta}data Editing)
  - **Format Strawberry Field** (UI/UX {Meta}data Display)
  - **Archipelago Multi-Importer** (AMI - Batch Ingest, Updates, and Deletions)
  - **Strawberry Runners** (Post-processing Queues)
-



# ARCHIPELAGO HAS:

A way of **Deploying** and **Running**

- A well defined choice of Services (Web/DB/File Storage/Media Access/Discovery)
- A *Docker Compose* ensemble
- A set of pure Drupal Configurations to get started
- A guide from Zero to Running

---



## CANNED FOOD METADATA PARADIGM

You can heat it

You can eat it

Still MODS

(or still structured, slow Drupal)



## INGREDIENTS + RECIPE(S)

What you already have in your fridge

Recipes can get better

Worst case scenario: it tastes like

**canned food the first time**

The screenshot displays the 'studio.archipelago.nyc' web application. The main window shows a botanical illustration of Nasturtium (Nasturtium officinale) with yellow flowers and green leaves. The illustration is titled 'Nasturtium' and is part of a collection. The interface includes a sidebar with navigation icons and a main content area with a detailed view of the illustration. Below the illustration, there is a metadata section with various fields and values.

**Title**  
Nasturtium

**Creator(s)/Contributor(s)**

- Contributor: Grasset, Eugène, 1841-1917
- Contributor: Verneuil, M. P. (Maurice Pillard), 1869-1942
- Provider: Magyar Képzőművészeti Egyetem

**Description**  
Plate 40. La Plante et ses applications ornementales, Paris : Librairie Centrale des Beaux-Arts, [1896]. I.

**Date of Original**  
1896-01-01

**Publisher**  
Europeana

**Institutional Owner**  
Schola Graphidis Art Collection, Hungarian University of Fine Arts - High School of Visual Arts, Budapest, Hungary

**Rights**  
Plate 40. La Plante et ses applications ornementales, Paris : Librairie Centrale des Beaux-Arts, [1896]. I. © Schola Graphidis Art Collection, Hungarian University of Fine Arts - High School of Visual Arts, Budapest  
<http://creativecommons.org/licenses/by-sa/4.0/>

**Linked Data for this Object**

Library Of Congress subjects

Drawings  
Art nouveau  
Floral decorations  
Art and biology  
Plants

LCNAP Personal Names  
Grasset, Eugène, 1841-1917  
Verneuil, M. P. (Maurice Pillard), 1869-1942

LCNAP Corporate Names

Library Of Congress Genre/Formal Terms

Plants

Getty terms

Modern Style (Art Nouveau)  
green flower  
pattern books  
chromolithography

Wikidata Subjects

Art Nouveau [Wikidata](#)  
chromolithography [Wikidata](#)  
switch book [Wikidata](#)  
19th century [Wikidata](#)  
Nasturtium [Wikidata](#)

Wikidata Agents

Eugène Grasset contributor

VIAP  
Verneuil, Maurice Pillard, 1869-1942  
Grasset, Eugène, 1841-1917

Europeana Entities Agent, Concepts, Places

Maurice Pillard Verneuil  
Eugène Grasset  
Art Nouveau  
Applied arts  
Color prints  
Drawing  
Hungary  
Hungary

Geocoded data for this Object

```
{
  "type": "VisualArtwork",
  "viaf": [
    {
      "uri": "https://viaf.org/viaf/61719849",
      "label": "Verneuil, Maurice Pillard, 1869-1942",
      "uri": "https://viaf.org/viaf/95179440",
      "label": "Grasset, Eugène, 1841-1917"
    },
    {
      "label": "Nasturtium",
      "owner": "Schola Graphidis Art Collection, Hungarian University of Fine Arts - High School of Visual Arts, Budapest, Hungary",
      "audios": [],
      "images": [
        {
          "models": [
            "Plate 40. La Plante et ses applications ornementales, Paris : Librairie Centrale des Beaux-Arts, [1896]. I. © Schola Graphidis Art Collection, Hungarian University of Fine Arts, Budapest, Hungary"
          ],
          "http://creativecommons.org/licenses/by-sa/4.0/",
          "videos": [],
          "creator": [],
          "ap:task s": [
            {
              "ap:sortfiles": "natural",
              "as:image": [
                {
                  "urn:uid": "94F51717-e456-497f-a248-94283d07e9a8",
                  "url": "s3://42b/image-2064110-museu-providedch0-schola-graphidis-art-collection-hungarian-university-of-fine-arts-high-school-of-visual-arts-budapest-3739-94f51717-e456-497f-a248-94283d07e9a8.jpeg",
                  "name": "2064110_Museu_ProvidedCH0_Schola_Graphidis_Art_Collection_Hungarian_University_of_Fine_Art_s_High_School_of_Visual_Arts_Budapest_3738.jpeg",
                  "tags": [],
                  "type": "Image",
                  "dr:fid": "45",
                  "dr:for": "images",
                  "dr:uid": "94F51717-e456-497f-a248-94283d07e9a8",
                  "checksum": "42bead4f661f257e91ab943b93848395",
                  "flv:ext": "ISO",
                  "100": "Flash",
                  "0ff": "Did not Fire",
                  "Model": "DMC-FZ62",
                  "Format": "image/jpeg",
                  "Marked": true,
                  "Rights": "© Schola Graphidis Art Collection, Hungarian University of Fine Arts - High School of Visual Arts, Budapest, Hungary; © Schola Graphidis Művészeti Gyűjtemény, MKE - Képző- és Iparművészeti Szakközépiskola, Budapest",
                  "Aperture": "3.2",
                  "Contrast": "Normal",
                  "FileSize": "961 kB",
                  "MIMEType": "image/jpeg",
                  "ColorMode": "RGB",
                  "ImageSize": "921x1300",
                  "Sharpness": "Normal",
                  "ColorSpace": "sRGB",
                  "DocumentID": "xmp.did:13194F60C3FEE41184C68AA9477FB178",
                  "ImageWidth": "921",
                  "InstanceID": "xmp.iid:86F6BC06E769E611B227D7CBC607BE6B",
                  "Saturation": "Normal",
                  "UsageTerms": "",
                  "XMPToolkit": "Adobe XMP Core 5.3-c011 66.145661, 2012/02/06-14:56:27 CS6 (Windows)",
                  "DateCreated": "2015:05:11 14:01:58+02:00",
                  "FocalLength": "9.2 mm",
                  "HistoryWhen": "0": "2015:05:20 09:40:12+02:00", "2": "2016:08:24 12:39:30+02:00", "ImageHeight": "1300", "MetadataDate": "2016:08:24 12:39:30+02:00", "MeteringMode": "Multi-segment", "ShutterSpeed": "1/50", "WhiteBalance": "Manual", "HistoryAction": "created", "saved": true, "HistoryChanged": ["/"], "ICCProfileName": "sRGB IEC61966-2.1", "DateTimeOriginal": "2015:05:11 14:01:58", "LegacyIPTCDigest": "B20186507B82F6070DA34B42356B723B5", "HistoryInstanceID": "xmp.iid:13194F60C3FEE41184C68AA9477FB178", "xmp.iid:14194F60C3FEE41184C68AA9477FB178", "xmp.iid:86F6BC06E769E611B227D7CBC607BE6B", "OriginalDocumentID": "xmp.did:13194F60C3FEE41184C68AA9477FB178", "ExposureCompensation": "0", "HistorySoftwareAgent": "0": "Adobe Photoshop CS4 Windows", "2": "Adobe Photoshop CS6 (Windows)", "sequence": "1", "flv:pronom": "Raw JPEG Stream", "mimetype": "image/jpeg", "pronom_id": "info:pronom/fmt/41", "detection_type": "signature", "dr:mimetype": "image/jpeg", "crypHashFunc": "md5", "flv:identif": "1": {"width": "921", "format": "JPEG", "height": "1300", "orientation": "TopLeft"}}, {"duration": "", "ispartof": [], "language": ["English", "French", "Hungarian"], "documents": [
          {
            "agent": "http://www.wikidata.org/entity/Q524154",
            "role_uri": "http://www.wikidata.org/entity/Q20264892",
            "name_label": "Eugène Grasset",
            "role_label": "contributor",
            "publisher": "Europeana",
            "name_label": "25",
            "issue_info": [],
            "creator": "http://id.loc.gov/authorities/names/n79007017",
            "role_uri": "http://id.loc.gov/vocabulary/relators/ctb",
            "agent_type": "personal",
            "name_label": "Grasset, Eugène, 1841-1917",
            "role_label": "Contributor",
            "name_uri": "http://id.loc.gov/authorities/names/n80150247",
            "role_uri": "http://id.loc.gov/vocabulary/relators/ctb",
            "agent_type": "personal",
            "name_label": "Verneuil, M. P. (Maurice Pillard), 1869-1942",
            "role_label": "Contributor",
            "name_uri": "http://id.loc.gov/authorities/names/nr2006006994",
            "role_uri": "http://id.loc.gov/vocabulary/relators/prv",
            "agent_type": "corporate",
            "name_label": "Magyar Képzőművészeti Egyetem",
            "role_label": "Provider",
            "description": "Plate 40. La Plante et ses applications ornementales, Paris : Librairie Centrale des Beaux-Arts, [1896]..
          }
        ]
      }
    }
  ]
}
```

## Rendered Representation of an ADO

## The ADO

(fear not. You don't need to write JSON)

# RAW JSON from an ADO (snippet)

```
"as:image": {
  "urn:uuid:94f51717-e456-497f-a248-a4283d07c9a8": {
    "url": "s3://42b\\image-2064110-museu-providedcho_schola-graphidis-art-collection-hungarian-university-of-fine-arts-high-school-of-visual-f-a248-a4283d07c9a8.jpeg",
    "name": "2064110_Museu_ProvidedCHO_Schola_Graphidis_Art_Collection_Hungarian_University_of_Fine_Arts_High_School_of_V",
    "tags": [],
    "type": "Image",
    "dr:fid": 45,
    "dr:from": "images",
    "dr:uuid": "94f51717-e456-497f-a248-a4283d07c9a8",
    "checksum": "42bead4f661f257e91ab943b9384839a",
    "flv:exif": {
      "ISO": 100,
      "Flash": "Off, Did not fire",
      "Model": "DMC-FZ62",
      "Format": "image/jpeg",
      "Marked": true,
      "Rights": "\u0009 Schola Graphidis Art Collection, Hungarian University of Fine Arts High School of Visual Arts, B",
      "Aperture": 3.2,
      "Contrast": "Normal",
      "FileSize": "961 kB",
      "ImageWidth": 921,
      "Saturation": "Normal",
      "UsageTerms": "",
      "DateCreated": "2015:05:11 14:01:58+02:00",
      "FocalLength": "9.2 mm",
      "HistoryWhen": [{"x": 0, "y": 0}],
      "ImageHeight": 1300,
      "MetadataDate": "2016:08:24 12:39:38+02:00",
      "MeteringMode": "Multi-segment",
      "ShutterSpeed": "1\u207c50",
      "WhiteBalance": "Manual",
      "HistoryAction": [{"x": 0, "y": 0}],
      "HistoryChanged": [{"x": 0, "y": 0}],
      "ICCProfileName": "sRGB IEC61966-2.1",
      "DateTimeOriginal": "2015:05:11 14:01:58",
      "LegacyIPTCDigest": "B20186507B82F670DA34B42356B723B5",
      "OriginalDocumentID": "xmp.did:13194F60C3FEE41184C68AA9477FB178",
      "ExposureCompensation": 0,
    },
    "sequence": 1,
    "flv:pronom": {
      "label": "Raw JPEG Stream",
      "mimetype": "image/jpeg",
      "pronom_id": "info:pronom/fmt/v41",
      "detection_type": "signature"
    },
    "dr:mimetype": "image/jpeg",
    "crypHashFunc": "md5",
    "flv:identify": [{"x": 0, "y": 0}],
  },
  "duration": "",
  "ispartof": [],
  "language": [
    "English",
    "French",
    "Hungarian"
  ],
  "documents": [],
  "edm_agent": [
    {
      "agent": ""
    }
  ]
}
```

# IIIF Presentation API V3 Twig template

```
95 {% if attribute(data, 'memberof') %}
96 {% set currentnode = 'node/' ~ data.memberof %}
97 "within": "{{ url(currentnode) }}",
98 {% else %}
99 {% set currentnode = '<current>' %}
100 {% endif %}
101 "items": [
102 {% for page in attribute(data, 'as:image') %}
103 {% set cantaloupeid = IIIFserverurl ~ url|replace({'s3://': ''})|replace({'private://': ''})|url_encode %}
104 {% if page["flv:exif"] %}
105 {% set width = page["flv:exif"].ImageWidth %}
106 {% set height = page["flv:exif"].ImageHeight %}
107 {% set thumb_width = width < max_thumb_width ? width : max_thumb_width %}
108 {% set thumb_height = (thumb_width/thumb_width * height)|round() %}
109 {% set thumbnail = page["flv:exif"].ImageHeight %}
110 {% else %}
111 {% set width = 1200 %}
112 {% set height = 1600 %}
113 {% endif %}
114 {% set thumb_width = width < max_thumb_width ? width : max_thumb_width %}
115 {% set thumb_height = (thumb_width/thumb_width * height)|round() %}
116 {% set thumbnail %}
117 "thumbnail": [
118 "id": "{{ cantaloupeid }}/full/{{thumb_width}},/0/default.jpg",
119 "type": "Image",
120 "format": "image/jpeg",
121 "width": {{ thumb_width }},
122 "height": {{ thumb_height }}
123 ],
124 {% endset %}
125 {
126 "id": "{{ nodeurl }}/iiif/canvas/p{{ loop.index }}",
127 "type": "Canvas",
128 "label": { "none": [ "p. {{ loop.index }}" ] },
129 {{ thumbnail }}
130 "height": {{ width }},
131 "width": {{ height }},
132 "items": [
133 {
134 "id": "{{ nodeurl }}/iiif/page/p{{ loop.index }}/1",
135 "type": "AnnotationPage",
136 "items": [
137 {
138 "id": "{{ nodeurl }}/iiif/annotation/p{{ loop.index }}",
139 "type": "Annotation",
140 "motivation": "painting",
141 {{ thumbnail }}
142 "body": {
143 "id": "{{ cantaloupeid }}/full/full,/0/default.jpg",
144 "type": "Image",
145 "format": "image/jpeg",
146 "service": [
```

# ARCHIPELAGO AND IIIF (BEST FRIENDS FOREVER)

- **All** Media (PDFs too) is Served via **Cantaloupe** (6.x)
- Internal IIIF Image API **mimics** for Direct File access (3D Models, Videos)
- **IIIF Viewers:** Mirador 3, OpenSeadragon, IABookreader, 3D, Panoramas, UV, leaflet
- **W3C Annotations** (Internal API) via Annotorious OSD
- **IIIF Geographic Extension**
- **HOCR** from Solr via [dbmdz/solr-ocrhighlighting](#)



# ARCHIPELAGO AND

# IIIF (FUTURE)

- IIIF Search API (2023)
- IIIF 3D Manifests (three.js)
- IIIF Change Discovery API 1.0

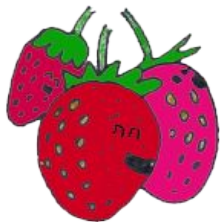
**IIIF V4? (no coding!)**



**Now:** GREATEST HITS AND SOME LIVE  
IMPROVISATION

- EDITING A IIIF MANIFEST TEMPLATE
- ARCHIPELAGO METADATA DISPLAY PREVIEW
- SAVING AND TESTING CHANGES LIVE IN  
MIRADOR





Contacts:

**Diego Pino Navarro**

*Archipelago's Lead Architect and  
A.D. for Digital Strategy at  
METRO*

**Allison Sherrick**

*Digital Projects & Services  
Manager*

**More Information at:**

<https://docs.archipelago.nyc>

**Guide to deploying your very  
own Archipelago at:**

<https://github.com/esmero/archipelago-deployment>

**Learn more about METRO at:**

<https://metro.org>

---