INSTALLATION AND CONFIGURATION OF THE ARK PLUGIN FOR OJS

Brief description

This guide serves as a support for the editors of scientific journals and managers of scientific journals who intend to use the ARK Persistent Identifier ("Archival Resource Key," archive resource keys) both in the articles, as well as the issues and the galleys in the OJS platform (Open Journal System)

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Main Concepts

What are ARKs?

ARKs ("Archival Resource Keys") are high-performance identifiers leading to things and descriptions of those things. For example:

https://n2t.net/ark/67531/metadc107835/

What is a resolver?

A resolver is a website that specializes in forwarding incoming identifiers (the ones that were originally advertised to users) to the websites that are best able to handle them. In general, forwarding is called resolution; One step in a resolution process is called a redirect.

For a resolver to work, its hostname (n2t.net or ark.bnf.fr) in the identifiers above should be chosen carefully so that it never needs to be changed. Memory organizations, some of them centuries old, tend to have hostnames suitable to be solvers. Some younger and better-known solvers are n2t.net (the ARK resolver), identifiers.org, doi.org, handle.net, and purl.org.

What do I need to create ARK?

First, you need a NAAN ("Name assigning authority number"), which is a number reserved exclusively for your organization. It should appear in every ARK that your organization assigns, right after the ark:/ tag. The NAAN in all these ARKs,

ark:/12148/btv1b8449691v/f29
http://ark.bnf.fr/ark:/12148/btv1b8449691v/f29
https://n2t.net/ark:/12148/btv1b8449691v/f29

is 12148, and uniquely identifies the National Library of France. Each NAAN is associated with a resolver URL for its ARKs, for example, to resolve the 12148 ARKs, add them to http://ark.bnf.fr/ as shown above. The N2T.net resolver is unusual in that it directs any ARK to the resolver registered under its NAAN.
What are the parts of an ARK?

**ARK ANATOMY**

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**Core Immutable Identity**

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\( / \)

Resolver Service Base Object Name Qualifiers

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\( / \)

**https://example.org/ark/12345/654xz321/s3/f8.05v.tiff**

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\( \) Label Sub-parts Variants

---

Name Mapping Authority (NMA) Assigned Name

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Name Assigning Authority Number (NAAN)

What do ARK, DOI, Handle, PURL, and URN have in common?

These are the main types of persistent identifiers (or schemas).

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://n2t.net/ark/99999/12345">https://n2t.net/ark/99999/12345</a></td>
<td>1. el protocolo (https://) más un nombre de host.</td>
</tr>
<tr>
<td><a href="https://doi.org/10.99999/12345">https://doi.org/10.99999/12345</a></td>
<td>2. solo para ARK y URN, también hay una etiqueta (&quot;ark:&quot; o &quot;urn:&quot;),</td>
</tr>
<tr>
<td><a href="https://handle.net/10.99999/12345">https://handle.net/10.99999/12345</a></td>
<td>3. la autoridad de asignación de nombre (99999, 10.99999 o 99999), que es la</td>
</tr>
<tr>
<td><a href="https://purl.org/99999/12345">https://purl.org/99999/12345</a></td>
<td>organización o grupo que creó un identificador particular,</td>
</tr>
<tr>
<td>https://&lt;various&gt;/urn:99999:12345</td>
<td>4. y finalmente, el nombre o identificador local que asignó (12345).</td>
</tr>
</tbody>
</table>
Installing the Plugins for OJS

Installing the plugins in OJS from the Modules Gallery

1. Log in to OJS with a user with administrative or journal manager permissions.

2. Select a journal in which to install the plugin
   - *This step must be repeated for each journal in case multiple exist.*

3. Go to Website > Plugins > Plugins Gallery.
   
   *As shown in the following figures.*

4. In the Plugins Gallery search for the module called “ARK”.
   - *Repeat steps 4-6 to install the “Public Identifier Resolver” Module*

5. Click on the module and then click Install.

6. A confirmation message indicating that the plugin was installed correctly will show up.

7. Go to Installed Plugins and locate both installed modules:
   - ARK
   - PubId Resolver

8. Tick the Active checkbox.
   - *This step must be repeated for each module*
9. A confirmation message indicating that the plugin was activated correctly will show up.

**Installing the plugins in OJS manually**

OJS must be installed and running on our web server.

1. **Determine the version of OJS installed**
   
   1. Log in to the admin account
   
   2. Go to Management > System Information.

   As shown in the following figures.

   *For this guide, we will be using version 3.3.0.8, but the plugin to install is compatible with any version from 3.0 to 3.3.*

2. **Locate the version of the plugins according to the OJS version**
   
   1. Go to the ARK plugin repository

   - [https://github.com/yasielpv/pkp-ark-pubid](https://github.com/yasielpv/pkp-ark-pubid)
2. Go to Releases.

   As shown in the following figure.

3. Locate the appropriate version and expand Assets.
   - For OJS versions 3.0 and 3.1, download 3.1.
   - For OJS versions 3.2 and 3.3, download 3.3.

4. Download the package called `pkp-ark-pubid-ojs-[version].tar.gz`.
   The following figure shows the option to download for OJS 3.3.0.8.

1. Go to the Publd Resolver plugin repository
   - [https://github.com/yasielpv/publdResolver](https://github.com/yasielpv/publdResolver).
2. Go to Releases.

3. Locate the latest version and expand Assets.
   - In this case, there is only one version for OJS from 3.0.X to 3.3.X.

4. Download the package called pubIdResolver-[version].tar.gz.

3. **Install the plugins in OJS**

   1. Log in to OJS with a user with administrative or journal manager permissions.
   2. Select a journal in which to install the plugin
      - *This step must be repeated for each journal in case multiple exist.*
   3. Go to **Website > Plugins > Installed Plugins**
   4. Click on **Load a new plugin** and locate the file downloaded in the previous step.
      - *Repeat steps 4-6 to install the “Public Identifier Resolver” module*

   *As shown in the following figures*

5. Finish the installation by clicking **Save**.

6. A confirmation message indicating that the plugin was installed correctly will show up.

7. In **Installed Plugins** locate both installed modules:
   - ARK
   - PubId Resolver

8. Tick the **Active** checkbox.
   - *This step must be repeated for each module*
9. A confirmation message indicating that the plugin was activated correctly will show up.

The following figures show the modules already activate.

### ARK Plugin Configuration for OJS

To configure the ARK module:

1. Within the module go to **Settings**
   - For this option to appear, the module must be activated previously, as shown in the previous step.

   As shown in the following figure.

2. A configuration window with several sections will appear.

   See the section explanations below.

   **First Section: Journal Contents**

   The first configuration section consists of 3 checkboxes corresponding to each element (Issues, articles and galleys) to which ARK persistent identifiers can be assigned.
<table>
<thead>
<tr>
<th>Issues</th>
<th>An issue compendium of all the articles in a publication of a journal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assigning an ARK to an issue does not assign ARKs to your articles, but rather it assigns the issue as a whole</td>
</tr>
<tr>
<td>Articles</td>
<td>An article is each one of the works present in a publication of a journal</td>
</tr>
<tr>
<td></td>
<td>Articles are the ones that most commonly have persistent identifiers.</td>
</tr>
<tr>
<td>Galleys</td>
<td>A galley is each one of the different views or files that an article has.</td>
</tr>
<tr>
<td></td>
<td>The same article can have a galley in PDF, another in HTML, another in EPUB, etc. Galleys are often associated with the downloadable files of an article</td>
</tr>
</tbody>
</table>

### Second Section: The ARK prefix

The second section is the ARK prefix, this prefix is the unchanging part of the ARK address, it is usually provided by the ARK resolver and has the following format: `ark:/xxxxxxxxxxxxxxxxxxxx`. The ARK prefix is validated to be "betanumeric" from 1 to 16 characters in length, that is, it accepts any combination of the following characters with a length of 1 to 16: 0123456789bcdfghjkmnpqrstvwxz.

### Third Section: The ARK Suffix

The third section corresponds to the ARK suffix, which is the changing part of the ARK address, which varies depending on the type of element (issue, article or galley) that the ARK is assigned to. For this section, wildcards are used. See the wildcards explanations below.

This section has 3 settings.

- The first assigns ARK suffixes using default patterns:
  - `@j.v@vi%i` for issues,
  - `@jv@vi%i.%a` for articles
  - `@ jv@vi%i.%a.g%g` for galleys.

  For example:

  - For a journal with the initials "test", for issue 5, volume 2 would be assigned `test.v2.i5`.
  - The ARK suffix assigned to the article with ID 89, would be `test.v2.i5.a89`.
  - And for the galley with ID 6 of the previous article, the suffix would be `test.v2.i5.a89.g6`.

- The second, allows you to manually add each item’s ARK in its metadata.
  - This option is useful when the ARKs do not follow any pattern.
The third allows assigning user predefined patterns.

When this checkbox is ticked the text fields are activated.

It is important to clarify that only the boxes for those items selected in the first section of the present configuration will activate. The patterns are replaced by the values of each element depending on the wildcards used.

**Wildcards**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>%j</td>
<td>Journal Initials</td>
</tr>
<tr>
<td>%v</td>
<td>Volume Number</td>
</tr>
<tr>
<td>%y</td>
<td>Issue Year</td>
</tr>
<tr>
<td>%a</td>
<td>Article Id</td>
</tr>
<tr>
<td>%g</td>
<td>Galley Id</td>
</tr>
<tr>
<td>%f</td>
<td>File Id</td>
</tr>
<tr>
<td>%p</td>
<td>Page Number</td>
</tr>
<tr>
<td>%x</td>
<td>Custom Identifier</td>
</tr>
</tbody>
</table>

**Fourth Section: ARK Resolver URL**

The fourth section corresponds to the URL of the ARK resolver. It is recommended for it to be the local ARK resolver, although it can be any ARK resolver.

This URL will be concatenated with the ARK prefix and then the ARK suffix.

\[
\text{[Resolution URL]} + \text{[ARK prefix]} + \text{[ARK suffix]}.\]

The resolution URL must begin with `http://` or `https://`, followed by the address of the resolver, and end with `/`.

**Fifth Section: Reassigning ARKs**

The fifth section provides us with the option to Reassign ARKs, this deletes all the ARKs assigned in the OJS platform to issues, articles and galleys. Then they are automatically reassigned following the settings established in the previous steps. This option is recommended for when a configuration change is made in the plugin and all previously assigned ARKs must be deallocated.

After configuring the plugin, the configuration must be saved using the **Save** button.
Assigning an issue’s ARK

To assign an ARK to a journal issue:

1. Select the issue.
2. Click Edit.
3. Go to Identifiers and verify that the ARK matches the desired configuration
4. Tick the Assign the ARK checkbox
   - If the "Assign the ARK ark: //#####/#### to this issue" checkbox is not ticked, the ARK will not be assigned.
5. Click Save to assign the ARK to the issue.
   - Once saved, The assigned ARK is uneditable, but it can be deallocated.

Clear deallocates this issue’s ARK.

Clear Issue’s Objects ARKs, deallocates the ARKs associated with the articles and galleys that are assigned to this issue.
Assigning an article’s ARK

To assign an ARK for an article in a journal:

1. Select the article.
2. Click View.
3. Go to Publication > Identifiers.
   3.1. If the ARKs are automatically assigned, verify that the ARK matches the desired configuration.
   3.2. If the ARKs are manually assigned, the text field will be editable.
4. Click Assign.
5. Click Save to assign the ARK to the article.
   - Once saved, The assigned ARK is uneditable.

As shown in the following figure.
Assigning a galley’s ARK

To assign an ARK for a journal galley:

1. Select an article and click View.
2. Go to Publication > Galley.
3. Create a Galley and click Edit.
4. Go to Identifiers and verify that the ARK matches the desired configuration
5. Tick the Assign the ARK checkbox
   - If the "Assign the ARK ark://#####/##### to this galley" checkbox is not ticked, the ARK will not be assigned.
6. Click Save to assign the ARK to the issue.
   - Once saved, The assigned ARK is uneditable, but it can be deallocated.

![Image of Assigning a galley’s ARK interface](image-url)
Access the ARKs with the local resolver

The PubId Resolver Module resolves articles, issues and galleys using the persistent identifier registered in the system. It can be accessed in the following URL pattern:

http://localhost/index.php/myJournal/gateway/plugin/pubIdResolver/[pubId]

where:

- localhost is the name of the local server
- myJournal is the path to the journal.

The module must be active to respond to requests.

To activate the module, or ensure that you have the necessary permissions:

1. In the Journal Manager go to Installed Modules.
2. Under Gateway Modules locate PubId Resolver Module.
3. Tick the Activate checkbox.

The module accepts parameters after the given URL pattern in the following formats:

http://.../[doi]
http://.../[urn]
http://.../[purl]
http://.../[ark]

where [doi], [urn], [purl] and [ark] are strings that identify the persistent identifier of the desired content. For example:

ARK:

http://localhost/index.php/myJournal/gateway/plugin/pubIdResolver/ark:/12345/fk12345

DOI:


The item’s metadata can also be obtained using the ERC format by adding question marks to the end of the persistent identifier.

The ERC format includes who, what, when, where, how, and target metadata.

- Who is the creator of the article.
- What is the name of the article.
- When is the publication date of the article.
- Where is the persistent URL of the article.
- How is the format of the element.
- Target is the final URL of the element.
For example:

 who: Veloz Morales, Dargel; González Marrero, Laritza
 what: Selección de una red social para apoyar la docencia universitaria empleando computación con palabras
 when: 2021-09-30 00:00:00
 where: ark:/42411/s6/a47 (https://n2t.net/ark:/42411/s6/a47)
 how: (:mtype text) article
 _t: https://revistas.ulasalle.edu.pe/innosoft/article/view/47