

Open Data Citation for Social Sciences and Humanities

DARIAH's Humanities at Scale Winter School in Prague: 24th-28th October 2016
<http://datacite.hypotheses.org/>

Workshop



A brief introduction to NAKALA

Since many scientific data producers do not have the digital infrastructure to provide persistent and interoperable access to their data, Huma-Num has implemented a tool to expose research data called "NAKALA".

NAKALA provides mainly three types of services:

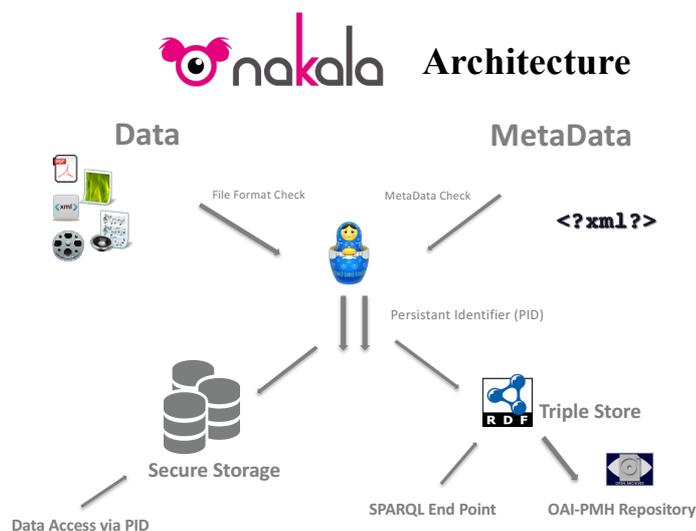
- A PID (Persistent Identifier) to data and metadata
- Permanent data access
- An exposition of metadata through a Triple Store and OAI-PMH

NAKALA is a simple repository for sharing resources:

- The main API is the Triple Store
- You can cite your Data and your MetaData
- Data and MetaData are immediately available

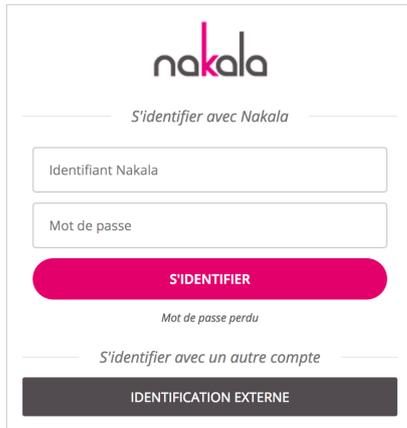
But if you wish to show your data, you need another application, not provided by NAKALA:

- A search Engine
- Tools for visualization



Data deposit in NAKALA

To connect to the NAKALA web interface, go to <http://www.nakala.fr/nakala>



The login form features the NAKALA logo at the top. Below it, the text "S'identifier avec Nakala" is centered. There are two input fields: "Identifiant Nakala" and "Mot de passe". A prominent pink button labeled "S'IDENTIFIER" is positioned below the password field. Underneath, there is a link for "Mot de passe perdu". At the bottom, the text "S'identifier avec un autre compte" is followed by a dark grey button labeled "IDENTIFICATION EXTERNE".

Use the identifier:

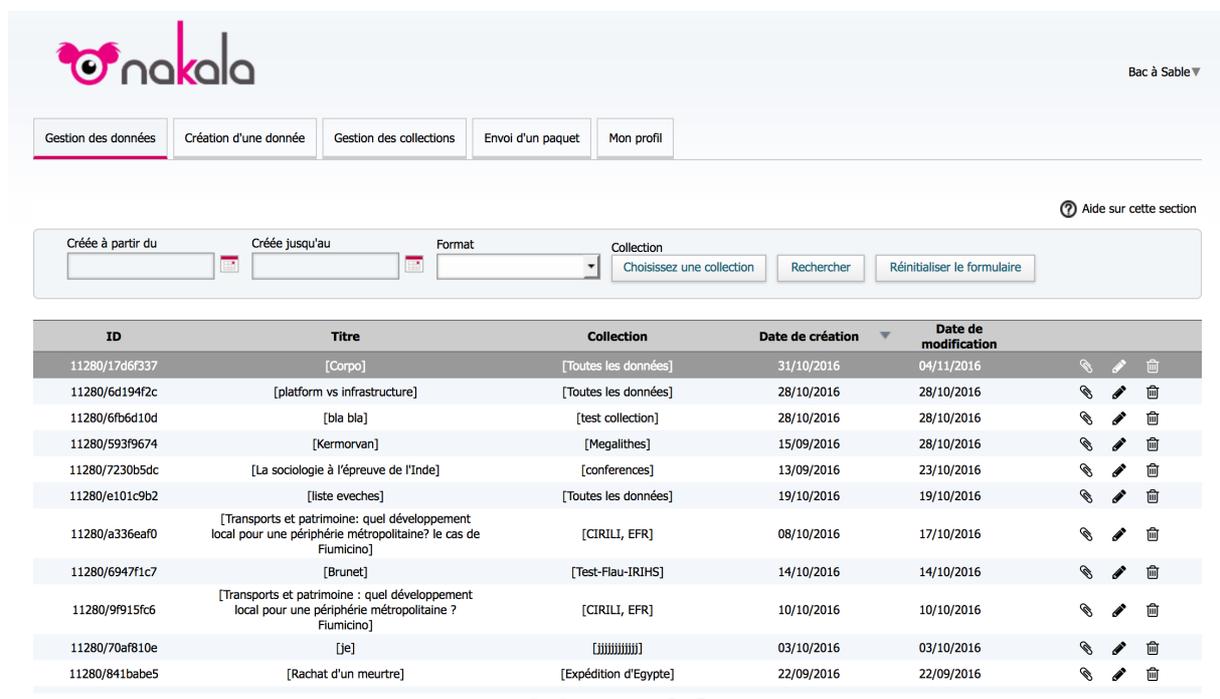
winter-school@has.dariah.eu or *winter-school-bis@has.dariah.eu* (in case someone else is already connected)

with the password:

winhasckool!

You are now connected to the NAKALA space "Bac à Sable" ("testbed" in English)

You can see a list of data already there. The left column contains the identifier (handle) of the resource.



The dashboard shows the NAKALA logo and the user's space "Bac à Sable". A navigation menu includes "Gestion des données", "Création d'une donnée", "Gestion des collections", "Envoi d'un paquet", and "Mon profil". A search bar allows filtering by "Créé à partir du", "Créé jusqu'au", "Format", and "Collection". Below the search bar is a table of data resources.

ID	Titre	Collection	Date de création	Date de modification	
11280/17d6f337	[Corpo]	[Toutes les données]	31/10/2016	04/11/2016	 
11280/6d194f2c	[platform vs infrastructure]	[Toutes les données]	28/10/2016	28/10/2016	 
11280/6fb6d10d	[bla bla]	[test collection]	28/10/2016	28/10/2016	 
11280/593f9674	[Kermorvan]	[Megalthes]	15/09/2016	28/10/2016	 
11280/7230b5dc	[La sociologie à l'épreuve de l'Inde]	[conferences]	13/09/2016	23/10/2016	 
11280/e101c9b2	[liste eveches]	[Toutes les données]	19/10/2016	19/10/2016	 
11280/a336eaf0	[Transports et patrimoine: quel développement local pour une périphérie métropolitaine? le cas de Fiumicino]	[CIRILI, EFR]	08/10/2016	17/10/2016	 
11280/6947f1c7	[Brunet]	[Test-Flau-IRIHS]	14/10/2016	14/10/2016	 
11280/9f915fc6	[Transports et patrimoine : quel développement local pour une périphérie métropolitaine ? Fiumicino]	[CIRILI, EFR]	10/10/2016	10/10/2016	 
11280/70af810e	[Je]	[jjjjjjjjjjjj]	03/10/2016	03/10/2016	 
11280/841babe5	[Rachat d'un meurtre]	[Expédition d'Egypte]	22/09/2016	22/09/2016	 

To make a deposit, choose the tab “Création d’une donnée” (data creation)

The screenshot shows the Nakala interface for creating a new data record. At the top left is the Nakala logo. On the right, there is a link 'Bac à Sable'. Below the logo is a navigation bar with five tabs: 'Gestion des données', 'Création d'une donnée' (highlighted), 'Gestion des collections', 'Envoi d'un paquet', and 'Mon profil'. Below the navigation bar is a link 'Aide sur cette section'. The main form is titled 'Création d'une nouvelle donnée'. It is divided into three sections: 'Fichier de données', 'Description Générique (dcterms)', and 'Description Spécifique Nakala'. The 'Fichier de données' section has a 'Parcourir...' button, the text 'Aucun fichier sélectionné.', and a 'Télécharger sur Nakala' button. The 'Description Générique (dcterms)' section contains fields for 'Titre', 'Créateur', 'Type', and 'Date de création', each with a text input, a 'lang' dropdown, and a 'type' dropdown. Below these is a dropdown menu currently set to 'abstract' with a green plus sign to its right. The 'Description Spécifique Nakala' section has a 'Droits' dropdown set to 'accès libre' and a 'Collection' dropdown with a 'Choisissez les collections' button.

Then upload a file (“Télécharger sur NAKALA”) and enter at least 4 metadata (Title, Creator, Type, Date). You can add more “dcterms” metadata fields by clicking on the “green +” sign after choosing the field type.

This screenshot shows the same Nakala form with data entered. The 'Fichier de données' section shows the file 'Has_colour-768x429.png' with a 'Supprimer' button. The 'Description Générique (dcterms)' section has the following entries: 'Titre' (Has Logo), 'Créateur' (DARIAH), 'Type' (Image), and 'Date de création' (04/11/2016), each with a 'la' label to its right. Below these is a dropdown menu set to 'abstract' with a green plus sign. Underneath, there is a text input field for 'abstract' containing the text 'Very abstract', also with a 'la' label to its right. The 'Description Spécifique Nakala' section has 'Droits' set to 'accès libre' and 'Collection' set to 'Toutes les données'.

Then click on “Envoyer” and that’s it!

You will receive a message with the identifier (handle “11280/31cbb722” in this case) of the resource created.



You can then see the new data in the list by clicking on the tab “Gestion de données” again.

ID	Titre	Collection	Date de création	Date de modification	
11280/31cbb722	[Has Logo]	[Toutes les données]	10/11/2016	10/11/2016	  
11280/17d6f337	[Corpo]	[Toutes les données]	31/10/2016	04/11/2016	  
11280/6d194f2c	[platform vs infrastructure]	[Toutes les données]	28/10/2016	28/10/2016	  
11280/6b6e4104	[Has Logo]	[Toutes les données]	28/10/2016	28/10/2016	  

You can edit your deposit (data & metadata), by clicking the “pen”.

Data reuse in NAKALA

You can access your file simply using the handle provided by NAKALA.

You have two possibilities:

- URI based on NAKALA domain name
- <http://www.nakala.fr/data/11280/31cbb722>
- URI based on handle domain name
- <http://hdl.handle.net/11280/31cbb722>

You can also access metadata with the following URI based on the same handle:

<http://www.nakala.fr/metadata/11280/31cbb722>

Has Logo at Nakala

<https://www.nakala.fr/data/11280/31cbb722>

rdf:type	▪ foaf:Document
dcterms:title	▪ Has Logo
dcterms:abstract	▪ Very abstract
dcterms:created	▪ 04/11/2016
dcterms:creator	▪ DARIAH
Is foaf:primaryTopic of	▪ < https://www.nakala.fr/resource/11280/31cbb722 >
dcterms:type	▪ Image

[As Turtle](#) | [As RDF/XML](#)

You can also access NAKALA internal metadata (resource) with the following URI based on the same handle:

<http://www.nakala.fr/resource/11280/31cbb722>

31cbb722 at Nakala

<https://www.nakala.fr/resource/11280/31cbb722>

rdf:type	▪ foaf:Document
skos:altLabel	▪ Has_colour-768x429.png
dcterms:identifier	▪ 11280/31cbb722
Is ore:aggregates of	▪ < https://www.nakala.fr/collection/11280/4123144a >
dcterms:extent	▪ 74495 (xsd:long)
ore:isAggregatedBy	▪ < https://www.nakala.fr/collection/11280/4123144a >
dcterms:issued	▪ 2016-11-10T16:49:32+01:00 (xsd:dateTime)
dcterms:modified	▪ 2016-11-10T16:49:32+01:00 (xsd:dateTime)
foaf:primaryTopic	▪ < https://www.nakala.fr/data/11280/31cbb722 >
dcterms:publisher	▪ < https://www.nakala.fr/account/11280/f1401838 >
foaf:sha1	▪ 06719f27030ec617662ab40431f027c7cad436e5

[As Turtle](#) | [As RDF/XML](#)

You can see that all NAKALA objects are identified by specific handles.

- NAKALA space (here the “Bac à Sable”)
- <http://www.nakala.fr/account/11280/f1401838>
- A collection
- <http://www.nakala.fr/collection/11280/4123144a>

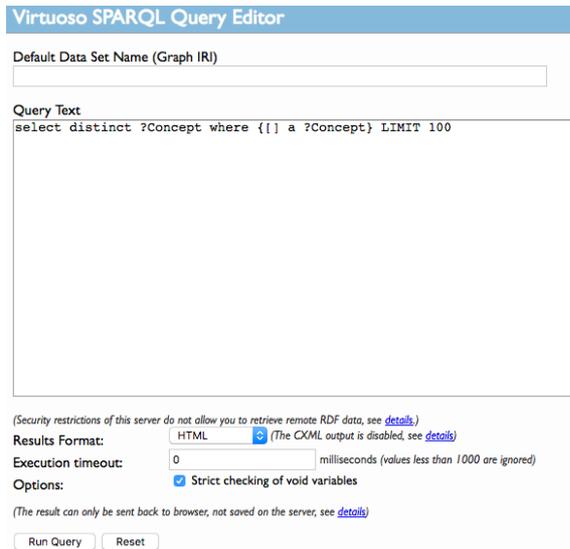
NAKALA API

NAKALA uses exclusively [Semantic Web](#) technologies to store and manage information. Therefore the “natural” API is a [SPARQL](#) EndPoint associated to NAKALA’s [TripleStore](#),

You can access the SPARQL EndPoint with the following URI:

<http://nakala.fr/sparql/>

where you can enter queries.



The screenshot shows the Virtuoso SPARQL Query Editor interface. At the top, there is a blue header with the text "Virtuoso SPARQL Query Editor". Below the header, there is a text input field for "Default Data Set Name (Graph IRI)". Underneath that is a section for "Query Text" containing a text area with the query: `select distinct ?Concept where {[] a ?Concept} LIMIT 100`. Below the query text area, there are several configuration options: "Results Format" set to "HTML", "Execution timeout" set to "0", and "Options" with a checked box for "Strict checking of void variables". At the bottom, there are two buttons: "Run Query" and "Reset".

Another way to access the Triple Store content is simply to use NAKALA’s URIs which are “dereferencable”: this was done using the same software as DBPedia.

As an example, you can try it with the NAKALA space URI of “Bac à Sable”

<http://nakala.fr/account/11280/f1401838>

By following links, you can finally retrieve your deposit.

You can enter the following queries in the SPARQL editor (<http://nakala.fr/sparql/>)

The predefined query is

```
SELECT distinct ?Concept
WHERE
{[] a ?Concept}
LIMIT 100
```

The result is a list of different types of concepts stored in the NAKALA TripleStore. Generally, this is the first step to take when you want to discover the content of a TripleStore.

Concept
http://www.w3.org/2004/02/skos/core#Concept
http://www.w3.org/2004/02/skos/core#ConceptScheme
http://xmlns.com/foaf/0.1/Agent
http://xmlns.com/foaf/0.1/Document

Then you may want to see all objects of the type
“<<http://xmlns.com/foaf/0.1/Agent>>“

```
SELECT ?objects
  WHERE {
    ?objects rdf:type <http://xmlns.com/foaf/0.1/Agent> .
  }
```

objects
http://www.nakala.fr/account/11280/14fa8bf4
http://www.nakala.fr/account/11280/334034dd
http://www.nakala.fr/account/11280/e2837bfe
http://www.nakala.fr/account/11280/f11c44e1
http://www.nakala.fr/account/11280/67481ef7
http://www.nakala.fr/account/11280/ebabe5fa
http://www.nakala.fr/account/11280/689e2bea
http://www.nakala.fr/account/11280/8801eda3

Then you can “ follow the graph” by querying all the objects linked to the NAKALA space “Bac à Sable” (which is an “Agent”) identified by the URI.
<<http://www.nakala.fr/account/11280/f1401838>>

```
SELECT ?things
WHERE
{ ?things ?linked
<http://www.nakala.fr/account/11280/f1401838> .
}
```

things
http://www.nakala.fr/scheme/11280/4d1a0e5c
http://www.nakala.fr/resource/11280/b752c58a
http://www.nakala.fr/resource/11280/2eb2db03
http://www.nakala.fr/resource/11280/8abe7b99
http://www.nakala.fr/resource/11280/49e9396c
http://www.nakala.fr/resource/11280/ce1564b9
http://www.nakala.fr/resource/11280/7c0dd5be
http://www.nakala.fr/resource/11280/d819837c
http://www.nakala.fr/resource/11280/8121462d
http://www.nakala.fr/resource/11280/53522bfc
http://www.nakala.fr/resource/11280/8b653206
http://www.nakala.fr/resource/11280/58a74332
http://www.nakala.fr/resource/11280/450fdb59
http://www.nakala.fr/resource/11280/aa084f00

Afterwards, you can query all the objects linked to your deposit identified by the URI:
 <http://www.nakala.fr/data/11280/31cbb722>
 In this case, the external metadata that you entered

```
SELECT ?objects
WHERE
{<http://www.nakala.fr/data/11280/31cbb722> ?linked ?objects.
}
```

objects
http://xmlns.com/foaf/0.1/Document
"04/11/2016"
"Very abstract "
"DARIAH"
"Has Logo"
"Image"

Or objects related to your deposit. In this case, internal NAKALA metadata.

```
SELECT ?objects
WHERE
{?objects ?related <http://www.nakala.fr/data/11280/31cbb722>.
}
```

objects
http://www.nakala.fr/resource/11280/31cbb722

To discover more of the Triple Store content, you can use the NAKALA Data Model:

