

6 November 2023

Metadata services: Changes in RDF format from 6 February 2024 (Export Release 2024.01)

1. Release schedule

In accordance with the German National Library's (DNB) release planning for export formats¹, the next change in the conversion and data modelling will take place on 6 February 2024. There may be disruptions to the interfaces and the Data Shop between 08:00 and 12:00 noon during the technical changeover.

2. Linked Data Service in general

2.1. Full copies

Following the export releases, it is expected that updated full copies of the Integrated Authority File (GND²) and the DNB's bibliographic data will be made available for download in the serialisation formats RDF/XML, Turtle, JSON-LD, as an HDT file³ and in N-Triples as of March, June/July and October/November.⁴

Metadata provenance dump deliveries are effected at the same intervals. The provenance information is modelled along the lines of PROV Ontology⁵ and published in the form of a separate data copy. Additional information regarding planning, documentation and modelling is available on the DNB Wiki⁶.

¹ <https://wiki.dnb.de/x/wgcbBQ> (in German language only)

² <https://www.dnb.de/EN/gnd>

³ Header, Dictionary, Triples; <https://www.rdfhdt.org/what-is-hdt/>

⁴ <https://data.dnb.de/opendata/>

⁵ <https://www.w3.org/TR/prov-o/>

⁶ <https://wiki.dnb.de/x/46G5C> (in German language only)

Full copies of the bibliographic data from the German Union Catalogue of Serials (ZDB)⁷ and the Adress data of the German ISIL- and Library Codes Agency⁸ will be updated in March and October/November.

The full copy for Entity Facts⁹ is released monthly, albeit only in the format JSON-LD.

The full copies of the GND cross-concordances are updated once a year in October/November.

2.2. Prefixes used in this document

gndo:	https://d-nb.info/standards/elementset/gnd
skos:	https://www.w3.org/2004/02/skos/core#

3. Publication of RDF vocabularies

In addition to the announcement of changes in RDF format, a dated preliminary version of the RDF vocabulary "GND Ontology" will also appear after being aligned with the release planning.

The preliminary version for release 2024.01 can be accessed at:

https://d-nb.info/standards/elementset/gnd_20240206	(GND Ontology)
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3.1. Changes in vocabulary "GND-Ontology"

3.1.1. Modelling of using instructions: addition of property gndo:usingInstructions

- | Improvement:
A new datatype property `gndo:originalScriptNameOfThePerson` has been set up as a means of referencing variant names in the original script and language. Matching language tags were used for this purpose.

4. Changes in GND conversions

- | Improvement:
For the GND entity "Person", variant names are marked and delivered in the original script and language. The language tags are formed using IETF BCP 47;¹⁰ they indicate that the variant name is available in xx language and yy script. If the language is unknown, the code "und" is used for "undefined" and delivered together with the code for the script.

⁷ <https://zeitschriftendatenbank.de/startseite>

⁸ <https://sigel.staatsbibliothek-berlin.de/en>

⁹ <https://www.dnb.de/EN/entityfacts>

¹⁰ https://en.wikipedia.org/wiki/IETF_language_tag ; <https://www.iana.org/assignments/language-subtag-registry/language-subtag-registry>

Example in Turtle: language known

```
<https://d-nb.info/gnd/118839810> gndo:originalScriptNameOfThePerson "תּוֹרָה"@he .
```

Example in Turtle: language unknown

```
<https://d-nb.info/gnd/113448007> gndo:originalScriptNameOfThePerson "กิตติศักดิ์  
ปรกติ"@und-Thai .
```

Examples in the test file:

```
https://d-nb.info/gnd/118839810  
https://d-nb.info/gnd/113448007  
https://d-nb.info/gnd/102835470  
https://d-nb.info/gnd/136163394  
https://d-nb.info/gnd/1068497580
```

| Improvement:

For the GND entity "Person", relationships to person or families not referenced by a GND ID are generated for purposes of identification. These entities are delivered in the form of blank nodes. Example in Turtle:

```
<https://d-nb.info/gnd/124537359> gndo:acquaintanceshipOrFriendship _:node123 .  
_:node123 gndo:forname "Johannes Adam " ; gndo:surname "Lonicer" .
```

Examples in the test file:

```
https://d-nb.info/gnd/124537359  
https://d-nb.info/gnd/11962740X  
https://d-nb.info/gnd/121328406  
https://d-nb.info/gnd/116001305  
https://d-nb.info/gnd/101100809
```

| New feature:

This release is also the first to provide semantic relations (equivalences only) between GND descriptors (all entities) and several other thesauri (AGROVOC¹¹, EMBNE¹², LCSH¹³, MeSH, NSogg¹⁴, RAMEAU¹⁵ and TheSoz¹⁶) in the GND dump; these will be updated every year in October/November.

The terms and the relationships between them are described using SKOS¹⁷ (Simple Knowledge Organization System).

The SKOS relations to STW¹⁸ descriptors are already delivered in this format for GND subject headings; this release will provide them for all other GND entities.

The cross-concordances between the standardised GND vocabularies and the external thesauri available in these dumps were generated intellectually, in some cases with the support of machine-based processes (EMBNE).

The authority data linked in this way allows for (multilingual) meta searches in library catalogues and portals besides supporting external data imports and automatic indexing procedures.

Examples in Turtle:

¹¹ <https://agrovoc.fao.org/>

¹² <https://datos.bne.es/>

¹³ <https://id.loc.gov/authorities/subjects>

¹⁴ https://thes.bncf.firenze.sbn.it/index_eng.html

¹⁵ <https://rameau.bnf.fr/>

¹⁶ <https://lod.gesis.org/thesoz/en/>

¹⁷ <https://www.w3.org/TR/skos-reference/>

¹⁸ <https://zbw.eu/stw/version/latest/about.en.html>

<<https://d-nb.info/gnd/4060485-8>> skos:exactMatch
<http://aims.fao.org/aos/agrovoc/c_8021> .

<<https://d-nb.info/gnd/4040280-0>> skos:closeMatch
<<http://id.loc.gov/authorities/subjects/sh85087285>>,
<<http://data.bnf.fr/ark:/12148/cb11982810h>>,
<<http://datos.bne.es/resource/XX532617>> ;

<<https://d-nb.info/gnd/118535315>> skos:exactMatch
<http://lod.gesis.org/thesoz/concept_10044342> ;

Examples in the test file:

<https://d-nb.info/gnd/118535315>
<https://d-nb.info/gnd/118812432>
<https://d-nb.info/gnd/4040280-0>
<https://d-nb.info/gnd/4315200-4>
<https://d-nb.info/gnd/1265150281>
<https://d-nb.info/gnd/4060485-8>
<https://d-nb.info/gnd/4002924-4>
<https://d-nb.info/gnd/4137380-7>

5. Test data and further information

The following test files, including the announced changes, can be accessed in the serialisation formats RDF/XML, Turtle and JSON-LD by visiting <https://data.dnb.de/testdat/> :

| „GNDTestRelease2024_01 ...“ for the GND authority data

All the information regarding the German National Library’s Linked Data Service can be found on our website¹⁹.

If you have any questions please do not hesitate to mail us at metadatendienste@dnb.de.

Yours faithfully

on behalf of Deutsche Nationalbibliothek (German National Library)

Tracy Arndt (Information Infrastructure)
and Florian Betz (Digital Services)

¹⁹ <https://www.dnb.de/EN/lds>