

# Metadaten-Management im Bibliotheksmanagementsystem FOLIO

**KIM Workshop 2020**

Felix Hemme

ZBW – Leibniz-Informationszentrum Wirtschaft, Kiel/Hamburg

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Folien: [10.5281/zenodo.3784148](https://zenodo.org/record/3784148/files/10.5281)



# Folio Library Service Platform

- Ziel: Konzeption und Entwicklung einer Library Service Plattform und Aufbau eines neuen Open Source BMS auf dieser Plattform
- Kern-Anwendungen für
  - Erwerbung (Orders, Organizations, Finance, Invoices, Receiving)
  - Ausleihe (Users, Check-in/out, Requests)
  - Metadaten-Management (Inventory, Source Record Storage, Editors)
  - ERM (Agreements, Licenses, eHoldings)
  - Reporting
  - Data import / Data export

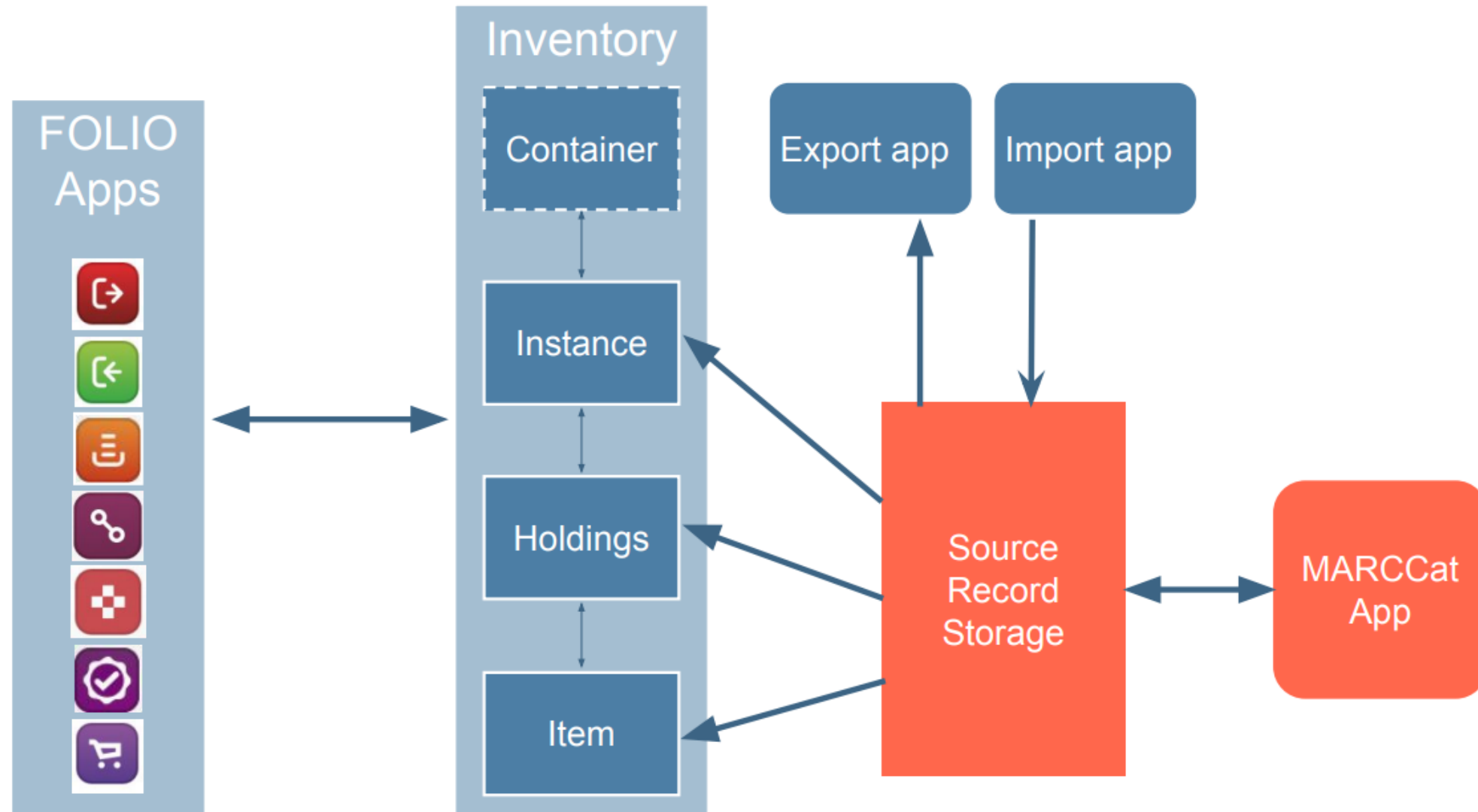


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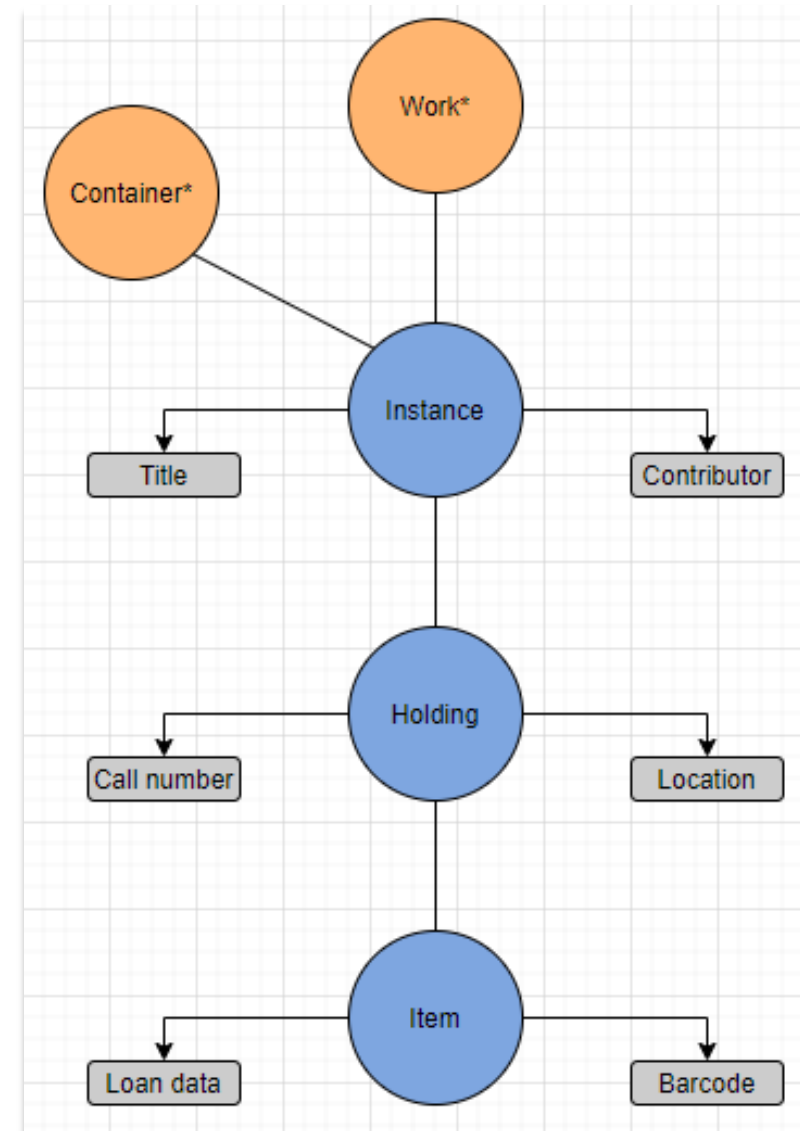
# Bibliografische Daten in FOLIO





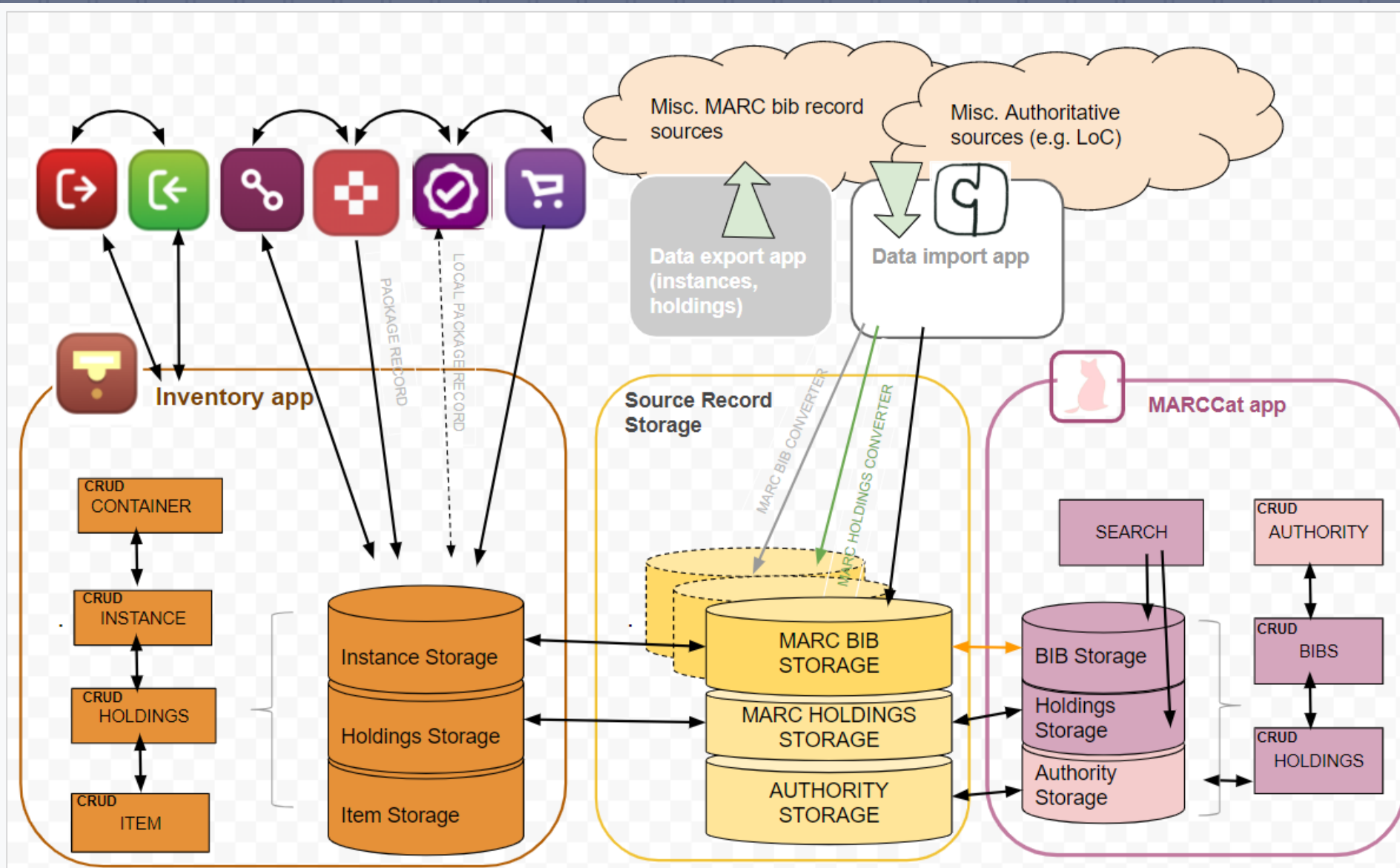
# Konzeptionelles Modell

- Instance: Repräsentation einer Ressource
- Holding: Beziehung der Bibliothek zur Ressource
- Item: Ausleihbare Einheit

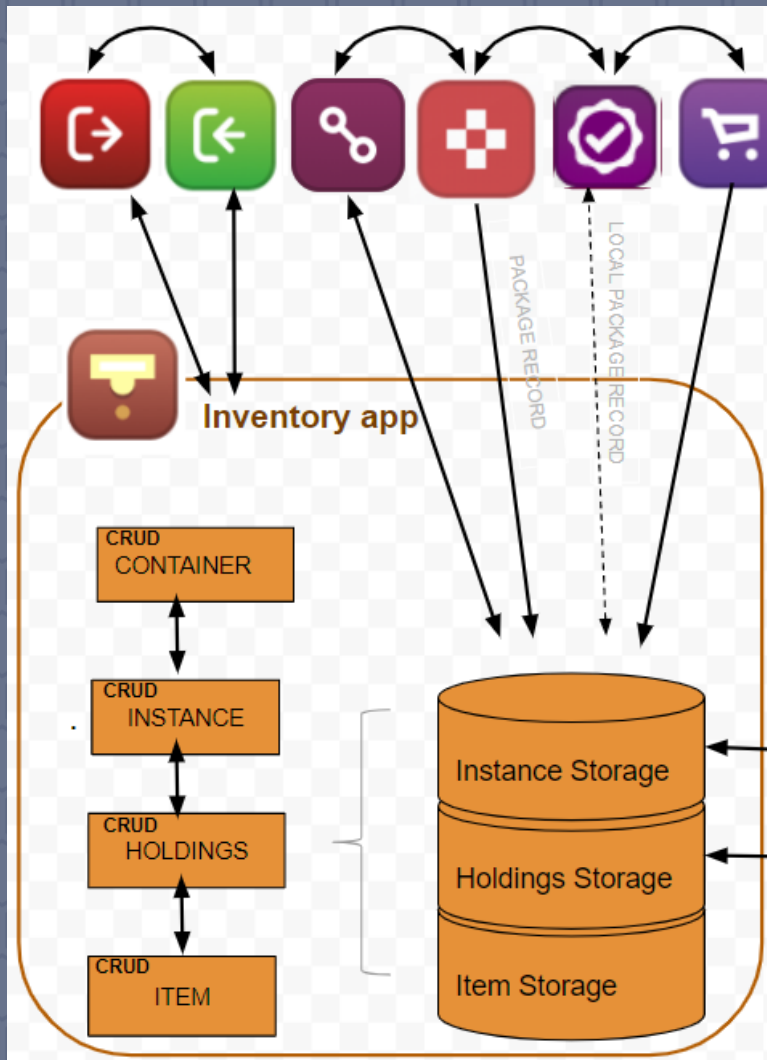


\* = Entität noch nicht implementiert

# Schematische Darstellung



# Inventory – der lokale Katalog



- Enthält die Entitäten
  - Instance
  - Holdings
  - Item
  - Container (Pakete, Sets usw.) // *tbd*
- Systemeigenes bibliografisches Datenformat
- Instance und Holdings können aus *Source Records* abgeleitet werden
- Datensätze können auch direkt im Inventory erstellt werden



# Inventory als Hub

- Funktionen
  - Suche nach Instance, Holdings und Items
  - Verwaltung des Bestands einer Bibliothek
  - Vollständige Beschreibung einer Ressource aufrufen
  - Den Source Record mit einem Klick in der entsprechenden App bearbeiten





# Inventory als Hub

## • Funktionen

- Suche nach Instance, Holdings und Items
- Verwaltung des Bestands einer Bibliothek
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- Den Source Record mit einem Klick in der entsprechenden App bearbeiten

## • App Interaction

- Orders <-> Inventory
- Requests <-> Inventory
- Circulation <-> Inventory
- Cataloging <-> Inventory
- SRS <-> Inventory
- ERM <-> Inventory // *tbd*



# Inventory Instance-Datensatz

Instance record Arctic shipping climate change, commercial traffic and port development  
Routledge, 2020

Instance record  text

Arctic shipping climate change, commercial traffic and port development edited by Frédéric Lasserre

**Add holdings**

### Administrative data

Record last updated: 4/23/2020 1:21 PM

Instance HRID	Metadata source	Cataloged date
in00000000746	MARC	-

Instance status term	Instance status code	Instance status source
-	-	-

*status updated -*

Mode of issuance  
single unit

Statistical code type	Statistical code	Statistical code name
-	-	-

### Title data

Resource title  
Arctic shipping climate change, commercial traffic and port development edited by Frédéric Lasserre

### Identifier

Resource identifier type	Resource identifier
ISBN	9781138489431 hardback
LCCN	2019033601
System control number	(DE-599)KXP1671338065
System control number	(DE-627)1671338065

### Contributor

Name type	Name	Type	Free text	Primary
Personal name	Lasserre, Frédéric 1967-	Editor	HerausgeberIn	-
Personal name	Faury, Olivier	Editor	HerausgeberIn	-

### Descriptive data

Publisher	Publisher role	Place of publication	Publication date
Routledge	Publication	London ; New York	2020

Edition	Physical description
-	xvi, 234 Seiten Illustrationen

Resource type term	Resource type code	Resource type source
text	txt	rdacontent

### Nature of content

-

Format category	Format term	Format code	Format source
unmediated	volume	nc	rdacarrier

### Language

English



# Inventory: Instance.json

## Inventory-Zugriff per Browser:

Chrome und Firefox haben Developertools, die sich mit Strg+Umschalt+I anschalten lassen. Dort im Tab "Network" erscheinen im Untertab "Response" die Antworten des Inventory-Storage

```
Headers Preview Response Initiator Timing
{
"@context" : "http://folio-snapshot-load-okapi.aws.indexdata.com/inventory/instances/context",
"id" : "3ea1ed71-9e22-40a2-b615-02bfc20ea662",
"hrid" : "in00000000746",
"source" : "MARC",
"title" : "Arctic shipping climate change, commercial traffic and port development edited by Frédéric Lasse",
"indexTitle" : "Arctic shipping climate change, commercial traffic and port development",
"parentInstances" : [ ],
"childInstances" : [ ],
"precedingTitles" : [ ],
"succeedingTitles" : [ ],
"alternativeTitles" : [ ],
"editions" : [ ],
"series" : [ "Routledge studies in transport analysis 12 (DE-627)795033834 (DE-576)413960773 (DE-600)278329",
"identifiers" : [ {
"identifierTypeId" : "c858e4f2-2b6b-4385-842b-60732ee14abb",
"value" : "2019033601"
}, {
"identifierTypeId" : "8261054f-be78-422d-bd51-4ed9f33c3422",
"value" : "9781138489431 hardback"
}, {
"identifierTypeId" : "7e591197-f335-4afb-bc6d-a6d76ca3bace",
"value" : "(DE-627)1671338065"
}, {
"identifierTypeId" : "7e591197-f335-4afb-bc6d-a6d76ca3bace",
"value" : "(DE-599)KXP1671338065"
} ],
"contributors" : [ {
"contributorNameTypeId" : "2b94c631-fca9-4892-a730-03ee529ffe2a",
"name" : "Lasserre, Frédéric 1967-",
"contributorTypeId" : "9deb29d1-3e71-4951-9413-a80adac703d0",
"contributorTypeText" : "HerausgeberIn",
"primary" : false
}, {
"contributorNameTypeId" : "2b94c631-fca9-4892-a730-03ee529ffe2a",
"name" : "Faury, Olivier",
"contributorTypeId" : "9deb29d1-3e71-4951-9413-a80adac703d0",
"contributorTypeText" : "HerausgeberIn",
"primary" : false
} ]
}
```

# Inventory: Instance.json

JSON-Schema beschreibt  
das Inventory-Format

<https://github.com/folio-org/mod-inventory-storage/blob/master/ramls/instance.json>

Validierung bspw. mit ajv  
(<https://www.npmjs.com/package/ajv-cli>)

```
379 lines (379 sloc) | 12.9 KB
Raw Blame History
1 {
2   "$schema": "http://json-schema.org/draft-04/schema#",
3   "description": "An instance record",
4   "type": "object",
5   "properties": {
6     "id": {
7       "type": "string",
8       "description": "The unique ID of the instance record; a UUID",
9       "$ref": "uuid.json"
10    },
11    "hrid": {
12      "type": "string",
13      "description": "The human readable ID, also called eye readable ID. A system-assigned sequential ID which maps to the"
14    },
15    "source": {
16      "type": "string",
17      "description": "The metadata source and its format of the underlying record to the instance record. (e.g. FOLIO if it"
18    },
19    "title": {
20      "type": "string",
21      "description": "The primary title (or label) associated with the resource"
22    },
23    "indexTitle": {
24      "type": "string",
25      "description": "Title normalized for browsing and searching; based on the title with articles removed"
26    },
27    "alternativeTitles": {
28      "type": "array",
29      "description": "List of alternative titles for the resource (e.g. original language version title of a movie)",
30      "items": {
31        "type": "object",
32        "properties": {
33          "alternativeTitleTypeId": {
34            "type": "string",
35            "description": "UUID for an alternative title qualifier",
36            "$ref": "uuid.json"
37          },

```

# Inventory: API-Dokumentation

<https://s3.amazonaws.com/folio/docs/api/module/inventory/inventory.html>

GET

POST

DELETE

[Generelle API-Dokumentation](#)

Inventory  
http://localhost  
Inventory A  
API for interacting

GET /inventory/instances

Retrieve a list of instance items.

Request Response

HTTP status code 200

Returns a list of instance items

Body

Media type: application/json

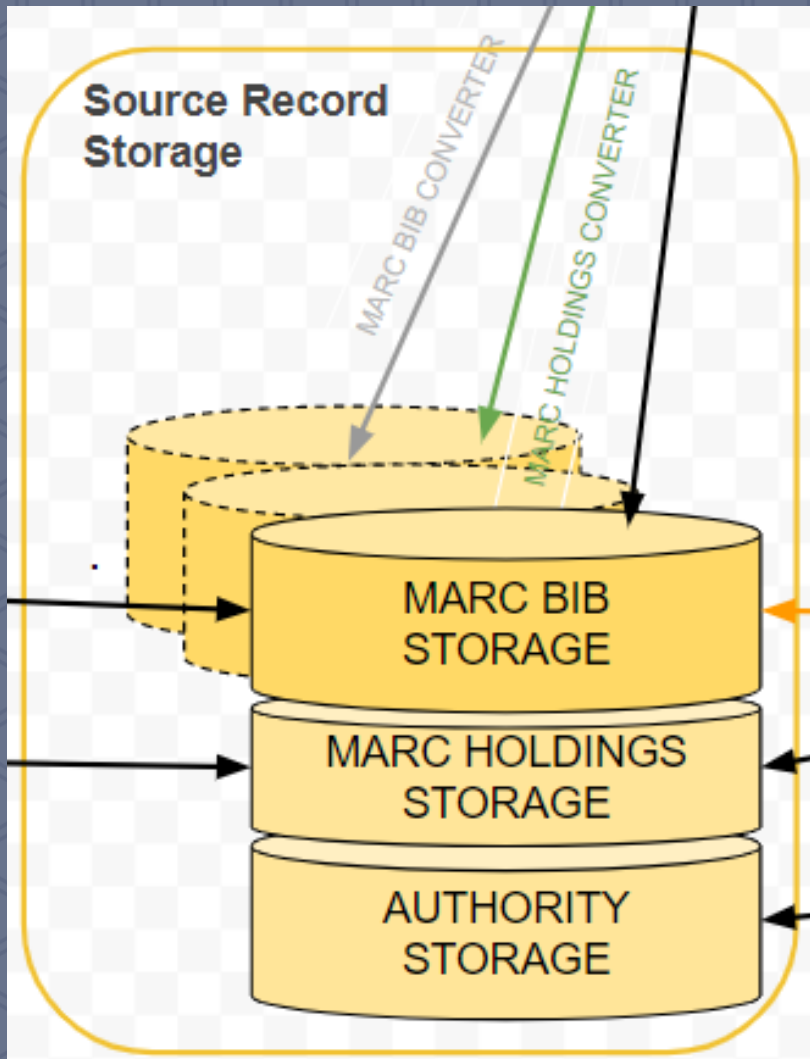
Type: json

Content:

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "description": "A collection of instance records",
  "type": "object",
  "properties": {
    "instances": {
      "description": "List of instance records",
      "id": "instances",
      "type": "array",
      "items": {
        "type": "object",
        "$ref": "instance.json"
      }
    },
    "totalRecords": {
      "type": "integer"
    }
  },
  "required": [
    "instances",
    "totalRecords"
  ]
}
```

folio

# Source Record Storage (SRS)



- Im SRS können Datensätze in diversen Quellformaten enthalten sein
- Zu Beginn MARC 21, später Pica+, Dublin Core, BIBFRAME 2.0 u. a.
- Entwicklung am MARC-SRS läuft noch



# Data Import

- Data Import ist die UI und Backend-Engine, die den Import, das Matching und Mapping von bibliografischen Daten ermöglicht

**Data import** | Agreements | Check in | Check out | Courses | **Data import** | Data export | eHoldings | eUsage | Inventory | Invoices | Finance | Licenses | Apps | Online

**Jobs** [Manage](#)

**Logs** [View all](#)

**Import**

**Previews**

- Standard BIB Import - importBIB017.marc  
222984498 - Triggered by Caleb Hunter  
24,000 records - Ended 11/21/2018 12:01 AM  
Ready for preview [Preview now](#)
- Authority updates - import8.marc  
112974998 - Triggered by John Lennon  
1,000 records - Ended 11/20/2018 11:50 PM  
Ready for preview [Preview now](#)
- BIB Import from Boston - importBoston.marc  
143274991 - Triggered by Taylor Edwards  
1,000 records - Ended 11/20/2018 11:50 PM  
Ready for preview [Preview now](#)

End of list

**Running**

- MARC TEST JOBS - record.xml  
13 - Triggered by DIKU ADMINISTRATOR  
40 records - Began 1:18 PM today  
In progress
- Create MARC Bibs - TAMU\_sample\_bibs\_10k.mrc  
12 - Triggered by DIKU ADMINISTRATOR  
10,000 records - Began 1:09 PM today  
In progress

End of list

File name	ID	Job profile	Records	Ended running	Run by
record.mrc	14	Create MARC Bibs	1	4/23/2020, 1:21 PM	DIKU ADMINISTRATOR
sample_bib_03.mrc	10	Demo Job Profile	10000	4/23/2020, 11:35 AM	DIKU ADMINISTRATOR
data_folio_1000.xml	1	Load vendor order records	0	4/23/2020, 11:35 AM	DIKU ADMINISTRATOR
data_folio_1000.xml	2	Load vendor order records	1000	4/23/2020, 11:34 AM	DIKU ADMINISTRATOR
output.xml	3	Load vendor order records	1	4/23/2020, 11:34 AM	DIKU ADMINISTRATOR
import7.marc	1129844	Authority updates	0	4/23/2020, 11:32 AM	John Doe
appr0716rev.mrc	9	Demo Job Profile	125	4/23/2020, 8:20 AM	DIKU ADMINISTRATOR
DemoFile.mrc	8	Demo Job Profile	6	4/23/2020, 8:18 AM	DIKU ADMINISTRATOR
DemoFile.mrc	7	Create MARC Bibs	6	4/23/2020, 8:17 AM	DIKU ADMINISTRATOR
DemoFile.mrc	6	Demo Job Profile	6	4/23/2020, 7:44 AM	DIKU ADMINISTRATOR
856noUcornellsamples.mrc	5	Create MARC Bibs	11	4/23/2020, 7:22 AM	DIKU ADMINISTRATOR
856_u_test.mrc	4	Demo Job Profile	4	4/23/2020, 6:48 AM	DIKU ADMINISTRATOR

Drag and drop to start a new data import job  
[or choose files](#)

# Data Import



Import Log for Job {9fd7ad2a-2754-4dbe-80bd-2da866dc433f}: 1 record Show: **All** Info Errors Use theme: Coy

```
{
  "id": "d8c40792-c36e-402c-b76b-18be36f9de6a",
  "snapshotId": "9fd7ad2a-2754-4dbe-80bd-2da866dc433f",
  "matchedId": "d8c40792-c36e-402c-b76b-18be36f9de6a",
  "generation": 0,
  "recordType": "MARC",
  "rawRecord": {
    "id": "8f95c769-4d2a-4c4e-be3a-43a362cb588f",
    "content": "03451cam a2200493 4500001001100000030007000110050017000180070003000350080041000380100017000790200047000960350023001430350026"
  },
  "parsedRecord": {
    "id": "c8bfaee1-7018-4821-87c7-c56da8699f92",
    "content": {
      "fields": [
        {
          "001": "in00000000746"
        },
        {
          "003": "DE-627"
        },
        {
          "005": "20191209215101.0"
        },
        {
          "007": "tu"
        },
        {
          "008": "190813s2020 xx ||||| 00| ||eng c"
        },
        {
          "010": {
            "ind1": " ",
            "ind2": " ",
            "subfields": [
              {
                "a": " 2019033601"
              }
            ]
          }
        }
      ]
    }
  }
}
```





# SRS-MARC-Datensatz

- Der Source Record kann auch aus dem Inventory **angezeigt** werden

The screenshot shows a web interface for managing library records. At the top, there is a header bar with a close button (X), a title "Instance record Arctic shipping climate change, commercial traffic and port development edite...", and a publisher/year "Routledge, 2020". On the right of the header is a blue "Actions" button with a dropdown arrow. Below the header, the main content area shows a record card for "Instance record" with a "text" type. The record title is "Arctic shipping climate change, commercial traffic and port development". An "Actions" menu is open over the record, listing four options: "Edit", "Duplicate", "View source" (which is highlighted with a blue background), and "Edit in quickMARC".

# SRS-MARC-Datensatz



## MARC bibliographic record

```
LEADER 03568cam a2200517 4500
001 in000000000746
003 DE-627
005 20191209215101.0
007 tu
008 190813s2020 xx ||||| 001 ||eng c
010 #a 2019033601
020 #a 9781138489431 #c hardback #9 978-1-138-48943-1
035 #a (DE-627)1671338065
035 #a (DE-599)KXP1671338065
040 #a DE-627 #b ger #c DE-627 #e rda
041 #a eng
044 #c XA-GB
050 0 #a HE752.A68
082 0 #a 387.509163/2 #q LOC
245 1 0 #a Arctic shipping #b climate change, commercial traffic and port development
264 1 #a London #a New York #b Routledge #c 2020
300 #a xvi, 234 Seiten #b Illustrationen
336 #a Text #b txt #2 rdacontent
337 #a ohne Hilfsmittel zu benutzen #b n #2 rdamedia
338 #a Band #b nc #2 rdacarrier
490 1 #a Routledge studies in transport analysis #v 12
500 #a Includes bibliographical references and index
```



# SRS-MARC-Datensatz

- Der Source Record kann auch aus dem Inventory **bearbeitet** werden

Instance record Arctic shipping climate change, commercial traffic and port development edited by Frederic Lussere and Olivier Faury  
Routledge, 2020

Instance record text

Arctic shipping climate change, commercial traffic and port development edited by Frederic Lussere and Olivier Faury

Actions

- Edit
- Duplicate
- View source
- Edit in quickMARC

# SRS-MARC-Datensatz bearbeiten (quickMARC)



**Edit MARC record - Arctic shipping climate change, commercial traffic and port development edited by Frédéric Lasserre and Olivier Faury**

↑ ↓	245	1	0	\$aArctic shipping \$bclimate change, commercial traffic and port development \$cedited by Frédéric Lasserre and Olivier Faury	+ 🗑️
↑ ↓	264		1	\$aLondon \$aNew York \$bRoutledge \$c2020	+ 🗑️
↑ ↓	300			\$axvi, 234 Seiten \$bIllustrationen	+ 🗑️
↑ ↓	336			\$aText \$btxt \$2rdacontent	+ 🗑️
↑ ↓	337			\$aohne Hilfsmittel zu benutzen \$bn \$2rdamedia	+ 🗑️
↑ ↓	338			\$aBand \$bnc \$2rdacarrier	+ 🗑️
↑ ↓	490	1		\$aRoutledge studies in transport analysis \$v12	+ 🗑️
↑ ↓	500			\$aIncludes bibliographical references and index	+ 🗑️

Konzept der  
Metadatenverwaltung  
im *Gemeinsamen  
Bibliotheksverbund*  
(GBV)



# Konzept Metadatenverwaltung im GBV

- Katalogisierung von Ressourcen im K10Plus (CBS 1.1) unter Verwendung der Software WinIBW von OCLC bleibt erhalten

## CBS

Set 2 | Setgröße 6109 | Datensatz 32 | PPN 1671338065 | Format D

Eingabe: 2003:13-08-19 Änderung: 1999:09-12-19 21:51:01 Status: 0206:25-11-19

0100 1671338065

0500 Aau

0501 Text\$btxt

0502 ohne Hilfsmittel zu benutzen\$bn

0503 Band\$bnc

1100 2020

1500 eng

1505 \$erda

1700 XA-GB

2000 978-1-138-48943-1\$fhardback

2003 |u|978-1-351-03746-4

2040 2019033601

2240 KXP: 1671338065

3010 [!61980047X!](#)Lasserre, Frédéric \*1967-\* ; ID: gnd/140552960\$BHerausgeberIn\$4edt

3010 Faury, Olivier\$BHerausgeberIn\$4edt

4000 Arctic shipping\$dclimate change, commercial traffic and port development\$hedited by Frédéric Lasserre and Olivier Faury

4030 London\$pnNew York\$nroutledge\$sh2020

4060 xvi, 234 Seiten

4061 Illustrationen

4170 Routledge studies in transport analysis\$I12

4180 #12#![!795033834!](#)Routledge studies in transport analysis ; ZDB-ID: 2783293-4\$I12

4201 Includes bibliographical references and index

4207 "This book considers both the present state of Arctic shipping and possible future trends with reference to the various sectors tools that support the strategies of coastal states to foster the development of resource extraction, enhance the attractiveness of Ar aim of this book is to draw a picture of the trends of Arctic shipping. How is traffic evolving in Canada's Arctic, or along the Northern considering the Arctic market? How are the ports and the hinterland developing and what are the strategies behind those? How is th consider all of these questions, and more, as they map out the prospects for Arctic shipping and analyse in detail the development i professionals and post-graduate students alike"--



# Konzept Metadatenverwaltung im GBV

- Per Online Update Fetch (OUF) erfolgt das Update der bibliografischen Daten und Exemplardaten in die angeschlossene FOLIO-Instanz (create, update, delete)
- OUFG : kommuniziert in Echtzeit mit dem CBS und spiegelt die Holdings und Titeldaten einer Bibliothek im Lokalsystem



# Konzept Metadatenverwaltung im GBV

## OUF-Prozeduren (vereinfacht):

- Update Signal Files: erhalten Updatesignal aus dem CBS bei insert, delete, update, out-of-use
- Fetch Request Files: Enthalten die recordId aus dem Verbundsystem zur Anforderung
- Title Files: Enthalten vollständige Titeldatensätze





# Konzept Metadatenverwaltung im GBV

## Import nach Folio

`ouf_update`: Enthält ppn und Art der Änderung

`picapull.pl`: Erzeugt fetch files (enthält die ppn des Datensatzes) und speichert sie in fetch-Verzeichnis

`ouf_fetch`: Überwacht das fetch-Verzeichnis und lädt vollständige Datensätze in Pica+ Textformat

`decode.pl`: Konvertiert Datensätze in Pica+ XML und schickt Datensätze an den Harvester

`Index Data harvester`: Konvertiert Datensätze in Inventory JSON und sendet sie nach Folio



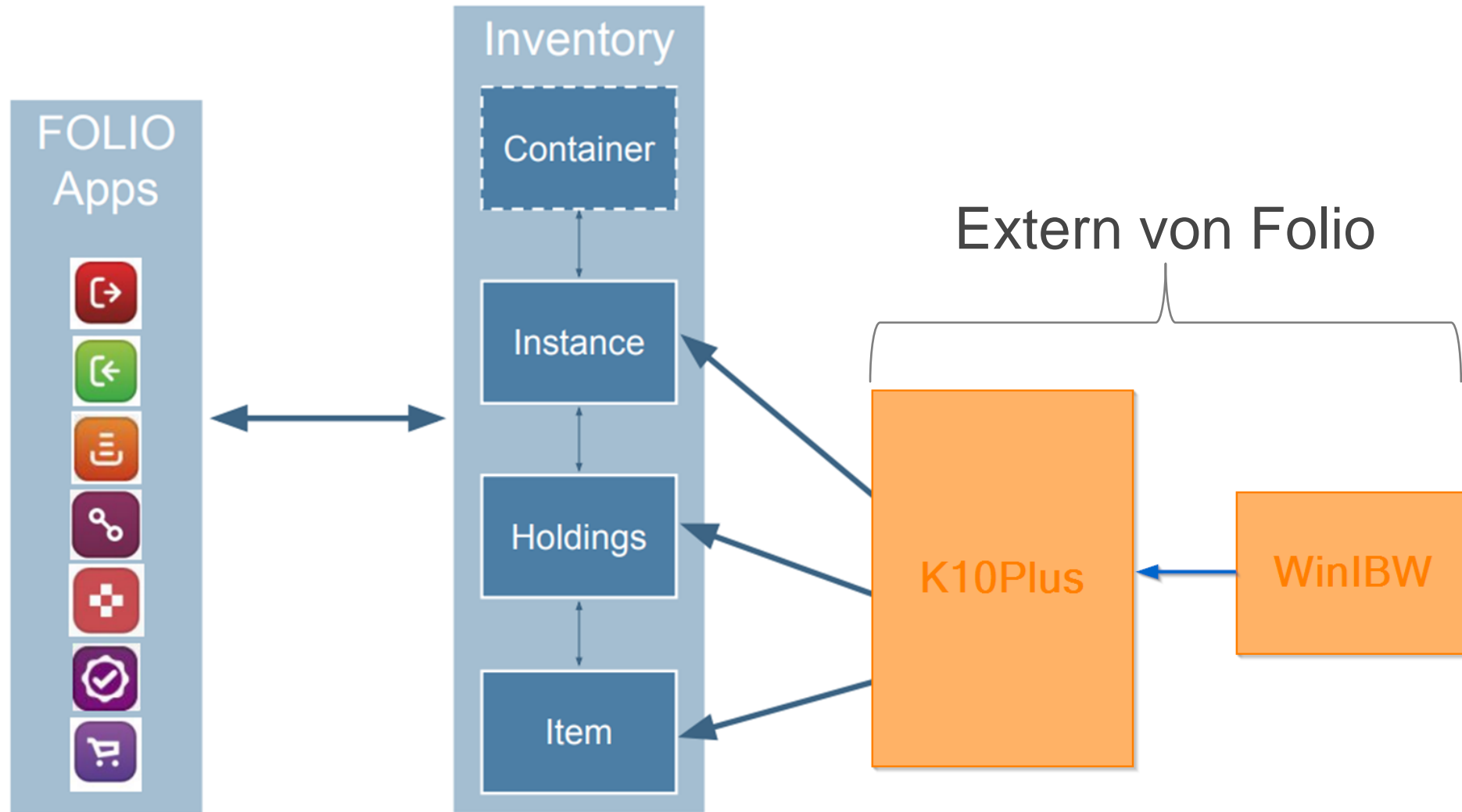
# Konzept Metadatenverwaltung im GBV

Daraus folgt:

- Katalogisierung bleibt in den vertrauten Systemen
- Keine Umgewöhnung der Katalogisier\*innen notwendig
- Skripte (Datenmasken, Exemplarmasken, Hauskripte) können weitergenutzt werden
- Komfortfunktionen bleiben erhalten (excelTabelle, ppnListe, rechercheStapel, Transliteration, Linkchecker, ...)
- Daten stehen den Folio-Anwendungen zeitnah zur Verfügung



# Schematisch





## Vielen Dank.

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Maßgeblich für diese Präsentation ist das gesprochene Wort.



# Folio Informationen

- Folio-Website: <https://www.folio.org/>
- Folio-Wiki: <https://wiki.folio.org/>
- Deutsche Folio-Community: <https://www.folio-bib.org/>
- Code auf GitHub: <https://github.com/folio-org>
- UI Prototype: <http://ux.folio.org/>
- Demo-Installationen:
  - <https://folio-demo.gbv.de/>
  - <https://folio-demo.hbz-nrw.de/>(diku\_admin / admin)