Publishing to Primo

To configure publishing to Primo, you must have one of the following roles:

- Catalog Administrator
- Repository Administrator
- General System Administrator

Because it is not necessary to run a publishing job to export bibliographic records for Primo VE, this section applies only to Primo. For details on how to export bibliographic records for Alma-Summon environments, see Publishing Bibliographic Records to Summon.

The Alma publishing process is run after the bibliographic, holdings, circulation data, and optional course reserves data has been populated in Alma. Alma exports the full set of records the first time and then exports the changed records daily. After Alma exports the records, Primo harvests and normalizes the exported records to be searched and viewed by end users via Primo’s Front End.

---

**Note**

This Publish bibliographic records to Primo profile publishes all types of records, not just MARC 21 records. Note that you must configure separate pipes in Primo to support each output type.

---

If you encounter export issues that require advanced troubleshooting (for example, in cases where records were exported to the Primo server but were not published in Primo for some reason), contact Ex Libris support for assistance in running the Alma-Primo synchronization process.

For information about publishing information from the Network Zone, see Publishing Bibliographic Records to Primo When Working with a Network Zone.

---

Exporting Alma Records to Primo

The Primo publishing profile allows you to configure the settings used to publish the records to Primo, and is not used for Primo VE since the publishing is handled internally by the system.

In a collaborative network, the Network Zone can publish shared resources for the member institutions. For more information, see Publishing Bibliographic Records to Primo When Working with a Network Zone.

---

To publish Alma records to Primo:

1. Configure an S/FTP connection to be used by Alma and Primo (see Configuring S/FTP Connections). Make sure that port 22 on the Primo server is open to the Alma server.
2. On the Publishing Profiles Details page (Resources > Publishing > Publishing Profiles), select Edit in the row actions list for the Publish bibliographic records to Primo publishing profile. The Publishing Profile Details page for the Primo publishing profile appears.
3. Configure the Publishing Profile Details page parameters as follows.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile Details section:</strong></td>
<td></td>
</tr>
<tr>
<td>Profile Name and Description</td>
<td>Update these fields as required.</td>
</tr>
<tr>
<td><strong>Member Publishing Parameters section:</strong></td>
<td></td>
</tr>
<tr>
<td>The parameters in this section are for member institutions in a Network Zone.</td>
<td></td>
</tr>
<tr>
<td>Publishing mode</td>
<td>See <a href="#">Publishing Records to Member Institutions’ Individual Primo Instances</a> for information on the Also publish network data option. When you select this option, the remaining profile options are limited to the ones that are</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>Parameter</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>relevant for this mode of publishing.</td>
<td></td>
</tr>
<tr>
<td><strong>Member Publishing Format</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Select</strong> <strong>Publish as single institution</strong> if you are a member institution and want to publish to Primo only the records available to you in your Institution Zone (which would not be the case for the scenario described here). See the examples below for the differences when you select or don’t select the <strong>Publish as a single institution</strong> option.</td>
<td></td>
</tr>
</tbody>
</table>
| **Example when** **Publish as single institution** **is selected:** | ```xml
<datafield tag="987" ind1=" " ind2=" ">
  <subfield code="a">12259269</subfield>
</datafield>
<datafield tag="INT" ind1=" " ind2=" ">
  <subfield code="a">E</subfield>
</datafield>
<datafield tag="INST" ind1=" " ind2=" ">
  <subfield code="a">ALMA_UNIVERSITY</subfield>
</datafield>
```
| **Example when** **Publish as single institution** **is not selected:** | ```xml
<datafield tag="987" ind1=" " ind2=" ">
  <subfield code="a">12259269</subfield>
</datafield>
<datafield tag="INST" ind1=" " ind2=" ">
  <subfield code="a">ALMA_UNIVERSITY</subfield>
  <subfield code="b">E</subfield>
  <subfield code="c">5164099790001858</subfield>
</datafield>
<datafield tag="MMS" ind1=" " ind2=" ">
  <subfield code="b">99900178515201858</subfield>
  <subfield code="a">ALMA_UNIVERSITY</subfield>
</datafield>
```
| **Publishing Parameters section:** | If this option is selected (for example, to publish headings enrichment data to Primo - see Exporting Alma Records to Primo below), Alma publishes all records, replacing previously published data. If this option is not selected, Alma publishes records that have changed since the last time they were published. This includes bibliographic records that were added, updated, deleted, and linked to inventory records that changed. |
| **Run full publishing** | **Note** Full publishing publishes only non-deleted records. You must also make sure that old records that have been deleted/suppressed from Alma are treated as expected. For this reason, it is recommended that you run incremental publishing to publish all recently deleted records as deleted, load the deleted record information into Primo using the regular, ongoing pipe (see Harvesting and Publishing Alma Records in Primo), run full publishing, and then load the published Alma records into Primo (again, using the regular, ongoing pipe). |
| **Scheduling** | Select one of the scheduling options. |
| **Email Notifications** | Specify which users and email addresses will receive email notifications when the publishing profile has completed. |

Ex Libris, a ProQuest Company
### Parameter | Description
---|---
Status | Select **Active**.

**Submission Format section:**

| FTP configuration | By default, the publishing process places the exported files in a directory that Primo uses to harvests the files. This field specifies a predefined profile that contains the FTP information. If the transfer fails, Alma includes a link to the published files in the publishing report.
---|---
| Note | The directory must be configured in advance because Alma cannot create it.
| Select the name of the S/FTP connection. |

| Subdirectory | The subdirectory in which the exported files are placed.
---|---
| For example, if you specified Alma in the Sub-directory field during S/FTP connection configuration and you enter Primo in this field, the data is exported to the Alma/Primo directory. |

**Content Options section:**

| Electronic, Physical, Digital, and Collection | The type of records that you want to publish.
---|---
| Note | To enable digital full-text publishing, contact Ex Libris Support.

| Course information enrichment | Specify whether course reserve information is included with the bibliographic records. Note that course reserves are not published as independent records. Instead, Alma adds this information to the CNO field in the associated bibliographic record.
---|---
| Note | Citation details are not published to Primo. Only the bibliographic record of the citation's attached inventory item (MMS record) is published.

| Related records information enrichment | Specify whether related record information (which is stored in the PLK field) is included in the bibliographic records.
---|---
| Title data is sent in the following subfields of the PLK field: d, e, f, g, h, i, m, and v. See the table below for a mapping of the MARC 21 245 field and the UNIMARC 200 field to the PLK subfields. |

| Subfield Description | PLK Subfields | MARC 21 245 Subfields | UNIMARC 200 Subfields |
---|---|---|---
| Other title information | d |  | d |
| Remainder of title / Other title information | e | b | e |
| Statement of responsibility / First Statement of Responsibility | f | c | f |
### Parameter Description

<table>
<thead>
<tr>
<th>Subfield Description</th>
<th>PLK Subfields</th>
<th>MARC 21 245 Subfields</th>
<th>UNIMARC 200 Subfields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium / General Material Designation</td>
<td>g</td>
<td>h</td>
<td>b</td>
</tr>
<tr>
<td>Number of part/section of a work / Number of a Part</td>
<td>h</td>
<td>n</td>
<td>h</td>
</tr>
<tr>
<td>Name of part / section of a work / Name of a Part</td>
<td>i</td>
<td>p</td>
<td>i</td>
</tr>
<tr>
<td>Title</td>
<td>m</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>Volume designation</td>
<td>v</td>
<td>v</td>
<td>v</td>
</tr>
</tbody>
</table>

Below is an XML example of the PLK field that includes title information of MARC 21 related records published to Primo.

```xml
<datafield tag="PLK" ind1=" " ind2=" ">
    <subfield code="a">Additional Form.</subfield>
    <subfield code="b">99110387010001451</subfield>
    <subfield code="m">Harry Potter and the sorcerer's stone /</subfield>
    <subfield code="f">by J.K. Rowling ; illustrations by Mary GrandPre.</subfield>
</datafield>
```

### Linked data enrichment

Specify whether URIs can be entered in the 0 subfield of the relevant bibliographic fields.

### Headings enrichment

Specify whether to publish headings enrichment data to Primo. For more information, see Publishing Headings Enrichment to Primo below. When you select this option, the field **Heading enrichment - enrich with "See Also" fields** appears.

**Note**
The addition of related terms is not supported out-of-the-box in Primo. Before activating this option, make sure that you have decided how to use the related terms in Primo and have updated your normalization rules as necessary. For more information, see Other Implementation Considerations below.

### Heading enrichment – enrich with “See Also” fields

This appears when **Headings enrichment** is selected. Specify whether to include the 5XX see also fields when publishing headings enrichment data to Primo. For more information, see Publishing Headings Enrichment to Primo below.

**Note**
Contact Ex Libris Support to enable this field.

Specify whether to enrich bibliographic records published to Primo with classification data that includes preferred and nonpreferred terms. The classification data to be used for enrichment is identified in the bibliographic record's 084 where $2$ indicates which classification scheme is used (such as RVK, BK, and MSC) and $a$ contains the call number.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>that is used to link to the classification (authority) record. When selected and the publishing job is processed, the bibliographic records are enriched with preferred and nonpreferred terms taken from the 153 and the 70X/75X fields in the classification (authority) record that is linked by the bibliographic records’ 084 fields and placed in 084 fields that are added to the published bibliographic records. For each 084 field in the Alma bibliographic record that is linked to a classification (authority) record and published to Primo, one or more 084 fields are added to the published record. For example, if the linked classification record contains one 153 field and two 7XX fields, three new 084 fields are added to the published record. $9 in the added 084 field will contain Y (yes) or N (no) to indicate if the term is preferred.</td>
</tr>
</tbody>
</table>

Physical Inventory Enrichment section:

You can map holdings tags/subfields from the holdings record to tags/subfields in the published bibliographic record: Holding Tag, Holding Subfield, Bib Tag, and Bib Subfield.

Select Add inventory enrichment and enter the information. Select Add to add the new mapping to the list.

Authority Enrichment section:

Use the Authority Enrichment configuration to enrich the bibliographic record published to Primo with the content of any field from the bibliographic-linked authority record.

Select Add Authority enrichment, and enter values for the following parameters:

- **Authority Tag** – Enter the field number of the tag from the authority record that you want added to the published bibliographic record.
- **Value in Subfield ‘9’** – Enter a descriptive value that is placed in $9 of the published record. You may enter the field number or some other descriptive text. In the following example, 382 was entered for the Value in Subfield ‘9’ parameter.

Authority Enrichment Configuration Example:

```
Authority Enrichment

Authority Tag: 382
Value in Subfield ‘9’: 382
```

Value in Subfield ‘9’ Published Record Example:

```
240 $$9382 $$0 41-GND-300569947 $$0 (DE-101)040197913 $$0 (DE-588)4019791-8 $$0 http://d-nb.info/gnd/4019791-8 $$a Violine |n 2 $$2 gnd
```

See **Headings Enrichment** for more information.

4. Select **Save**. The modified publishing profile is saved. Data that meets the defined criteria is exported to the specified FTP location when the profile is run according to the selected schedule.

The **Publishing to Primo job** publishes up to 1000 relations for each bibliographic record.

For information on monitoring a publishing export job, see **Viewing Running Jobs**. For information on the job report, see **Viewing Completed Jobs**.
Publishing Headings Enrichment to Primo

Alma publishing to Primo options provide the capability to include headings enrichment data. For each MARC 21 or UNIMARC record published to Primo, Alma enables you to include the authority headings information to be used in Primo.

The focus of this section details Alma’s implementation of publishing headings enrichment data. In addition, there are implementation considerations for integrating this capability with Primo. See the Other Implementation Considerations section below that directs you to the Primo information you’ll need to complete your implementation.

For information regarding configuring headings enrichment, see Publishing to Primo. After you configure Publish bibliographic records to Primo to include the headings enrichment configuration option(s), your incremental publishing to Primo includes headings enrichment in the harvested records. This, of course, assumes that your Publish bibliographic records to Primo publishing profile is selected as an Active profile.

The headings enrichment capability is relevant for Primo version 4.1.1 and later. Before configuring Alma for publishing headings enrichment data to Primo, you need to update your normalization rules in Primo. Additional Primo information is referenced below in the Other Implementation Considerations section. If you decide that you need to run a full publishing of records to Primo, see the instructions above under Run full publishing.

It is recommended that the Authorities – Preferred Term Correction job be set to Active when implementing and using the publishing headings enrichment to Primo capability. Otherwise, there may be instances when the Primo Browse list may show multiple preferred headings that ultimately link to the same authority in Alma.

Headings Enrichment

MARC 21 and UNIMARC records are enriched with information from related Alma authority records (either local or Community Zone authority records) for the following bibliographic record authorization fields:

- MARC 21 – 100-199, 600, 610, 611, 630, 648, 650, 651, 654, 655, 700, 710, 711, 730, 751, 752, 754, 800, 810, 811 or 830
- UNIMARC – 410, 411, 416, 500, 600, 601, 602, 605, 606, 607, 616, 617 700, 701, 702, 703, 710, 711, 712, 713, 720, 721, 722, 723, 730, 740, 741, or 742

Specifically, the enrichment includes the 1XX and 4XX, preferred and nonpreferred, information when available in the related authority record. This enrichment is provided with the selection of the Headings enrichment publishing parameter described in the procedure below.

This especially enhances the Primo search capability of nonpreferred (4XX) terms so that, for example, Mark Twain can be
found with Samuel Clemens; and with the cross references to the Primo author and subject browse list, when the heading Samuel Clemens appears, it displays “See Twain, Mark.”

Optionally, headings enrichment authorization can also include the following 5XX **see also** authority fields when the **Heading enrichment – enrich with “See Also” fields** publishing parameter is selected as described in [Publishing to Primo](#):

- MARC 21 – 500, 510, 511, 530, 548, 550, 551, 555, 562, 580, 581, 582, or 585
- UNIMARC – 500, 510, 511, 515, 530, 550, 580

See the table below for a description of how the enrichment is implemented.

<table>
<thead>
<tr>
<th>Subfield Change</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2</td>
<td>Contains the vocabulary code used for authorization. The current supported values include:</td>
</tr>
<tr>
<td></td>
<td>• LCSH</td>
</tr>
<tr>
<td></td>
<td>• LCNAMES</td>
</tr>
<tr>
<td></td>
<td>• MESH</td>
</tr>
<tr>
<td></td>
<td>• LCAC</td>
</tr>
<tr>
<td></td>
<td>If the second indicator of the field is 4 or 7, $2 is not overwritten.</td>
</tr>
<tr>
<td>$0 (subfield zero)</td>
<td>Contains the Alma authority record ID. If the field in the MARC 21/UNIMARC record is authorized using authority records in Alma (either local or Community Zone authority records), $0 is added. Other $0 considerations include:</td>
</tr>
<tr>
<td></td>
<td>• If the original field already has a value in $0 (from another system), it is replaced with Alma’s authority record ID.</td>
</tr>
<tr>
<td></td>
<td>• If Alma does not have an authority record for a heading, no $0 is added to the field.</td>
</tr>
<tr>
<td></td>
<td>• If the field has a value in $0, but the field is not authorized in Alma, $0 is deleted.</td>
</tr>
<tr>
<td>$9</td>
<td>Contains <strong>Y</strong>, <strong>N</strong>, <strong>R</strong>., or <code>&lt;value&gt;</code>.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Y</strong>=The term in the authorized field is preferred.</td>
</tr>
<tr>
<td></td>
<td>• <strong>N</strong>=The term in the authorized field is nonpreferred.</td>
</tr>
<tr>
<td></td>
<td>• <strong>R</strong>=The term in the authorized field is from a 5XX see also field.</td>
</tr>
<tr>
<td></td>
<td>• <code>&lt;value&gt;</code>=For tags that you specify using the Authority Enrichment configuration, you need to specify a value to be inserted for $9 when the bibliographic record is enriched for publishing. See Authority Enrichment for more information.</td>
</tr>
<tr>
<td></td>
<td>$9 is added to every field in the original MARC 21/UNIMARC record that is authorized.</td>
</tr>
<tr>
<td>$L</td>
<td>Contains the language information (for multilingual authorities).</td>
</tr>
</tbody>
</table>

For fields associated with authority records that contain preferred and nonpreferred terms, record enrichment processing is handled in the following manner:

- A field with the same tag as the original, authorized field is added to the MARC record.
- $0 and $2 are added to this new field with the same values as the ones contained in the original field.
- $9 is added to the new field with the value **Y** for preferred, the value **N** for nonpreferred, the value **R**, and `<value>` as described in the table above and in the additional information/example below.
- The values of the other subfields for the new field are copied from the authority record field.
If you optionally select the **Heading enrichment – enrich with “See Also” fields** publishing parameter (as described in the [Publishing to Primo](#) section), record enrichment processing is handled in a similar manner with $9 containing the value R to indicate that the content is from a 5XX see also field.

See the illustration below for an example of the headings enrichment implementation.

```xml
<datafield tag="100" ind2=" " ind1="1">
  <subfield code="a">Schumaker, Ward.</subfield>
  <subfield code="2">LCNAMES</subfield>
  <subfield code="0">41-LIBRARY_OF_CONGRESS-n 93026393</subfield>
  <subfield code="9">Y</subfield> (preferred)
</datafield>
<datafield tag="245" ind2="0" ind1="1">
  <subfield code="a">Dance! /</subfield>
  <subfield code="c">Ward Schumaker.</subfield>
</datafield><datafield tag="250" ind2=" " ind1=" ">
  <subfield code="a">1st ed.</subfield>
</datafield>
<datafield tag="260" ind2=" " ind1=" ">
  <subfield code="a">San Diego :</subfield>
  <subfield code="b">Harcourt Brace,</subfield>
  <subfield code="c">©1996.</subfield>
</datafield>
<datafield tag="300" ind2=" " ind1=" ">
  <subfield code="a">1 volume (unpaged) :</subfield>
  <subfield code="b">color illustrations ;</subfield>
  <subfield code="c">21 x 28 cm</subfield>
</datafield>
<datafield tag="336" ind2=" " ind1=" ">
  <subfield code="a">text</subfield>
  <subfield code="b">txt</subfield>
  <subfield code="2">rdacontent</subfield>
  <subfield code="2">rdacontent</subfield>
</datafield>
```
A number of animals demonstrate some of the many different ways to dance, from bumping and romping to swirls and plie’s.
<subfield code="a">Rhymed stories</subfield><br/>
<subfield code="2">LCSH</subfield><br/>
<subfield code="0">41-LIBRARY_OF_CONGRESS-sh2005008473</subfield><br/>
<subfield code="9">N</subfield> (nonpreferred)<br/>
</datafield>
<datafield tag="650" ind2="0" ind1="">
  <subfield code="a">Rhyming stories</subfield>
  <subfield code="2">LCSH</subfield><br/>
  <subfield code="0">41-LIBRARY_OF_CONGRESS-sh2005008473</subfield><br/>
  <subfield code="9">N</subfield> (nonpreferred)<br/>
</datafield>
<datafield tag="650" ind2="0" ind1="">
  <subfield code="a">Stories in verse</subfield>
  <subfield code="2">LCSH</subfield><br/>
  <subfield code="0">41-LIBRARY_OF_CONGRESS-sh2005008473</subfield><br/>
  <subfield code="9">N</subfield> (nonpreferred)<br/>
</datafield>
<datafield tag="650" ind2="0" ind1="">
  <subfield code="w" g/></subfield>
  <subfield code="a">Fiction</subfield>
  <subfield code="2">LCSH</subfield><br/>
  <subfield code="0">41-LIBRARY_OF_CONGRESS-sh2005008473</subfield><br/>
  <subfield code="9">R</subfield> (see also)<br/>
</datafield>
<datafield tag="650" ind2="0" ind1="">
  <subfield code="w" g/></subfield>
  <subfield code="a">Narrative poetry</subfield>
  <subfield code="2">LCSH</subfield><br/>
  <subfield code="0">41-LIBRARY_OF_CONGRESS-sh2005008473</subfield><br/>
Other Implementation Considerations

You need to verify that your Primo normalization rules are tailored to address the additional headings enrichment fields to align with your requirements. See the Configuring the Normalization Rules section in the Primo documentation for more information. This documentation first explains the browse section and then explains the rules per template including the Alma MARC Template. Also note that:

- In general, the rules need to be updated in the following ways:
  - The Browse section needs to be updated so that Browse headings including cross-references can be created.
  - A number of rules (detailed in the Primo documentation) have to be updated to prevent non-preferred terms from being used in display, facets, dedup, and sort.
- The Alma MARC Template (in Primo) has been updated to support the Alma headings enrichment from Primo V4.1 with some corrections added in V4.5. As a result, it is likely that you already have the necessary rules in place; or if not, possibly you may have already updated your rules. To verify the status of your rules, first check the Browse section. If there are no rules in the Browse section, the rules will have to be updated. If there are rules in the Browse section, the rules are most likely updated but you should also check that the other fields as identified in the Normalization Rules Template section of the Primo documentation have been updated.

You can update your Primo normalization rules using the following options:

- Synchronize with Template - This option is described in Implementation and Upgrade Information
- Copy this Target to another Mapping Set - This option is described in Editing Normalization Rules Sets

For Primo Total Care installations, follow the usual procedure of contacting Support for template normalization rule changes (non-preconfigured feature changes) to have your normalization rules updated to incorporate headings enrichment data published from Alma.

The Output of the Publishing Process

The output files of the Alma Primo publishing job are placed in the defined FTP directory location of the publishing profile.
The publishing process places all MARC 21 records directly on the FTP directory location specified, while automatically creating a separate subdirectory for any non-MARC 21 metadata format used by your institution, where relevant. This may include a subdirectory named unimarc for UNIMARC records and (if so configured by Ex Libris) dc for Dublin Core records. If your institution uses any non-MARC 21 formats, you will need a separate Primo pipe harvest setup for each format, adding the appropriate subdirectory unimarc or dc to the pipe's FTP source directory definition. For instance, if Alma is publishing to an FTP in directory a/b/c, the MARC 21 pipe in Primo will set the source directory as a/b/c. However, if the same institution uses UNIMARC or Dublin Core, the source directory set for those pipes would need to be set as a/b/c/unimarc or a/b/c/dc, respectively. For more information on publishing to the Primo sandbox from an Alma sandbox, see Alma-Primo Sandbox Integration.

The publishing process output directory contains the archived and compressed (*.tar.gz) files with the following naming conventions:

- IEP*.tar.gz – Contains bibliographic records with the print inventory.
- IEE*.tar.gz – Contains records with electronic inventory.
- IED*.tar.gz – Contains records with digital inventory.
- IE_MMS*.tar.gz – Contains records with no inventory attached.

Each tar.gz file contains 100 Alma records.

**Note**

Course reserves data is not published as a separate record type. It is embedded in the published P (physical), E (electronic), and D (digital) records.

---

**The Format of Published Data**

Alma publishes data in XML format. Alma modifies published MARC XML records to include the following data:

**Note**

The format delineated below for publishing is not the same as the format used for the GET BIB API and SRU. For details on these formats, see https://developers.exlibrisgroup.com/alma/apis/bibs/.

- **Alma Intellectual Entity ID** – Stored in the header of the published record, and used as the base for the record ID in Primo:

  ```xml
  <header status="new">
  <identifier>urn_publish:21239404420001021</identifier>
  </header>
  ```

- **001** – Contains the MMS ID.
- **INT** – Indicates the entity type, which is stored in the $$a subfield. Alma publishes the following record types to Primo:
  - **P** (Physical) – Indicates that the exported bibliographic record has an associated holdings record (with or without items). P is the default value (even if there are no associated holdings records) if the criteria for D, E, or C are not met.
- **D** (Digital) – Indicates that the exported bibliographic record has an associated representation. For more information, refer to the TYP field.
- **E** (Electronic) – Record is one of the following electronic types:
  - Electronic – Indicates that the bibliographic record has an associated portfolio.
  - Electronic Collection – Records of this type do not have any associated portfolios but are distinguished from other electronic records with the ECT field.
- **C** (Collection). Indicates that the type of record is a collection and may contain mixed types of material.
- **TYP** – Indicates the entity type of digital records, which is stored in the $$a$$ subfield.
- **AVA** – This field is created for print materials only. It contains location and availability information for the published record and related records in the following subfields:
  - $$8$$ – Contains the MMS ID of the holdings record. This subfield is not used by Primo, but customers who use the Retrieve Bib REST API and SRU can retrieve it.
  - $$a$$ – Institution code
  - $$b$$ – Library code
  - $$c$$ – Location display name
  - $$d$$ – Call number
  - $$e$$ – Availability (such as available, unavailable, or check_holdings)
  - $$f$$ – Total items
  - $$g$$ – Non-available items
  - $$j$$ – Location code
  - $$k$$ – Call number type - If a location uses an accession number, this subfield is not published.
  - $$p$$ – Priority
  - $$t$$ – Textual representation taken from the MARC 866, 867, and/or 868 fields. This subfield is not used by Primo, but customers who use the Retrieve Bib REST API and SRU can retrieve it. This subfield is repeatable.
- **AVD** – This field is created for digital materials only. It is published for bibliographic records with digital inventory. It contains the following subfields:
  - $$a$$ – Institution code
  - $$b$$ – Representation PID
  - $$c$$ – Representation type: REPRESENTATION or REMOTE_REPRESENTATION
  - $$d$$ – Remote repository name (if this is a remote representation)
  - $$e$$ – Representation's label
  - $$f$$ – Public note
- **AVE** – This field contains "available for" group information (Available Electronic; see Configuring Distributed Access to Electronic Resources) in the following subfields:
  - $$i$$ – contains a single e-resource's "available for" institution code
  - $$c$$ – contains a single e-resource's "available for" campus code
  - $$l$$ – contains a single e-resource's "available for" library code

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Note
If you have defined a separate Primo institution per Alma campus, this field is the basis for defining the Primo institution in the PNX records. Otherwise, you can use this information to create search scopes and search campus-specific e-resources.

• **COL** – This field contains collection information in the following subfields:
  ◦ **a** – Parent collection ID
  ◦ **b** – Collection title
  ◦ **c** – Collection name
  ◦ **A** – The owning institution. Currently, this field is added only for centralized publishing, but it will be used for standard publishing in the future.

• **CNO** – This field contains course reserve list information in the following subfields:
  ◦ **$a** – Institution code
  ◦ **$b** – Start date
  ◦ **$c** – End date
  ◦ **$e** – Department name
  ◦ **$f** – Department code
  ◦ **$g** – Course instructors
  ◦ **$j** – Course name
  ◦ **$k** – Course code and section
  ◦ **$l** – Section ID
  ◦ **$o** – Searchable IDs
  ◦ **$r** – Course year

Note
The CNO contains the course details but not the citation details. If the reading list citation is an article in a journal held by the library, in order for the article information to appear in Primo, the article must be cataloged as an MMS record. It is not enough to enter the article details in the reading list citation and then attach it to the resource which is the bibliographic record of the journal. The attached resource is published to Primo, not the reading list citation.

• **ECT** – When populated, indicates that the electronic record is an electronic collection.
  ◦ **$a** – set to **database**

• **INST** – Contains the institution code (needed for the records of type E, for which AVA is not created). Note that the institution code is stored in the **$a** subfield. If the Available Electronic functionality is used, the institution may be indicated in the AVE field only.

For collaborative networks that are using centralized publishing, the **$b** subfield contains the entity type instead of the INT field. For example, if the entity is a collection, the **$b** subfield would contain a **C**.

For Alma-D and Alma-C records, the **$c** subfield contains the Alma Intellectual Entity ID, which the **alma_thumb2** template uses to display thumbnails.
• **OWN** – This field contains ownership information (Ownership) in the following subfields and is not included in the Alma MARC - Template template:
  ◦ $Si – contains a single e-resource ownership associated with the bibliographic record (the institution ID)
  ◦ $Sl – contains a single e-resource ownership associated with the bibliographic record (the library)

• **PLK** – This field contains linking information from MARC 76X-78X and 830 fields. The use of this data requires you to define additional normalization rules in Primo.
  ◦ $$a – contains the MARC relationship between this record and the record to which it links.
  ◦ $$b – contains the MMS ID of the record to which this record links.