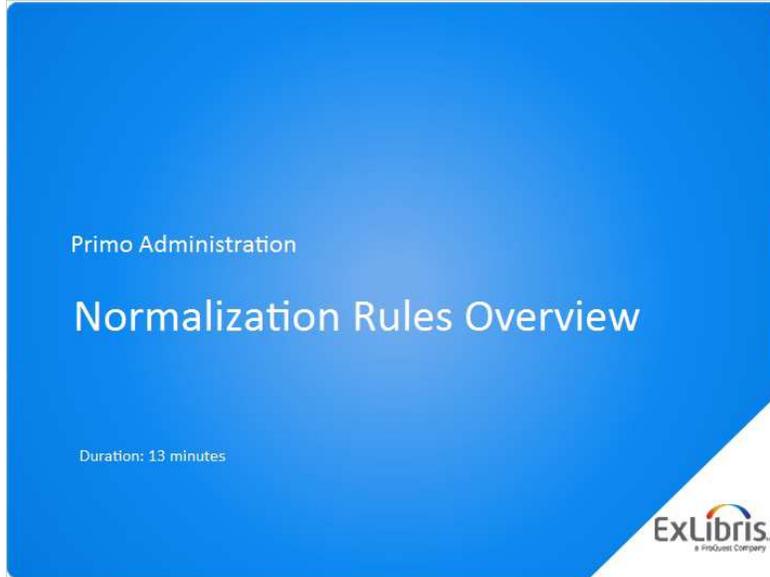


Primo Administration: Normalization Rules Overview

1. Normalization Rules Overview

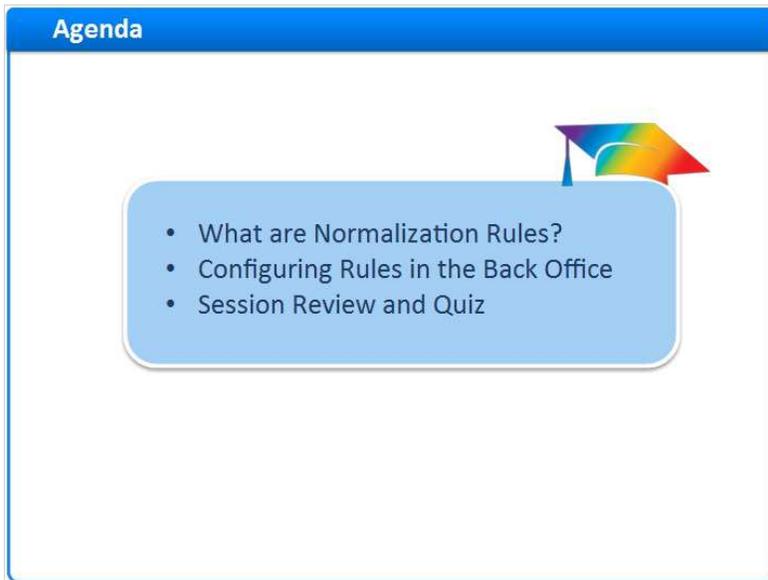
1.1 Primo Administration: Normalization Rules Overview



Notes:

Hello and welcome to this overview on Normalization Rules in Primo.

1.2 Agenda



The slide features a blue header with the word "Agenda" in white. Below the header is a large white rounded rectangle with a blue border. In the top right corner of this rectangle is a colorful graduation cap icon. Centered within the white area is a light blue rounded rectangle containing a bulleted list of three items.

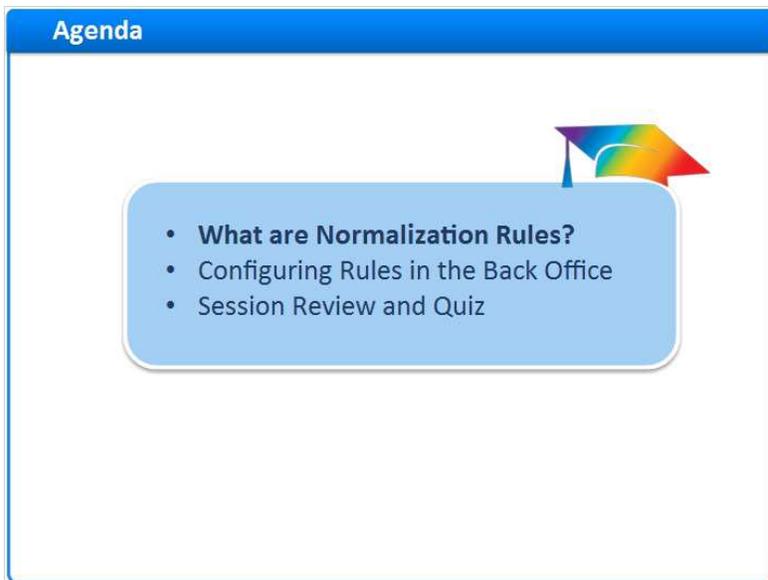
- What are Normalization Rules?
- Configuring Rules in the Back Office
- Session Review and Quiz

Notes:

In this session, we'll begin by defining what normalization rules are, and why and when do we use them in Primo.

Then we'll show in the Primo Back Office how to create and edit normalization rules.

1.3 What are Normalization Rules?



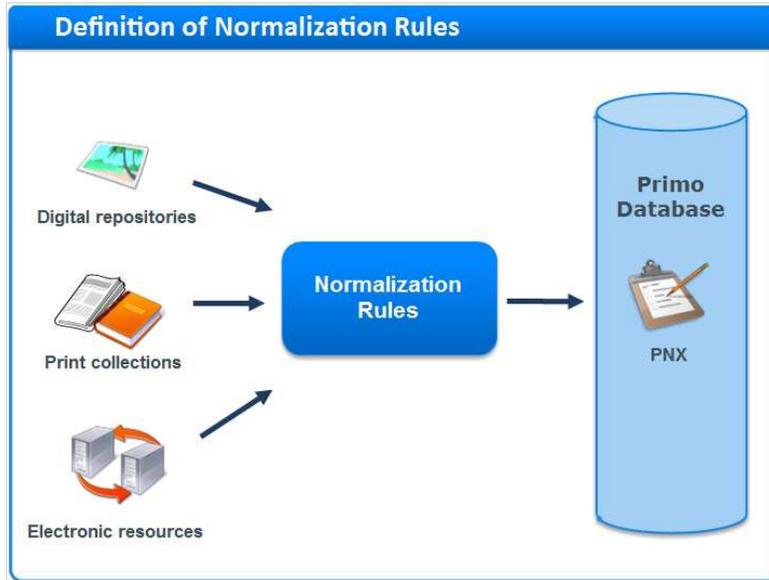
The slide features a blue header with the word "Agenda" in white. Below the header is a large white rounded rectangle with a blue border. In the top right corner of this rectangle is a colorful graduation cap icon. Centered within the white area is a light blue rounded rectangle containing a bulleted list of three items.

- **What are Normalization Rules?**
- Configuring Rules in the Back Office
- Session Review and Quiz

Notes:

So what are normalization Rules?

1.4 Definition

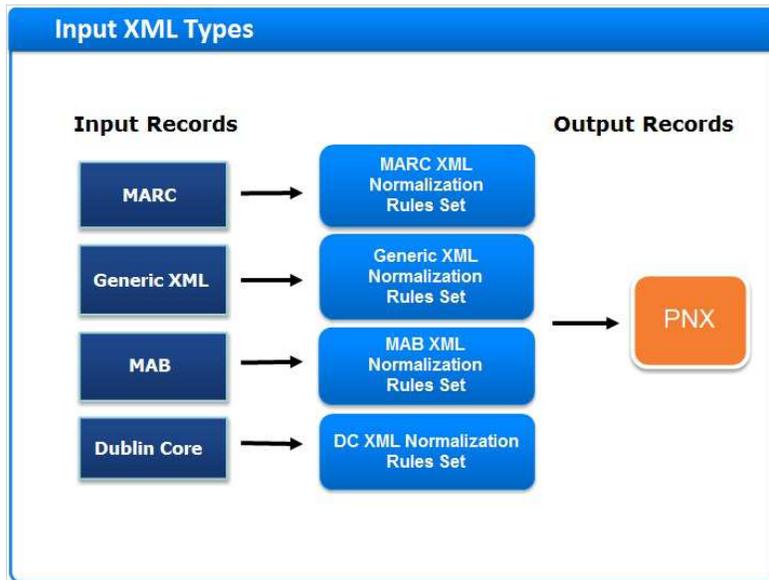


Notes:

Primo harvests XML records from various source systems during the 'publishing platform' phase. These source records can come in many formats, such as digital, print and electronic. But, Primo requires a **unified** format to allow quick and efficient search; so each harvested record must be normalized, resulting in an identical format in Primo.

Normalization rules define how records from a specific data source are converted from their source format to **PNX**, or Primo Normalized XML. The resultant Primo records are called PNX records. In other words, normalization rules are the "instructions" for converting records to PNX. Applying normalization rules is one of the final steps in the **pipe** process.

1.5 Input XML Types

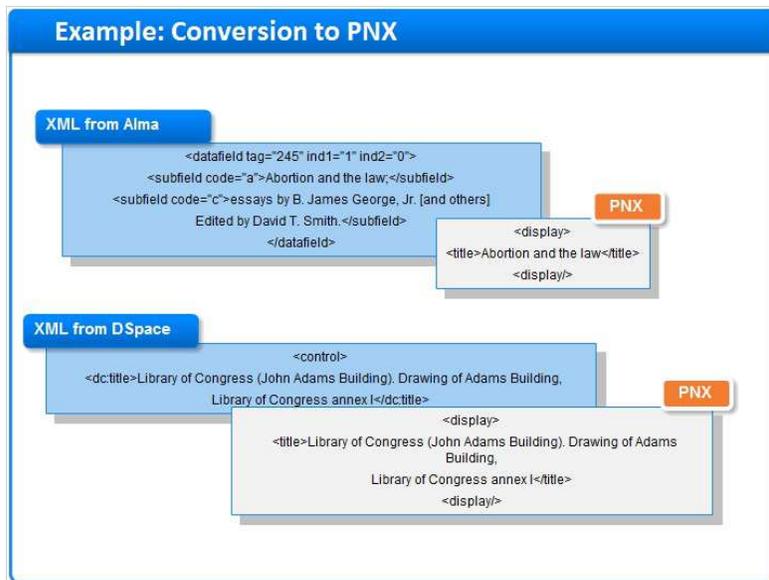


Notes:

As mentioned, the input records can come from different XML formats, like: MARC XML, Dublin Core and MAB.

In order to handle each input XML type, a corresponding normalization rules set is used. This allows Primo to create the same PNX structure for all records regardless of input type.

1.6 Conversion to PNX



Notes:

Let's see how different sources require different normalization rules.

Here we see two sample records, from two different data sources.

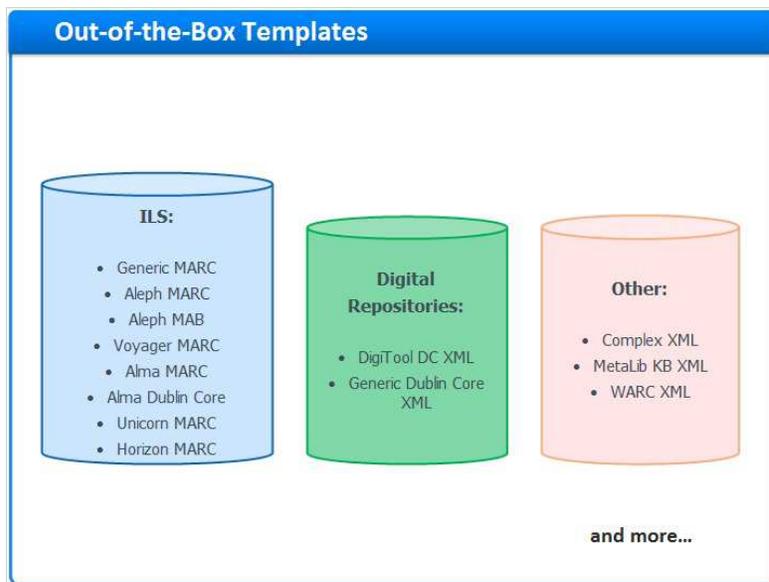
The first, is the title field of a MARC record - the 245 field, from an Alma source system.

Based on the normalization rules, Primo takes the data from 245 field and places it in the PNX field display-title.

The second example shows the title field of a Dublin core record, the dc:title field from a DSpace source system.

In this case too, Primo correctly populates the **display-title** field in the PNX., thanks to using the corresponding normalization rules set.

1.7 Out-of-the-Box Templates



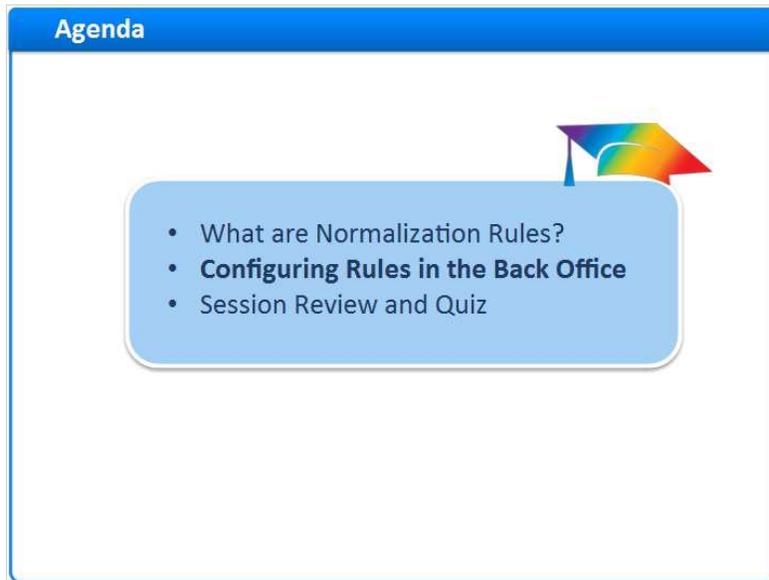
Notes:

Primo includes out-of-the-box pre-defined templates of normalization rules; each for converting different source-data formats.

These templates are hard-coded: you can see them but cannot update them.

They are updated occasionally by Ex Libris upon Primo release.

1.8 Configuring Rules in the Back Office



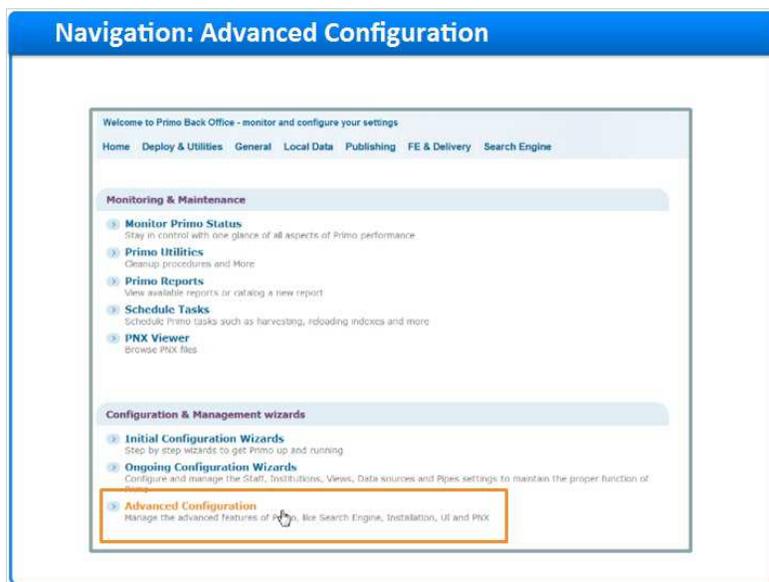
The slide features a blue header with the word 'Agenda' in white. Below the header is a large light blue rounded rectangle containing a list of three items. To the right of the list is a small graphic of a graduation cap with a rainbow-colored tassel. The list items are: 'What are Normalization Rules?', 'Configuring Rules in the Back Office' (highlighted in bold), and 'Session Review and Quiz'.

- What are Normalization Rules?
- **Configuring Rules in the Back Office**
- Session Review and Quiz

Notes:

Now that we know what normalization rules are, and why they are needed; let's see how you can create and modify normalization rules in the Primo Back Office.

1.9 Navigation (from Advanced Config)



The screenshot shows the Primo Back Office interface. At the top is a blue header with the text 'Navigation: Advanced Configuration'. Below this is a navigation bar with links: Home, Deploy & Utilities, General, Local Data, Publishing, FE & Delivery, and Search Engine. The main content area is divided into two sections. The first section is 'Monitoring & Maintenance' and contains five items: 'Monitor Primo Status', 'Primo Utilities', 'Primo Reports', 'Schedule Tasks', and 'PRX Viewer'. The second section is 'Configuration & Management wizards' and contains three items: 'Initial Configuration Wizards', 'Ongoing Configuration Wizards', and 'Advanced Configuration'. The 'Advanced Configuration' item is highlighted with an orange box and a mouse cursor.

Notes:

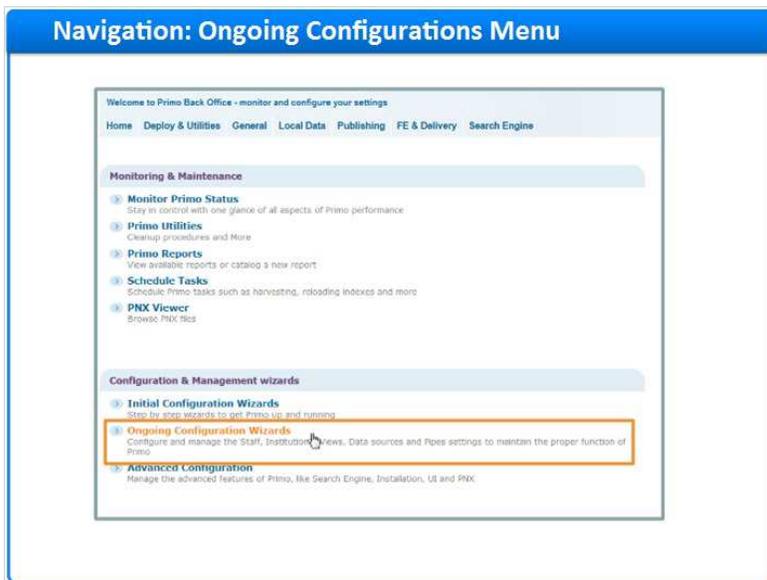
There are three ways to navigate to the Normalization Rules menu in the Back Office:

The first is from Primo Home > Advanced Configuration > Full Normalization Rule Configuration

Advanced Configuration (Slide Layer)



1.10 From Ongoing Configuration



Notes:

The second is from Primo Home Ongoing Configuration Wizards > Pipe Configuration Wizard > Normalization Rules configuration

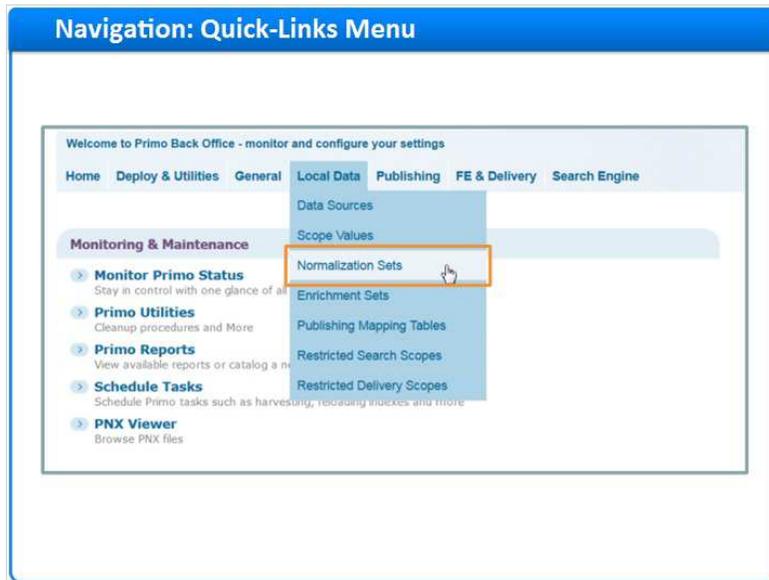
Pipe Configuration Wizard (Slide Layer)



Normalization Rules Configuration (Slide Layer)



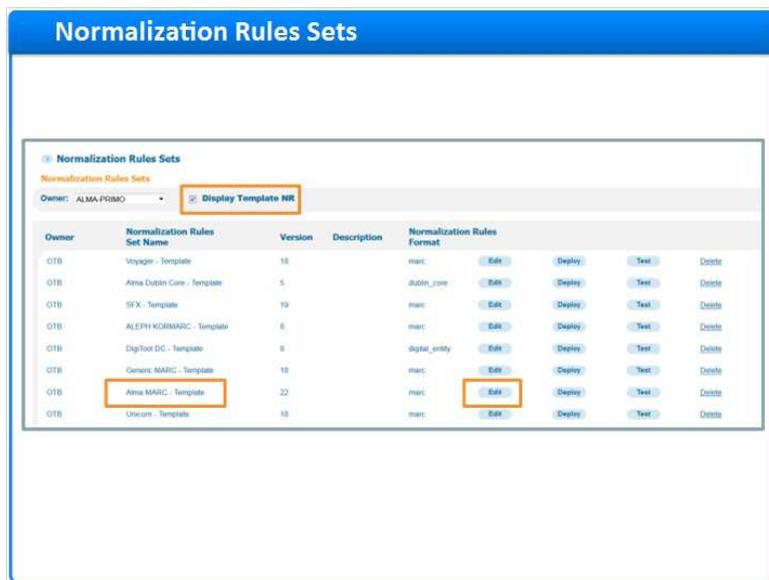
1.11 From Quick-Links Menu



Notes:

And the third and quickest way is from the quick-links menu: Go to Local Data > Normalization Sets.

1.12 Normalization Rules Sets

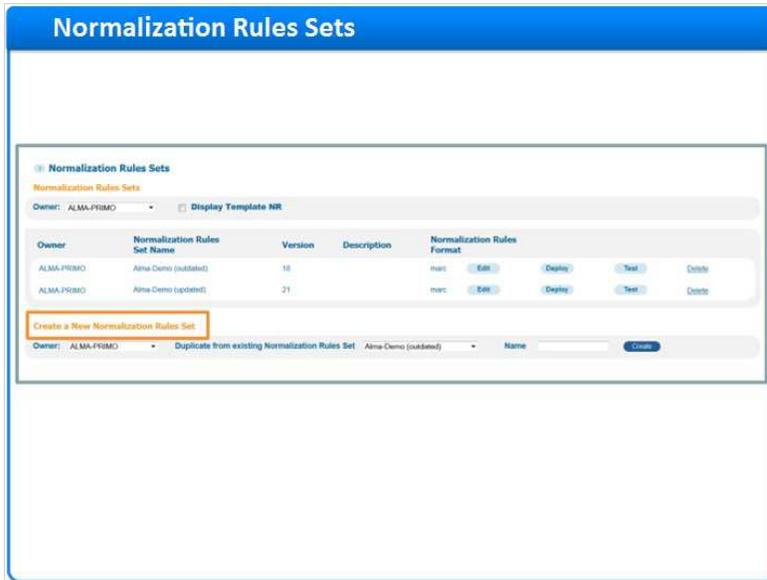


Notes:

We are now in the Normalization Rules menu, here you can see the list of the normalization rules sets, and edit the existing rules.

To see the out-of-the-box template Normalization Rules, click 'Display Template NR'. To modify an existing rule set, click 'edit' for the desired set

1.13 Create New Rule Set

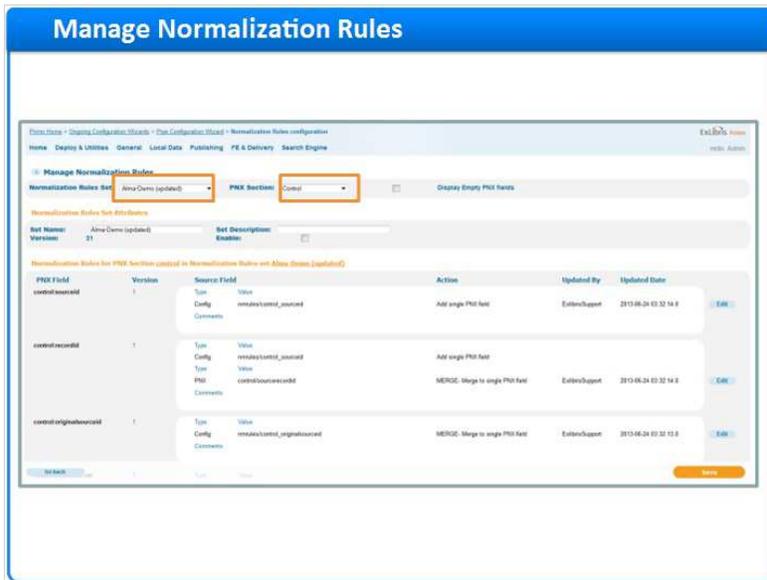


Notes:

At the bottom of the page we have the option to create a new normalization rules set.

Note that it is not possible to create a set from scratch. Rather, you begin by duplicating an existing set.

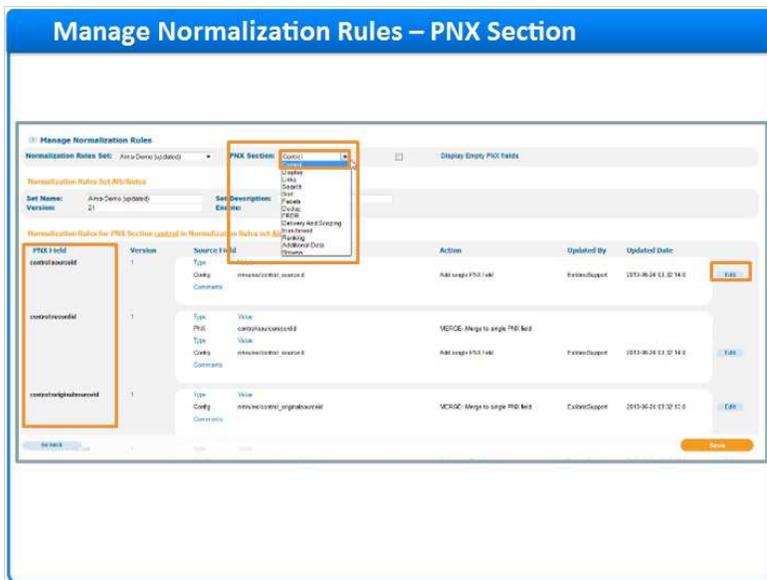
1.14 Manage Normalization Rules



Notes:

After clicking 'edit' for a set we get to the 'Manage Normalization Rules' menu. By default, it displays the set you clicked on, but you have the option to display a different set instead. Each set, is composed of several PNX sections. Select the PNX section you wish to display from the PNX Section drop-down list.

1.15 PNX Section



Notes:

The 'PNX section' drop-down list shows all of the PNX sections.

By navigating between the sections, we can edit the rules which create the various fields of each section.

For example, under the 'control' section of the PNX, we can edit the rules which create the **sourceid**, and the **recordid** fields.

Remember that there is no need to map every field of the PNX from scratch, since the normalization rules sets are duplicated from a template. So you mostly want to customize specific areas to fit the needs of your institution.

Click Edit on the field you wish to modify.

1.16 Editing Rules of a Set

The screenshot shows the 'Normalization Set Editor' interface. At the top, there are three dropdown menus: 'Normalization Rules Set' (Alma-Demo (updated)), 'Section' (Control), and 'Field' (Source ID). Below these, the page title is 'Normalization Rules for field sourceid in PNX Section control in Normalization rules set Alma-Demo (updated)'. There is a 'Description:' field, an 'Action:' dropdown (ADD), and a button labeled 'Advanced'. Below that is 'Last Updated By: ExhibrisSupport' and 'AT: 2013-06-24 03:32:14.0'. A 'Comments:' field and 'Version: 1' are also present. A table with one row is shown, with columns for 'Type' (Configuration XPath), 'Config' (nmrules/control_sourceid), 'Transformation', and 'Parameter'. A 'Copy As Is' button is next to the transformation field. At the bottom left, there is a 'Create a New Rule' button with a 'Create' sub-button. Navigation links 'Go to bottom of page' and 'Go to top of page' are also visible.

Notes:

Now we are in the "Normalization Set Editor" page.

Here too we can navigate between the rules the PNX sections, **and** the different fields of each section.

We can switch between basic and advanced mode of the editor page;

In the list of rules, we can modify the existing rules and add new ones.

1.17 Editing a Rule

The screenshot shows a web interface titled "Editing a Rule". The interface is divided into several sections, each with a blue header and a white content area:

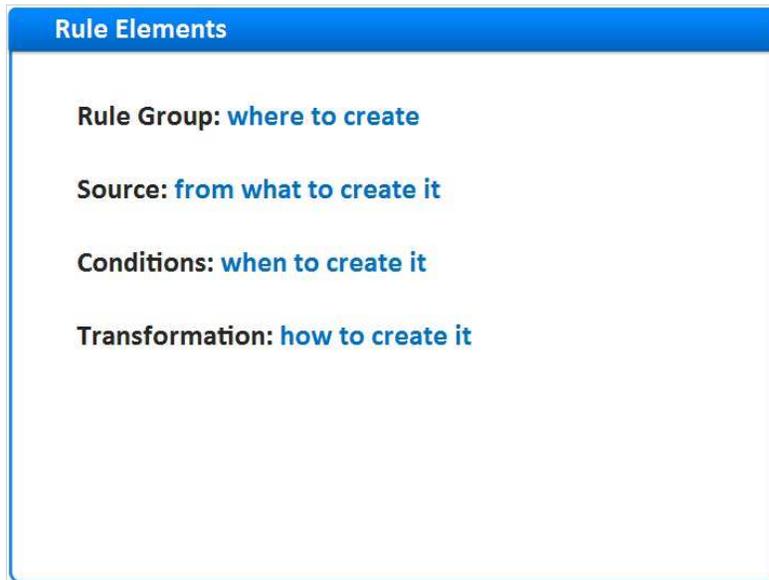
- Rule group:** A text input field containing "display_title".
- Source:** A dropdown menu set to "MARC". To its right are input fields for "Field" (245), "Ind1" (empty), and "Ind2" (empty). Further right is a dropdown for "Subfield" set to "Include", a dropdown for "a.b.t.g.k.n.p", and a checked "Enabled" checkbox.
- Conditions:** A section with a blue header and the text "No conditions Specified".
- Transformations:** A section with a blue header containing:
 - Transformation:** A dropdown menu set to "Remove characters from the end".
 - Parameter:** A text input field containing "/*".
 - Behavior:** A dropdown menu.
 - Action:** A dropdown menu set to "OR".

Notes:

Let's take a look at how you modify a specific rule.

Each rule has 4 main elements: the rule group, the rule source, the conditions for the rule, and the transformation routines.

1.18 Rule Elements



Notes:

Let's look at the elements:

The **Rule Group** is the PNX field to be created, in other words - *Where to create*. A single PNX field can be created from one or more rules, hence a group.

The **Source** refers to the data that is being normalized in the rule, or in other words - *What to create it from*. In most cases it will be a field from the source record, but not necessarily.

Conditions can be added to define in what cases the field should or shouldn't be created, in other words - *when to create it*. This element is not mandatory and can remain empty.

The last element is the **Transformation**: this is what needs to be done to the source data so it is converted to the target PNX field, in other words - *how to create it*.

1.19 Rules Source

Rules Source

Rule group display_type

Type

Field	Ind1	Ind2
008		

Source

Conditions

Condition 1 - Logic True

display/type

Notes:

Let's see the available **source** types for populating a field, as you can select them from the Source drop-down list:

When **MARC** is the source, the data will be taken from the source XML fields, in this case the 008 field. When the source is **PNX**, the data will be taken from the PNX record field. PNX fields are identified by an X-path, that is section and field separated by a slash.

For example, to denote the Resource **Type** field in the **Display** section, enter **display/type**.

If you select **Constant** as the source, that means the target field will be filled in by a constant value that you supply in the parameter field (in other words that bit of data will not come from the input record, it will come from what you fill in here).

And finally, selecting **Config** as a source, the input value is a field from a configuration file or table. Here again the X-path of the field is required.

1.20 Rules Conditions

The screenshot displays the 'Rules Conditions' configuration window. At the top, the rule group is 'display_title'. Below this, the 'Source' is 'MARC' and 'Type' is '130'. The 'Conditions Logic' is set to 'True' and the 'Conditions Relation' is 'And'. There are two conditions defined. Condition 1 has source 'MARC', type '130', and routine 'Check string equals string' with parameter 'N'. Condition 2 has source 'MARC', type '130', and routine 'Validate FMT equals' with parameter 'SE'. The 'Success If' field for Condition 1 is 'Match Current' and for Condition 2 is 'Match Last'. The 'Transformations' section shows 'Copy As Is' and 'Action' set to 'OR'.

Notes:

Let's go over the different parameters that make up a rule's conditions:

Conditions Logic = This first parameter allows you to assign conditional logic to all conditions in a group. Is this rule-group positive or negative: a positive condition is satisfied if it is true, a negative condition is satisfied if it is false.

The next field, **Conditions Relation** = appears when there is more than 1 condition defined. The available values are:

- AND - which indicates that all conditions must be met for the condition group to be true
- OR - which indicates that at least one of the conditions must be met for the condition group to be true

Condition - Logic = This parameter allows you to assign condition logic on the condition level, similar to what we've seen on the group level.

Condition - Source = The source field tested by the condition. Any source can be selected.

The **Success if** field defines the rule behavior when there are several occurrences of the input field. It can have one of four values=

- Match any - must be true for any occurrences of the source field
- Match current - must be true in the current source field
- Match all - must be true for all occurrences of the source field
- Match last - must be true for the last occurrence of the source field. This is the default.

Next section is **Condition - Routines** = this is a list of routines that perform the actual checking of the condition. (Note that the **General Parameter** field is not in use.)

Under **Routine** you select the validating routine from a hard-coded list of options, for example to compare the input field with a certain string, select the "Check string equals string" routine.

Under **Parameter** = you can add an optional parameter, when one is needed for the routine, for example, the string to compare.

You can create a new condition or create new fields within a condition by clicking the '+' icon next to a condition or field to duplicate it.

To delete a condition, click the '-' icon next to the condition or field you want to delete.

1.21 Rules Transformations

Rule group: display_title

Type: Field Ind1 Ind2 Subfield

Source: MARC 130 Include a,d,f,k,l,m,n,y Enabled

Conditions logic: True Conditions relation: And

Condition 1 - Logic: False

Condition 1 - Source: Type: MARC Field: 130 Ind1: Ind2: Subfield: Include: Success If: Match Current

Condition 1 - Routines: General Parameter: Routine: Check string equals string Parameter: N

Condition 2 - Logic: True

Condition 2 - Source: Type: MARC Field: ldr Ind1: Ind2: Subfield: Include: Success If: Match Last

Condition 2 - Routines: General Parameter: Routine: Validate FMT equals Parameter: SE

Transformations: Transformation: Copy As Is Parameter: Behavior: Action: OR

Notes:

As for the rules transformation, you can define many possible manipulations to the input data. For example, 'copy as is' which is the default transformation, transfers the data from the source field to the PNx field with no changes.

Additional transformations include **Move** and **Delete**.

Another example is, '**remove characters from end**' which truncates any one of the characters specified in the parameter field from the end of the field.

Note that only some transformations require filling in the parameter field.

1.22 Handling Recurring Fields

Handling Recurring Fields

Rule group: display_subject

Type: [] Field: [] Ind1: [] Ind2: [] Subfield: []

Source: MARC [] 600 [] Exclude: v,xyz,P [] Enabled [x]

Conditions: No conditions Specified

Transformations:

Transformation: [] Parameter: []

Replace Characters: [] []

Remove characters from the end: [] []

Behavior: []

Action: OR []

Behavior: []

OR []

ADD []

OR []

MERGE []

```
-- <display>
- <display>
- <subject>
  Art -- Periodicals; Art -- 20th cent. -- Periodicals; Art -- 21st cent. -- Periodicals
</subject>
</display>
</display>
```

Notes:

Another important element of transformations, is how to apply them when the input contains several instances of the same field - for this we have the Action parameter.

Let's see an example. The **display/subject** field, can contain multiple PNX fields:

If the rule is flagged with the action "ADD", a new PNX field will be created even if the field already exists.

If the rule is flagged with the action "OR" and the PNX field has already been created, then the rule will not create another PNX field.

If the rule is flagged with the action "MERGE", the PNX field that it creates will be merged with the PNX field that was created before it.

1.23 Example Rule

Example Rule

- Example: display/title field

Rule group: display_title

Type: Field

Source: MARC

Field: 130

Include: 0,1,2,3,4,5,6,7,8,9

Enabled:

Conditions logic: True

Condition 1 - Logic: True

Condition 1 - Source: Type: Field

Field: 0

Include: 0

Success if: Match any

Condition 1 - Runtime: General Parameters

Runtime: Validate FMT equals

Parameter: SE

Transformations

Transformation: Copy As Is

Behavior: OR

Notes:

Now that we've seen all the elements, let's look at an example of a rule:

This is a rule which creates the title field in the display section of the PNX. The source for this field is the MARC 130 field, including the subfields mentioned. Our **condition** checks if the leader field in the source record, has a format equaling SE. If so, the data in the 130 field is 'copied as is', as can be seen in the transformation.

1.24 Session Review and Quiz

Agenda



- What are Normalization Rules?
- Configuring Rules in the Back Office
- **Session Review and Quiz**

Notes:

Session Review and Quiz

1.25 Session Review

Session Review

In this session we covered:

- What normalization rules are
- How to modify normalization rules in the Primo Back Office

Next Steps:

- Review the recommended articles
- Take the quiz
- Continue to the next training session

Notes:

In this session we covered what normalization rules are, and how to modify normalization rules in the Primo Back Office.

Please refer to the Recommended Articles section for additional information. After the brief quiz that begins on the next page, you can continue on to the next training session in this series.

1.26 Question 1

(Multiple Choice, 10 points, 1 attempt permitted)

Quiz: Normalization Rules Overview

 Please select the correct response. If the rule is flagged with the action "ADD"

- A new PNX field will created even if the field already exists
- The rule will not create another PNX field
- The PNX field that it creates will be merged with the PNX field that was created before it
- A new PNX field will created as long as the field does not exist already
- Nothing happens

Correct	Choice
X	A new PNX field will created even if the field already exists
	The rule will not create another PNX field
	The PNX field that it creates will be merged with the PNX field that was created before it
	A new PNX field will created as long as the field does not exist already
	Nothing happens

Feedback when correct:

If the rule is flagged with the action 'ADD', a new PNX field will created even if the field already exists.

Feedback when incorrect:

If the rule is flagged with the action 'ADD', a new PNX field will created even if the field already exists.

Notes:

Correct (Slide Layer)

Quiz: Normalization Rules Overview

?

Please select the correct response. If the rule is flagged with the action "ADD"

- A new PNX field will created even if the field already exists
- The rule will not create another PNX field
- The PNX field that it creates will be merged with the PNX field that was created before it
- A new PNX field will created 'ADD', a new PNX field will created already
- Nothing happens

If the rule is flagged with the action 'ADD', a new PNX field will created even if the field already exists.

Correct Continue

Incorrect (Slide Layer)

Quiz: Normalization Rules Overview

 Please select the correct response. If the rule is flagged with the action "ADD"

- A new PNX field will created even if the field already exists
- The rule will not create another PNX field
- The PNX field that it creates will be merged with the PNX field that was created before it
- A new PNX field will created already
- Nothing happens

If the rule is flagged with the action 'ADD', a new PNX field will created even if the field already exists.

Incorrect Continue

1.27 Question 2

(Multiple Response, 10 points, 1 attempt permitted)

Quiz: Normalization Rules Overview

 Please select the correct responses. Select all that apply. There are four rule elements. They are:

- Rule group
- Source
- Conditions
- Transformation
- PNX

Correct	Choice
X	Rule group

X	Source
X	Conditions
X	Transformation
	PNX

Feedback when correct:

The rule elements are rule group, source, conditions, and transformation.

Feedback when incorrect:

The rule elements are rule group, source, conditions, and transformation.

Correct (Slide Layer)

Quiz: Normalization Rules Overview

 Please select the correct responses. Select all that apply. There are four rule elements. They are:

- Rule group
- Source
- Conditions
- Transformation
- PNX

The rule elements are rule group, source, conditions, and transformation.

Correct Continue

Incorrect (Slide Layer)

Quiz: Normalization Rules Overview

 Please select the correct responses. Select all that apply. There are four rule elements. They are:

- Rule group
- Source
- Conditions
- Transformation
- PNX

The rule elements are rule group, source, conditions, and transformation.

Incorrect Continue

1.28 Question 3

(True/False, 10 points, 1 attempt permitted)

Quiz: Normalization Rules Overview

 Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

- True
- False

Correct	Choice
X	True

False

Feedback when correct:

Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

Feedback when incorrect:

Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

Notes:

Correct (Slide Layer)

Quiz: Normalization Rules Overview

Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

True

False

Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

Correct Continue

Incorrect (Slide Layer)

Quiz: Normalization Rules Overview

 Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

True

False

Normalization rules define how records from a specific data source are converted from their source format to PNX, or Primo Normalized XML

Incorrect Continue

1.29 Thank You!

Thank You!

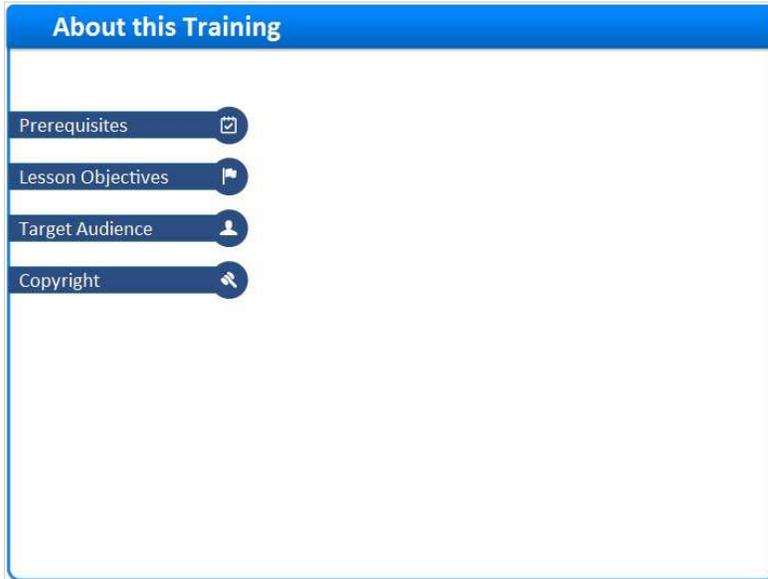
Visit the Ex Libris Knowledge Center
<http://knowledge.exlibrisgroup.com>

 ExLibris
a ProQuest Company

Notes:

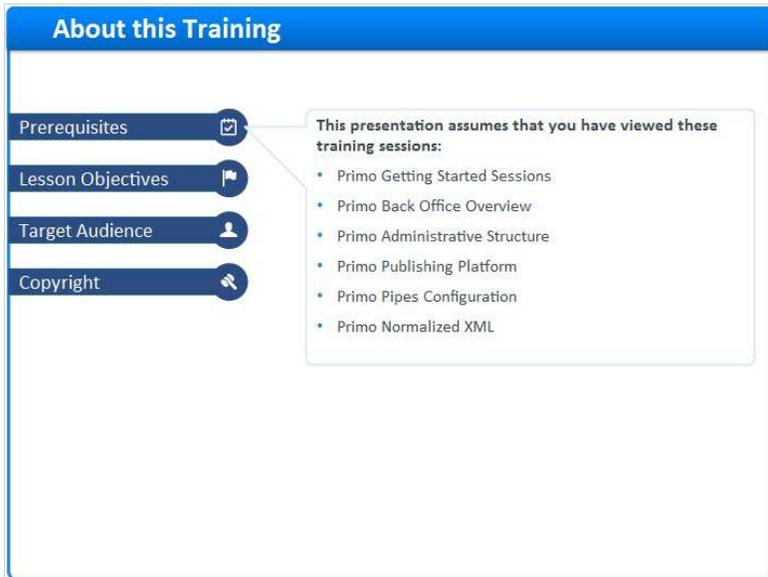
Thank you for joining this session!

1.30 About this Training



Notes:

1 (Slide Layer)



2 (Slide Layer)

About this Training

- Prerequisites
- Lesson Objectives **By the end of this training session, you will be able to:**
 - Modify Normalization Rules in the Primo Back Office
- Target Audience
- Copyright

3 (Slide Layer)

About this Training

- Prerequisites
- Lesson Objectives
- Target Audience **Target Audience:**
 - Staff implementing and maintaining Primo
- Copyright

4 (Slide Layer)

About this Training

- Prerequisites
- Lesson Objectives
- Target Audience
- Copyright

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