

Resource Types

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1. Introduction

A resource type defines a certain XML source format, together with processing options. It typically consists of

- an XML structure definition (e.g., Relax NG)
- some presentation pipelines,
- some presentation XSLT stylesheets,
- usecases to manipulate documents.

All of these can be shared between several resource types.

2. Configuring Resource Types

The configuration files of a resource type are stored in a single directory:

```
doctypes/
  mydoctype/
    doctype.xconf      configuration file
    samples/
      mydoctype.xml    sample file
```

The schema definition file is stored in the common `resources` directory. This allows to share schemas between multiple resource types:

```
resources/
  schemas/
    mydoctype.rng
```

Some resource types are provided by the Lenya core:

```
$LENYA_HOME
  lenya/
    doctypes/
      xhtml/...
      links/...
    resources/
      schemas/
        xhtml.rng
        links.rng
        ...
```

To add custom usecases to your publication, use the following directory structure:

```
$PUB_HOME
  lenya/
    doctypes/
      mydoctype1/...
      mydoctype2/...
      ...
    resources/
      schemas/
        mydoctyp1.rng
        mydoctyp2.rng
        ...
```

3. Adding Resource Types to a Publication

The resource types used by a publication are declared in `publication.xconf`, including the assignment of a workflow schema to a resource type:

```
<publication>
  ...
  <resource-type name="xhtml" workflow="workflow.xml"/>
  <resource-type name="homepage" workflow="workflow.xml"/>
  <resource-type name="links" workflow="workflow.xml"/>
```

```
...
</publication>
```

You can add references to

- core resource types,
- resource types of template publications, or
- resource types of the publication itself.

Adding a custom resource type to your publication includes the following steps:

3.1. Choose a Unique Resource Type Name

You should choose a reasonable name for your resource type. In the examples, we use *profile* (page with information about a person).

3.2. Providing a Sample XML Document

If you want to enable users to create new resources belonging to your resource type, it is useful to provide a sample XML document. If you want to use the `DefaultBranchCreator` that ships with Lenya, you have to add the sample document because it is used as a template for creating new resources.

The sample document is placed in `{publication}/lenya/doctypes/{resource-type-name}/samples/`. You can choose an arbitrary filename, but it is recommended to use the resource type name (e.g., `profile.xml`).

3.3. Providing an XML Structure Definition

This step is only needed if you want to edit resources with Lenya or validate them after they have been imported or manipulated. The type of the structure definition ([XML Schema](http://www.w3.org/XML/Schema) (<http://www.w3.org/XML/Schema>), [Relax NG](http://www.relaxng.org/) (<http://www.relaxng.org/>), ...) depends on the editor or validator you want to use. For instance, the [BXE](http://www.bitfluxeditor.org/) (<http://www.bitfluxeditor.org/>) WYSIWYG editor requires a Relax NG document.

The structure definition document is placed in the directory `{publication}/lenya/resources/schemas/`. The name of the file is arbitrary, but it is recommended to use the resource type name (e.g., `profile.rng`).

3.4. Creating a Workflow Schema

If your resources should have a workflow, you have to add a workflow schema for your resource type as described in [Workflow Configuration](#) (`../1_2_x/components/workflow/configuration.html`). A workflow schema can be shared between multiple resource types. The workflow schema is assigned to a resource type in `publication.xconf` (see section *Adding Resource Types to a Publication*).

3.5. The Resource Type Definition

To assign the creator, schema etc. to your resource type, declare it in

`{publication}/lenya/doctypes/{resource-type-name}/doctype.xconf:`

```
<resource-type name="profile">
  <creator src="org.apache.lenya.cms.authoring.DefaultBranchCreator">
    <sample-name>profile.xml</sample-name>
  </creator>
  <schema src="profile.rng"/>
</resource-type>
```

3.6. Define a Custom Menubar

If you want to use a custom menubar for your resource type, follow the guidelines on the page [The Lenya Menubar](#) (`../1_2_x/components/layout/lenya-menubar.html`). Typically, a menubar is shared between multiple resource types. Small

customizations can be achieved with Java code in the menubar XSP.

To let the user create new resources using the `DefaultBranchCreator`, you have to add the following menu item:

```
<item uc:usecase="site.create" href="?doctype=profile"><i18n:text>New Profile
Document</i18n:text></item>
```

3.7. Presentation

To make your resources available as HTTP pages, you have to add the appropriate pipelines and XSLT stylesheets. In general, there are no restrictions.

If you derive your publication from the default publication, the pipelines have to be placed in `{publication}/doctypes.xmap`. The stylesheets are located in `{publication}/xslt/` and are named `{resource-type}2xhtml.xsl` (e.g., `profile2xhtml.xsl`). The stylesheet is supposed to generate a valid XHTML fragment (in the XHTML namespace) with `<div id="body">` as the document element.