



Chapter 1. Nuxeo Preview Addon

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The `nuxeo-platform-preview` addon provides services, transformers and adapters to generate HTML preview out of a Nuxeo DocumentModel.

1.1. Overview

The preview addOn is composed of several layers :

- UI part
 - Adds on Preview tabs that displays the preview inside an IFRAME
- Transformer part
 - Preview addon contribute transformers that are dedicated to generating HTML out of most file formats
- Service and Adapters
 - Preview addon includes services that allow you to define PreviewAdapter for each type of Document. These adapters are responsible for defining how the preview will be generated :
 - define the field(s) used for preview
 - Because a Nuxeo document contains a lot of differents fields, the adapter must determine what are the default fields used to generate the preview.
 - define how preview is generated
 - Basically preview can be generated using some transformers or using some fields that already contains pre-generated html preview

The services provided by the Preview addon let you configure PreviewAdapter depending on your document types and manage some cache for transformer based previews.

1.2. Installing the preview Addon

Installing the Preview Addon is fairly simple.

1.2.1. Deploy the addon

Just drop the `nuxeo-platform-preview-5.X.jar` in the `nuxeo.ear/plugins/` directory and restart your server.

1.2.2. Configure transformers

The preview service relies on html transformers that uses external tools to achieve the transformation. You need to have them installed and configured before the preview addon does work.

The preview service comes with 2 html transformers:

- PDF2Html
 - This transformer generates HTML from PDF files.
 - This transformer relies on the command line tool `pdftohtml`. This tool can be found as package for most linux distrib (includes in `poppler-utils` in Ubuntu). This tool can also be installed on MS Windows platform, see <http://sourceforge.net/projects/pdftohtml/>
 - Once you have installed `pdftohtml` on your server, you must configure Nuxeo to let him know where is the command line tool. For that you can use a extension point to define what is the temporary directory to use and where is `pdftohtml` command.
 - Default settings should be ok for most Linuxes, but you will have to do the configuration if you use a MS Windows box.
 - To do this configuration, create a file named `pdftohtml-config.xml` in the `nuxeo.ear/config` directory

```

                <?xml version="1.0"?>
<component name="myproject.pdfthtml.config.contrib">
  <extension target="org.nuxeo.ecm.platform.preview.transformers.CLTransformerPluginParameterManagerComponent"
    point="cltpParameters">

    <CLTransformerPluginParameters name="Pdf2HtmlParams" targetTransformerPlugin="Pdf2Html">
      <parameters>
        <!-- default Linux parameters
        <parameter name="commandString">/usr/bin/pdfthtml</parameter>
        <parameter name="tmpDir">/tmp/</parameter> -->
        <!-- MS Windows parameters -->
        <parameter name="commandString">C:\\Program files\\pdfthtml\\pdfthtml.exe</parameter>
        <parameter name="tmpDir">C:\\Temp\\</parameter>
      </parameters>
    </CLTransformerPluginParameters>
  </extension>
</component>

```

- Any2Html

This Transformer is in fact a chain using Any2pdf and Pdf2html. This means you need to have PDF2html working but also OpenOffice in listen mode (this is documented earlier in this book).

1.3. Extensions and pluggability

Preview AddOn provide several extension solutions

1.3.1. Pluggable Adapters

Preview AddOn uses the standard DocumentModelAdapter system. For that it defines a HtmlPreviewAdapter interface that must be implemented by each adapters. In order to let you choose the Adapter implementation according to the Document type, the DocumentAdapterFactory used for the HtmlPreviewAdapter is pluggable. This factory uses the PreviewAdapterManager service to determine what implementation of the HtmlPreviewAdapter should be returned when you use

```
doc.getAdapter(HtmlPreviewAdapter.class)
```

Defining custom preview adapter is done via a dedicated extension point : you register a Factory for a given DocumentType. This factory will be used to create the implementation of the HtmlPreviewAdapter from the DocumentModel. Here is example of such a contribution :

```

                <?xml version="1.0"?>
<component name="org.nuxeo.ecm.platform.preview.adapter.contrib">
  <extension target="org.nuxeo.ecm.platform.preview.adapter.PreviewAdapterManagerComponent"
    point="AdapterFactory">

    <previewAdapter name="notePreviewAdapter" enabled="true">
      <typeName>Note</typeName>
      <class>org.nuxeo.ecm.platform.preview.adapter.factories.NotePreviewAdapter</class>
    </previewAdapter>

  </extension>
</component>

```

This contribution define the Adapter factory for the Note Document type. Contributed factories must implement the PreviewAdapterFactory interface (that contains only one method!).

The implementation returned by the factory can be based on one of the 2 base classes provided inside the AddOn.

- TransformerBasedHtmlPreviewAdapter

This base class provides all the build in features to create a preview adapter that uses the Transformation Services to generate the html preview.

Default usage in Nuxeo is the generic adapter for the all the documents that contains the file schema.

- PreprocessedHtmlPreviewAdapter

This base class provides all the build in features to create a preview adapter that uses pre-processed HTML preview that is stored inside the document.

Default usage in Nuxeo is the adapter for the Note Document type.

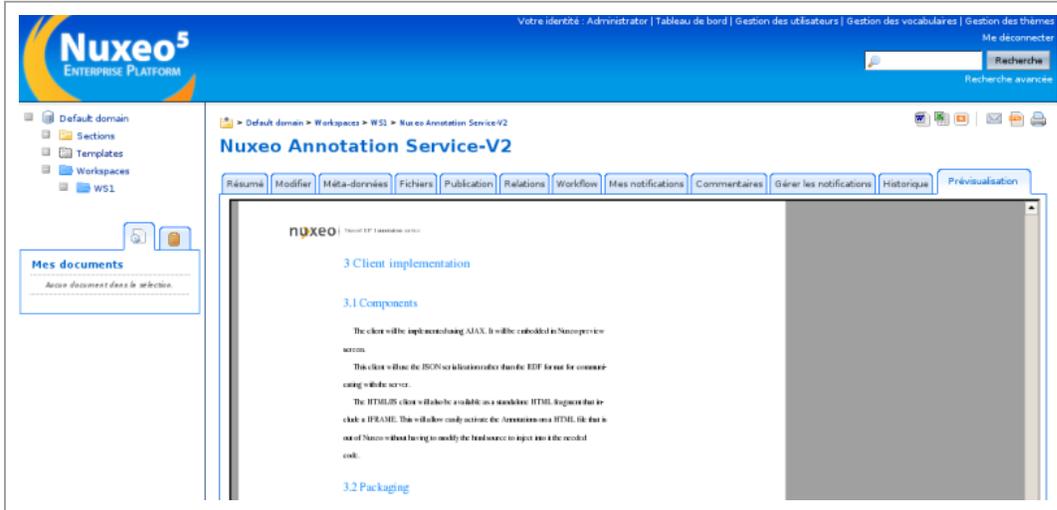
For most usages, you just be able to contribute a factory that create a new PreprocessedHtmlPreviewAdapter with the good arguments.

1.3.2. Pluggable HTML Transformers

The Preview AddOn contributes some commandLine based transformers.

It also provides you with a base class `AbstractCommandLineBasedTransformer` that can be used to easily make another `CommandLine` based Transformer.

We also provide a `CLTransformerPluginParameterManager` service that is used by the base class to extract the configurable parameters.



1.4. Previews and URLs

The preview AddOn includes a restlet.

This restlet provides a REST access to the preview service. This means that you can retrieve the preview of a document by just using a simple GET URL.

Preview URLs have this form :

```
http://{server}:{port}/nuxeo/restAPI/preview/{document_uuid}/{previewfield}/
```

where

- `document_uuid`
is the the document uuid that is already present in all Nuxeo urls
- `previewfield`
is the xpath of the field that should be used as main file for the preview

Depending on the underlying adapter implementation, this field may or may not be relevant. Use 'default' to let the adapter implementation choose the right field for you.

Please note that the last / is important. As HTML preview can contain nested images, the base URL must end with a /. The Restlet system handles a cache to avoid refetching the preview data at each call.