

eXo Platform 3.0 - Content Functions

Copyright ©

1. Preface	1
1.1. Get Started with eXo Content	1
1.2. Package	1
1.2.1. Package WCM standalone version - Tomcat bundle	1
1.2.2. Package WCM with workflow enabled - Tomcat bundle	1
1.2.3. Make WCM EAR packages to run with jBoss	1
2. Portlets	3
2.1. Content Detail	3
2.1.1. Available preferences	3
2.1.2. Sample configuration	3
2.2. Content List	4
2.2.1. Available preferences	4
2.2.2. Sample Configuration	7
2.3. Search	8
2.3.1. Available preferences	8
2.3.2. Sample configuration	9
2.4. Explorer	10
2.4.1. Available preferences	10
2.4.2. Example of configuration	11
2.5. Administration	13
2.5.1. Available preferences	13
2.5.2. Sample Configuration	13
2.6. Fast Content Creator	13
2.6.1. Available preferences	13
2.6.2. Sample Configuration	14
3. Configuration	15
3.1. Drives	15
3.1.1. Fields	15
3.1.2. Example of configuration	16
3.2. Publication	17
3.2.1. component configuration	18
3.2.2. external-component-plugins configuration	19
3.2.3. Example	19
3.3. Deployment	20
3.3.1. Fields	20
3.3.2. Example of configuration	22
3.4. Taxonomies	22
3.4.1. Fields	22
3.4.2. Sample Configuration	25
3.5. Nodetypes	28
3.5.1. Fields	28
3.5.2. Examples Nodetype configuration	28
3.6. Views	29
3.6.1. Fields	29
3.6.2. Example of configuration	30
3.7. Templates	31
3.7.1. Application template	31
3.7.2. Nodetype template	35
3.8. SiteSearchService	35
3.8.1. Component Configuration	35
3.8.2. Component Plugin Configuration	35
3.8.3. Sample Configuration	36

4. Inside WCM Templates	37
4.1. Content types	37
4.1.1. Dialog	37
4.1.2. View	45
4.2. List of Contents	46
4.2.1. Folder based Template	46
4.2.2. Category tree Template	46
5. Inside WCM Explorer	47
5.1. CSS	47
5.2. Javascript	47
5.3. CKEditor	47
6. Extensions	48
6.1. REST Services	48
6.1.1. REST Overview	48
6.1.2. Restful Web Service	48
6.2. UI Extensions	50
6.2.1. Overview	50
6.2.2. How to add your own tab in ECM Administration	50
6.3. Authoring Extension	54
6.3.1. Extended Publication Plugin	54
6.3.2. Publication Manager	56
7. Java Services	62
7.1. TaxonomyService	62
7.2. LinkManager	73
7.3. PublicationManager	78
7.4. WCMComposer	80
7.5. NewFolksonomy	82
7.6. ApplicationTemplateManager	92
7.7. NodeFinder	96
7.8. JodConverter	102
7.9. SiteSearchService	102
8. FAQ	104
8.1. How to deploy a workflow?	104
8.1.1. Deploy a workflow inside a .war file	104
8.1.2. Deploy a workflow inside a .jar file	104

Chapter 1. Preface

1.1. Get Started with eXo Content

eXo WCM is a fully integrated Content Management solution inside GateIn. Basically, we're using the extension mechanism inside GateIn to add content features. If you want more information about the extension mechanism, you can read the GateIn documentation : <http://docs.jboss.com/gatein/portal/3.1.0-FINAL/reference-guide/en-US/html/index.html>

This integrated solution provides users with a comprehensive platform for integrating applications and managing and publishing content - all from a single, familiar console.

When starting a new project, you can see eXo WCM as a WCM Java developer Platform. In this reference guide, we will give you guidelines so you can build stable applications using eXo WCM from the inside.

1.2. Package

- All package actions in WCM start from the delivery folder, so you should go to this folder first.

```
$ cd ecms/delivery
```

1.2.1. Package WCM standalone version - Tomcat bundle

```
$ cd wcm/assembly  
$ mvn clean install
```

1.2.2. Package WCM with workflow enabled - Tomcat bundle

```
$ cd wkf-wcm/assembly  
$ mvn clean install
```

1.2.3. Make WCM EAR packages to run with jBoss

- Make WCM extension EAR

```
$ cd packaging/wcm/ear  
$ mvn clean install
```

- Make WCM demo sites EAR

```
$ cd packaging/ecmdemo/ear
```

```
$ mvn clean install
```

- Make workflow EAR

```
$ cd packaging/workflow/ear  
$ mvn clean install
```

Chapter 2. Portlets

2.1. Content Detail

2.1.1. Available preferences

Preference	Type	Default Value	Description
repository	String	repository	Repository is a place where data are stored and maintained
workspace	String	collaboration	Workspace is a place where the content is stored
nodeIdentifier	String	N/A	The UUID or the path of content that you want to show
ShowTitle	Boolean	true	Show the content title on the top of the portlet
ShowDate	Boolean	false	Show the content date on the top of the portlet
ShowOptionBar	Boolean	false	Show a bar with some actions (Print, Back)
ContextEnable	Boolean	false	Define if the portlet will use the parameter on URL as the path to content to display or not
ParameterName	String	content-id	Define which parameter will be used to get the content's path
ShowVote	Boolean	false	Show the result of voting for the displayed content
ShowComments	Boolean	false	Show the existing comments of this content (if any)
sharedCache	Boolean	true	Define if the portlet will cache the displayed contents.

2.1.2. Sample configuration

```
<portlet-preferences>
```

```
<preference>
  <name>repository</name>
  <value>repository</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>workspace</name>
  <value>collaboration</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>nodeIdentifier</name>
  <value>/myfolder/mycontent</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>ShowTitle</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>ShowDate</name>
  <value>false</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>ShowOptionBar</name>
  <value>false</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>ShowPrintAction</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>isQuickCreate</name>
  <value>false</value>
  <read-only>true</read-only>
</preference>
<preference>
  <name>ContextEnable</name>
  <value>false</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>ParameterName</name>
  <value>content-id</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>sharedCache</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
</portlet-preferences>
```

Note

In 2.1.x, there are some preferences that are no longer used, for example, ShowPrintAction preference.

2.2. Content List

2.2.1. Available preferences

Preference	Type	Default Value	Description
mode	String	AutoViewerMode	The mode that the portlet uses to display content: all contents in a specific folder or all specific contents in the portlet.
folderPath	String		The path to the folder whose contents are displayed by this portlet.
orderBy	String	publication:liveDate	The property by which all the contents in the portlet are sorted.
orderType	String	DESC	The type of the content sort method: ascending or descending
header	String		Header of the portlet. It is displayed at the top of the portlet.
automaticDetection	Boolean	true	This value indicates whether the header of the portlet is chosen to be the title of the folder given in the folderPath parameter (true value) or the value given in the header paramter above
formViewTemplatePath	String	/exo:ecm/views/templates/ContentTemplateUsedToDisplayContents	Path to the template used to display the contents in this portlet.
paginatorTemplatePath	String	/exo:ecm/views/templates/ContentTemplateUsedToDisplayContents	Path to the template used to display the contents in this portlet.
itemsPerPage	Integer	10	Number of contents displayed in every "page" of the portlet.
showThumbnailsView	Boolean	true	This value indicates whether the content image in this portlet is shown or not.
showTitle	Boolean	true	This value indicates whether the content title in this portlet is shown or not.
showHeader	Boolean	true	This value indicates whether the content

Preference	Type	Default Value	Description
			header in this portlet is shown or not.
showRefreshButton	Boolean	false	This value indicates whether the refresh button is shown in this portlet or not.
showDateCreated	Boolean	true	This value indicates whether the content created date in this portlet is shown or not.
showReadmore	Boolean	true	This value indicates whether the Readmore button is shown in every content of the portlet (After clicking this button, user can read the whole text of the content).
showSummary	Boolean	true	This value indicates whether the content summary in this portlet is shown or not.
showLink	Boolean	true	If this value is true , the header of every content is also the link to view this content fully. If the value is false , the header is considered as a simple text
showRssLink	Boolean	true	Show the rss link of this portlet.
basePath	String	detail	Show the page in which the full content is displayed when user clicks to the Read more button.
contextualFolder	String	contextualDisable	Enable/ disable the contextual mode of the portlet. If enabled, the portlet can take the folder path indicated in the URL to display contents.
showScvWith	String	content-id	The name of the parameter shows the path of content in url to

Preference	Type	Default Value	Description
			display when clicking the "Read more" button of this content.
showClvBy	String	folder-id	The name of the parameter shows the path of the folder in url to display its contents.
sharedCache	Boolean	true	Define if the portlet will cache the displayed contents.

2.2.2. Sample Configuration

```

<portlet-preferences>
  <preference>
    <name>mode</name>
    <value>AutoViewerMode</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>folderPath</name>
    <value/>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>orderBy</name>
    <value>publication:liveDate</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>orderType</name>
    <value>DESC</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>header</name>
    <value/>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>automaticDetection</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>formViewTemplatePath</name>
    <value>/exo:ecm/views/templates/content-list-viewer/list/UIContentListPresentationDefault.gtmpl</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>paginatorTemplatePath</name>
    <value>/exo:ecm/views/templates/content-list-viewer/paginators/UIPaginatorDefault.gtmpl</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>itemsPerPage</name>
    <value>10</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showThumbnailsView</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
</preference>

```

```

    <name>showTitle</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showHeader</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showRefreshButton</name>
    <value>false</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showDateCreated</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showReadmore</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showSummary</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showLink</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showRssLink</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>basePath</name>
    <value>detail</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>contextualFolder</name>
    <value>contextualDisable</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showScvWith</name>
    <value>content-id</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>showClvBy</name>
    <value>folder-id</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>sharedCache</name>
    <value>true</value>
    <read-only>false</read-only>
  </preference>
</portlet-preferences>

```

2.3. Search

2.3.1. Available preferences

Preference	Type	Default value	Description
repository	String	repository	The repository is a place where data are stored and maintained.
workspace	String	collaboration	The workspace where the content is stored
searchFormTemplatePath	String	/exo:ecm/views/templates/WCM Advance Search/search-form/UIDefaultSearchForm.gtmpl	The path to the search form template
searchResultTemplatePath	String	/exo:ecm/views/templates/WCM Advance Search/search-result/UIDefaultSearchResult.gtmpl	The path to the search result template
searchPaginatorTemplatePath	String	/exo:ecm/views/templates/WCM Advance Search/search-paginator/UIDefaultSearchPaginator.gtmpl	The path to the search paginator template
searchPageLayoutTemplatePath	String	/exo:ecm/views/templates/WCM Advance Search/search-page-layout/UIDefaultSearchPageLayout.gtmpl	The path to the search page template
itemsPerPage	Integer	5	The number of items for each page
showQuickEditButton	Boolean	true	Show or hide the quick edit icon (!)
basePath	String	parameterizedviewer	The page which is used to display the search result

2.3.2. Sample configuration

```

<portlet-preferences>
  <preference>
    <name>repository</name>
    <value>repository</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>workspace</name>
    <value>collaboration</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>searchFormTemplatePath</name>
    <value>/exo:ecm/views/templates/WCM Advance Search/search-form/UIDefaultSearchForm.gtmpl</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>searchResultTemplatePath</name>
    <value>/exo:ecm/views/templates/WCM Advance Search/search-result/UIDefaultSearchResult.gtmpl</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>searchPaginatorTemplatePath</name>
    <value>/exo:ecm/views/templates/WCM Advance Search/search-paginator/UIDefaultSearchPaginator.gtmpl</value>
    <read-only>false</read-only>
  </preference>
</portlet-preferences>

```

```

<name>searchPageLayoutTemplatePath</name>
<value>/exo:ecm/views/templates/WCM_Advance_Search/search-page-layout/UISearchPageLayoutDefault.gtmpl</value>
<read-only>>false</read-only>
</preference>
<preference>
  <name>itemsPerPage</name>
  <value>5</value>
  <read-only>>false</read-only>
</preference>
<preference>
  <name>showQuickEditButton</name>
  <value>>true</value>
  <read-only>>false</read-only>
</preference>
<preference>
  <name>basePath</name>
  <value>parameterizedviewer</value>
  <read-only>>false</read-only>
</preference>
</portlet-preferences>

```

2.4. Explorer

2.4.1. Available preferences

Preference	Type	Default value	Description
repository	String	repository	The repository name which will be used in an instance of Site Explorer
workspace	String	N/A	Not in use. The workspace name was included in the Drive(!)
path	String	N/A	The path of node. This preference will be used when the usecase chosen is Parameterize
drive	String	N/A	Not in use. Replaced by driveName preference(!)
views	String	N/A	Not in use. The views will be displayed basing on the Drive which user has the access permission(!)
allowCreateFolders	String	N/A	Allow to create a folder by type. When you do not specify the value, then the default value will be nt:unstructured, nt:folder
categoryMandatoryWhenFileUpload	Boolean	false	Force an user to add a category when uploading or creating a document

Preference	Type	Default value	Description
uploadFileSizeLimitMB	Float	150	The maximum of file size when upload to the system (MB)
usecase	String	selection	The behavior to access Site Explorer. By default, the "selection" option is configured. Besides "selection", there are 4 other ways to configure the file explorer: Jailed,Personal,Social,Parameterize
driveName	String	Private	The name of a drive that an user wants to access
trashHomeNodePath	String	/Trash	The location to store the deleted nodes
trashRepository	String	repository	The name of the repository where stores the deleted nodes
trashWorkspace	String	collaboration	The name of the workspace where stores the deleted nodes
editInNewWindow	Boolean	false	Allow to edit document with or without a window popup.
showTopBar	Boolean	true	Allow to show the Top bar or not.
showActionBar	Boolean	true	Allow to show the Action bar or not.
showSideBar	Boolean	true	Allow to show the Side bar or not.
showFilterBar	Boolean	true	Allow to show the Filter bar or not.

2.4.2. Example of configuration

```
<portlet-preferences>
  <preference>
    <name>repository</name>
    <value>repository</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>workspace</name>
    <value/>
    <read-only>false</read-only>
  </preference>
  <preference>
```

```
<name>path</name>
<value/>
<read-only>false</read-only>
</preference>
<preference>
  <name>drive</name>
  <value/>
  <read-only>false</read-only>
</preference>
<preference>
  <name>views</name>
  <value/>
  <read-only>false</read-only>
</preference>
<preference>
  <name>allowCreateFolders</name>
  <value/>
  <read-only>false</read-only>
</preference>
<preference>
  <name>categoryMandatoryWhenFileUpload</name>
  <value>false</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>uploadFileSizeLimitMB</name>
  <value>150</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>usecase</name>
  <value>selection</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>driveName</name>
  <value>Private</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>trashHomeNodePath</name>
  <value>/Trash</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>trashRepository</name>
  <value>repository</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>trashWorkspace</name>
  <value>collaboration</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>editInNewWindow</name>
  <value>false</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>showTopBar</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>showActionBar</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>showSideBar</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
<preference>
  <name>showFilterBar</name>
  <value>true</value>
  <read-only>false</read-only>
</preference>
```

```
</portlet-preferences>
```

2.5. Administration

2.5.1. Available preferences

Preference	Type	Default	Description
repository	String	Repository	The name of the current repository

2.5.2. Sample Configuration

```
<portlet-preferences>
  <preference>
    <name>repository</name>
    <value>repository</value>
    <read-only>false</read-only>
  </preference>
</portlet-preferences>
```

2.6. Fast Content Creator

2.6.1. Available preferences

Preference	Type	Default Value	Description
mode	String	basic	The default mode for fast content creator portlet
repository	String	repository	The name of the current repository
workspace	String	collaboration	The workspace where the content is stored
path	String	/Groups/platform/users/Document	The destination path where the content is stored
type	String	exo:article	The node type of document which will be shown on the dialog form
saveButton	String	Save	The custom button Save
saveMessage	String	This node has been saved successfully	The custom message when clicking Save button

Preference	Type	Default Value	Description
isRedirect	Boolean	false	Redirect to another page or not
redirectPath	String	http://www.google.com.vn	The path that the page will redirect to
isActionNeeded	Boolean	true	Is an action needed to save the configuration

2.6.2. Sample Configuration

```

<portlet-preferences>
  <preference>
    <name>mode</name>
    <value>basic</value>
    <read-only>true</read-only>
  </preference>
  <preference>
    <name>repository</name>
    <value>repository</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>workspace</name>
    <value>collaboration</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>path</name>
    <value>/Groups/platform/users/Documents</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>type</name>
    <value>exo:article</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>saveButton</name>
    <value>Save</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>saveMessage</name>
    <value>This node has been saved successfully</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>isRedirect</name>
    <value>false</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>redirectPath</name>
    <value>http://www.google.com.vn</value>
    <read-only>false</read-only>
  </preference>
  <preference>
    <name>isActionNeeded</name>
    <value>true</value>
    <read-only>true</read-only>
  </preference>
</portlet-preferences>

```

Chapter 3. Configuration

3.1. Drives

A drive is like a shortcut in the content repository, a quick access to some places for users. You can restrict the visibility of this drive to a group/user and apply a specific view depending on the content you have in this area.

A drive is the combination of:

- Path: the root folder of the drive.
- View: how we can see the contents (by list, thumbnails, coverflow, etc).
- Role: visible to everybody, a group or a single user.
- Options: allow us to specify whether to see hidden nodes or not and to create folders in this drive or not.

3.1.1. Fields

Object type: *org.exoplatform.services.cms.drives.DriveData*

Field name	Type	Description
name	String	Name of the drive. It must be unique
repository	String	Content Repository where to find the root path
workspace	String	Workspace in the Content Repository
homePath	String	Root path in the Content Repository. userId can be used to use the userId at runtime in the path.
permissions	String	Visibility of the drive based on eXo rights. For example: <code>*/platform/users</code>
icon	String	Url to the icon
views	String	The list of views you want to use, separated by commas. For example: <code>simple-view,admin-view</code>
viewPreferences	Boolean	User Preference icon will be visible if true
viewNonDocument	Boolean	Non-document types will be visible in the user view if true

Field name	Type	Description
viewSideBar	Boolean	Show/Hide the left bar (with navigation and filters)
showHiddenNode	Boolean	Hidden nodes will be visible if true
allowCreateFolders	Boolean	List of nodet type we can create as folders. For example: nt:folder, nt:unstructured
allowNodeTypesOnTree	String	Allows you to filter node types in the navigation tree. For example, the default value is "*" to show all content types

We use the following structure for drives configuration

```
<external-component-plugins>
  <target-component>org.exoplatform.services.cms.drives.ManageDriveService</target-component>
  <component-plugin>
    <name>manage.drive.plugin</name>
    <set-method>setManageDrivePlugin</set-method>
    <type>org.exoplatform.services.cms.drives.impl.ManageDrivePlugin</type>
    <description>Nothing</description>
    <init-params>
      <object-param>There are initializing attributes of org.exoplatform.services.cms.drives.DriveData object</object-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

The file that contains the structure above will be configured in the configuration.xml file as the following:

```
<import>war:/conf/wcm-extension/dms/drives-configuration.xml</import>
```

3.1.2. Example of configuration

```
<external-component-plugins>
  <target-component>org.exoplatform.services.cms.drives.ManageDriveService</target-component>
  <component-plugin>
    <name>manage.drive.plugin</name>
    <set-method>setManageDrivePlugin</set-method>
    <type>org.exoplatform.services.cms.drives.impl.ManageDrivePlugin</type>
    <description>Nothing</description>
    <init-params>
      <object-param>
        <name>Managed Sites</name>
        <description>Managed Sites</description>
        <object type="org.exoplatform.services.cms.drives.DriveData">
          <field name="name">
            <string>Managed Sites</string>
          </field>
          <field name="repository">
            <string>repository</string>
          </field>
          <field name="workspace">
            <string>collaboration</string>
          </field>
          <field name="permissions">
            <string>*/platform/administrators</string>
          </field>
          <field name="homePath">
            <string>/sites content/live</string>
          </field>
          <field name="icon">

```

```

    <string/>
  </field>
  <field name="views">
    <string>wcm-view</string>
  </field>
  <field name="viewPreferences">
    <boolean>>false</boolean>
  </field>
  <field name="viewNonDocument">
    <boolean>>true</boolean>
  </field>
  <field name="viewSideBar">
    <boolean>>true</boolean>
  </field>
  <field name="showHiddenNode">
    <boolean>>false</boolean>
  </field>
  <field name="allowCreateFolders">
    <string>nt:folder, nt:unstructured</string>
  </field>
  <field name="allowNodeTypesOnTree">
    <string>*</string>
  </field>
</object>
</object-param>
<object-param>
  <name>Public</name>
  <description>Public drive</description>
  <object type="org.exoplatform.services.cms.drives.DriveData">
    <field name="name">
      <string>Public</string>
    </field>
    <field name="repository">
      <string>repository</string>
    </field>
    <field name="workspace">
      <string>collaboration</string>
    </field>
    <field name="permissions">
      <string>*:/platform/users</string>
    </field>
    <field name="homePath">
      <string>/Users/${userId}/Public</string>
    </field>
    <field name="icon">
      <string/>
    </field>
    <field name="views">
      <string>simple-view, admin-view</string>
    </field>
    <field name="viewPreferences">
      <boolean>>false</boolean>
    </field>
    <field name="viewNonDocument">
      <boolean>>false</boolean>
    </field>
    <field name="viewSideBar">
      <boolean>>true</boolean>
    </field>
    <field name="showHiddenNode">
      <boolean>>false</boolean>
    </field>
    <field name="allowCreateFolders">
      <string>nt:folder, nt:unstructured</string>
    </field>
    <field name="allowNodeTypesOnTree">
      <string>*</string>
    </field>
  </object>
</object-param>
</init-params>
</component-plugin>
</external-component-plugins>

```

3.2. Publication

3.2.1. component configuration

Configuration name	Data type	Sample value	Description
key	String	org.exoplatform.services	Service class location
type	String	org.exoplatform.services	Service publication class implementation location
component-plugins	Object	N/A	The plugins that are used inside the component
init-params	Object	N/A	The initial parameter that will be used inside the component

3.2.1.1. component-plugin configuration

- **Description:**

Configuration name	Data type	Sample value	Description
name	String	Simple publication	Name of component-plugin
set-method	String	addPublicationPlugin	Set method to start using plugin
type	String	org.exoplatform.services	Class publication lifecycle simple plugin

3.2.1.2. init-params configuration

- parameter will be set in pair: name-value and will be placed inside the <value-param> object

Configuration name	Data type	Sample value	
name	String	useCache	
value	String	true	

- parameter also can be set in an object, with further information will be the object's properties.

Configuration name	Data type	Sample value	Description
name	String	cache.config.wcm.composer	The name of the object
description	String	N/A	The brief description about the object

Configuration name	Data type	Sample value	Description
object	Object	N/A	This object will be passed to component as a parameter, this object includes fieldset properties

3.2.2. external-component-plugins configuration

Configuration name	Data type	Sample value	Description
target-component	String	org.exoplatform.services.wcm.publication.WCMPublicationServiceImpl	External plugins' class location
component-plugin	Object	N/A	Configuration of component that will be used as a plugin

3.2.3. Example

3.2.3.1. Example of component using plugins

```

<component>
  <key>org.exoplatform.services.wcm.publication.WCMPublicationService</key>
  <type>org.exoplatform.services.wcm.publication.WCMPublicationServiceImpl</type>
  <component-plugins>
    <component-plugin>
      <name>States and versions based publication</name>
      <set-method>addPublicationPlugin</set-method>
      <type>org.exoplatform.services.wcm.publication.lifecycle.stageversion.StageAndVersionPublicationPlugin</type>
      <description>This publication lifecycle publish a web content or DMS document to a portal page with more s
    </component-plugin>
    <component-plugin>
      <name>Simple publication</name>
      <set-method>addPublicationPlugin</set-method>
      <type>org.exoplatform.services.wcm.publication.lifecycle.simple.SimplePublicationPlugin</type>
      <description>This publication lifecycle publish a web content or DMS document to a portal page without ver
    </component-plugin>
  </component-plugins>
</component>

```

3.2.3.2. Example of component having init-params

```

<component>
  <key>org.exoplatform.services.wcm.publication.WCMComposer</key>
  <type>org.exoplatform.services.wcm.publication.WCMComposerImpl</type>
  <init-params>
    <value-param>
      <name>useCache</name>
      <value>true</value>
    </value-param>
  </init-params>
</component>

```

3.2.3.3. Example of external-component-plugins configuration

```

<external-component-plugins>
  <target-component>org.exoplatform.services.cache.CacheService</target-component>
  <component-plugin>
    <name>addExoCacheConfig</name>
    <set-method>addExoCacheConfig</set-method>
    <type>org.exoplatform.services.cache.ExoCacheConfigPlugin</type>
    <description>Configures the cache for query service</description>
    <init-params>
      <object-param>
        <name>cache.config.wcm.composer</name>
        <description>The default cache configuration</description>
        <object type="org.exoplatform.services.cache.ExoCacheConfig">
          <field name="name">
            <string>wcm.composer</string>
          </field>
          <field name="maxSize">
            <int>300</int>
          </field>
          <field name="liveTime">
            <long>600</long>
          </field>
          <field name="distributed">
            <boolean>false</boolean>
          </field>
          <field name="implementation">
            <string>org.exoplatform.services.cache.concurrent.ConcurrentFIFOExoCache</string>
          </field>
        </object>
      </object-param>
    </init-params>
  </component-plugin>
</external-component-plugins>

```

3.3. Deployment

When a site is created, normally the end-user wants to see something in the page instead of a blank page, so we need this service for deployment of some "default" contents like Banner, Footer, Navigation, Breadcrumb, etc.

There are two main cases to use:

- The site is created only one time when the database is clean.
- The site is created at runtime, when a user uses the core feature of GateIn portal.

3.3.1. Fields

init-params

Element	Type	Description
object-param	Object	The parameter which is an Object

object-param

Element	Type	Default value	object-param
name	String	ACME Logo data	The name of this object parameter
description	String	Deployment Descriptor	The description of this

Element	Type	Default value	object-param
			object parameter
object	Class	org.exoplatform.services.deploy.descriptor	The object of this object parameter

object

Attribute	Type	Default value	Description
type	String	org.exoplatform.services.deploy.descriptor (*)	The type of this object

org.exoplatform.services.deploy.descriptor

Name	Type	Default value	Description
target	Object	org.exoplatform.services.deploy.descriptor (*)	The target node (which will contains the imported node)
sourcePath	String	war:/conf/sample-portal/	The absolute path of the XML file
cleanupPublication	Boolean	false	Decide when allows to cleanup the publication lifecycle in the target folder after importing the data. true: allow false: not allow

org.exoplatform.services.deploy.descriptor\$Target

Field	Type	Default value	Description
repository	String	repository	The repository of the target node
workspace	String	collaboration	The workspace of the target node
nodePath	String	/sites content/live/acme/web contents/site artifacts	The path of the target node

3.3.2. Example of configuration

```
<external-component-plugins>
  <target-component>org.exoplatform.services.deployment.WCMContentInitializerService</target-component>
  <component-plugin>
    <name>Content Initializer Service</name>
    <set-method>addPlugin</set-method>
    <type>org.exoplatform.services.deployment.plugins.XMLDeploymentPlugin</type>
    <description>XML Deployment Plugin</description>
    <init-params>
      <object-param>
        <name>ACME Logo data</name>
        <description>Deployment Descriptor</description>
        <object type="org.exoplatform.services.deployment.DeploymentDescriptor">
          <field name="target">
            <object type="org.exoplatform.services.deployment.DeploymentDescriptor$Target">
              <field name="repository">
                <string>repository</string>
              </field>
              <field name="workspace">
                <string>collaboration</string>
              </field>
              <field name="nodePath">
                <string>/sites content/live/acme/web contents/site artifacts</string>
              </field>
            </object>
          </field>
          <field name="sourcePath">
            <string>war:/conf/sample-portal/wcm/artifacts/site-resources/acme/Logo.xml</string>
          </field>
          <field name="cleanupPublication">
            <boolean>true</boolean>
          </field>
        </object>
      </object-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

3.4. Taxonomies

Taxonomies are used to sort documents to ease searches when browsing documents online. The main idea behind that concept is to provide a multi dimensional set of paths to find a document. The best example is when you browse Yahoo news. In many cases, you can get your content by using different category paths. Therefore, after creating a document somewhere in the repository, it is possible to categorize it by adding several taxonomy references. By browsing the taxonomy tree, it will be possible to find the referencing article and display them as if they were children of the taxonomy nodes. As you can imagine, taxonomies are stored in the JCR itself and we are using the JCR Reference functionality to provide that advanced ECM feature.

Managing the tree of taxonomies is very simple, you can copy/cut nodes and paste them. Of course, you can add and remove taxonomies from the tree. Once a taxonomy has been added, any user who has access to the "Manage Categories" icon from his/her view can then browse the taxonomy tree and refer one of its nodes to the created documents.

3.4.1. Fields

Object type: *org.exoplatform.services.cms.taxonomy.impl.TaxonomyTreeDefaultUserPermission*

Field name	Collection type	Description
permissions	java.util.ArrayList<TaxonomyTreeDefaultUserPermission>	List of default user permissions

Field name	Collection type	Description
		access the taxonomy tree

Object type: *org.exoplatform.services.cms.taxonomy.impl.TaxonomyTreeDefaultUserPermission\$Permission*

Field name	Type	Default value	Description
identity	String	*:/platform/administrators	user name or user group.
read	Boolean	true	permission to read the taxonomy tree.
addNode	Boolean	true	permission to add a node in the taxonomy tree.
setProperty	Boolean	true	permission to set properties for a node in the taxonomy tree .
remove	Boolean	true	permission to remove a node from the taxonomy tree.

Target Component: *org.exoplatform.services.cms.taxonomy.TaxonomyService*

Name: predefinedTaxonomyPlugin

Set-method: addTaxonomyPlugin

Type: *org.exoplatform.services.cms.taxonomy.impl.TaxonomyPlugin*

value param	Type	Default value	Description
autoCreateInNewRepository	Boolean	true	enable/ Disable the creation of the taxonomies in new created repository.
repository	String	repository	name of the repository where taxonomies are created.
workspace	String	dms-system	name of the workspace where taxonomies are created.
treeName	String	system	name of the taxonomy tree to be created.

Object param	Type	Default value	Description
permission.configuration	String	org.exoplatform.services.cms.taxonomy.impl.TaxonomyTreeDefaultUserPermission\$Permission	access permission for the whole taxonomy tree.

Object param	Type	Default value	Description
predefined.actions	string	org.exoplatform.services.cms.actions.impl.ActionConfig	predefined actions for the taxonomy tree root node.
taxonomy.configuration	String	org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig	access permissions for each taxonomy in tree.

Object type: *org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig*

Name	Type	Description
taxonomies	java.util.ArrayList<TaxonomyConfig>	list of taxonomy to be configured permission.

Object type: *org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig\$Taxonomy*

Name	Type	Default value	Description
name	String	name	name of the taxonomy.
path	String	cms	path to the taxonomy in taxonomy tree.
permissions	Arraylist	java.util.ArrayList<TaxonomyConfig\$Permission>	list of permissions for user or group to access the taxonomy.

Object type: *org.exoplatform.services.cms.actions.impl.ActionConfig*

Name	Type	Default value	Description
actions	Arraylist	java.util.ArrayList<ActionConfig\$TaxonomyAction>	list of actions which are created for the taxonomy tree root node.

Object type: *org.exoplatform.services.cms.actions.impl.ActionConfig\$TaxonomyAction*

Field name	Type	Default value	Description
type	String	exo:taxonomyAction	type of the action.
name	String	taxonomyAction	name of the action.
description	String	N/A	description of the action.
homePath	String	dms-system:/exo:ecm/exo:taxonomyAction	location of node where the action node is stored.
targetWspace	String	N/A	when a new node is created in the node whose path is defined in homePath field, it will be

Field name	Type	Default value	Description
			moved to a new location automatically. The target workspace is specified in this field.
targetPath	String	collaboration	when a new node is created in the node whose path is defined in homePath field, it will be moved to a new location automatically. The target path is specified in this field.
lifecyclePhase	ArrayList	java.util.ArrayList<String>	the life cycle phases, in which the action is activated.
roles	String	*:/platform/administrators	the users or groups only with whom the action is activated.
mixins	ArrayList	java.util.ArrayList<ActionConfig\$Mixin>	list of node types that are affected by this action.

Object type: *org.exoplatform.services.cms.actions.impl.ActionConfig\$Mixin*

Field name	Type	Default value	Description
name	String	mix:affectedNodeTypes	mixin node type name that will be added, whose responsibility is to store the affected node types.
properties	String	exo:affectedNodeTypeNames	the name of the properties that store all the node types affected by the action.

3.4.2. Sample Configuration

```

<component>
  <key>org.exoplatform.services.cms.taxonomy.TaxonomyService</key>
  <type>org.exoplatform.services.cms.taxonomy.impl.TaxonomyServiceImpl</type>
  <init-params>
    <object-param>
      <name>defaultPermission.configuration</name>
      <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyTreeDefaultUserPermission">
        <field name="permissions">
          <collection type="java.util.ArrayList">
            <value>
              <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyTreeDefaultUserPermission$Permission">
                <field name="identity">
                  <string>*:/platform/administrators</string>
                </field>
              </object>
            </value>
          </collection>
        </field>
      </object>
    </object-param>
  </init-params>
</component>

```

```

        <field name="read">
            <string>true</string>
        </field>
        <field name="addNode">
            <string>true</string>
        </field>
        <field name="setProperty">
            <string>true</string>
        </field>
        <field name="remove">
            <string>true</string>
        </field>
    </object>
</value>
</collection>
</field>
</object>
</object-param>
</init-params>
<external-component-plugins>
    <target-component>org.exoplatform.services.cms.taxonomy.TaxonomyService</target-component>
    <component-plugin>
        <name>predefinedTaxonomyPlugin</name>
        <set-method>addTaxonomyPlugin</set-method>
        <type>org.exoplatform.services.cms.taxonomy.impl.TaxonomyPlugin</type>
        <init-params>
            <value-param>
                <name>autoCreateInNewRepository</name>
                <value>true</value>
            </value-param>
            <value-param>
                <name>repository</name>
                <value>repository</value>
            </value-param>
            <value-param>
                <name>workspace</name>
                <value>dms-system</value>
            </value-param>
            <value-param>
                <name>treeName</name>
                <value>System</value>
            </value-param>
            <object-param>
                <name>permission.configuration</name>
                <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig">
                    <field name="taxonomies">
                        <collection type="java.util.ArrayList">
                            <value>
                                <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig$Taxonomy">
                                    <field name="permissions">
                                        <collection type="java.util.ArrayList">
                                            <value>
                                                <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig$Permission">
                                                    <field name="identity">
                                                        <string>*:/platform/users</string>
                                                    </field>
                                                    <field name="read">
                                                        <string>true</string>
                                                    </field>
                                                    <field name="addNode">
                                                        <string>true</string>
                                                    </field>
                                                    <field name="setProperty">
                                                        <string>true</string>
                                                    </field>
                                                    <field name="remove">
                                                        <string>false</string>
                                                    </field>
                                                </object>
                                            </value>
                                        </collection>
                                    </field>
                                </object>
                            </value>
                        </collection>
                    </field>
                </object>
            </object-param>
        </init-params>
    </component-plugin>
</external-component-plugins>

```

```

<name>predefined.actions</name>
<description>description</description>
<object type="org.exoplatform.services.cms.actions.impl.ActionConfig">
  <field name="actions">
    <collection type="java.util.ArrayList">
      <value>
        <object type="org.exoplatform.services.cms.actions.impl.ActionConfig$TaxonomyAction">
          <field name="type">
            <string>exo:taxonomyAction</string>
          </field>
          <field name="name">
            <string>taxonomyAction</string>
          </field>
          <field name="description">
            <string/>
          </field>
          <field name="homePath">
            <string>dms-system:/exo:ecm/exo:taxonomyTrees/storage/System</string>
          </field>
          <field name="targetWspace">
            <string>collaboration</string>
          </field>
          <field name="targetPath">
            <string>/Documents</string>
          </field>
          <field name="lifecyclePhase">
            <collection type="java.util.ArrayList">
              <value>
                <string>node_added</string>
              </value>
            </collection>
          </field>
          <field name="roles">
            <string>*:/platform/administrators</string>
          </field>
          <field name="mixins">
            <collection type="java.util.ArrayList">
              <value>
                <object type="org.exoplatform.services.cms.actions.impl.ActionConfig$Mixin">
                  <field name="name">
                    <string>mix:affectedNodeTypes</string>
                  </field>
                  <field name="properties">
                    <string>exo:affectedNodeTypeNames=exo:article,exo:podcast,exo:sample,kfx:document,
                  </field>
                </object>
              </value>
            </collection>
          </field>
        </object>
      </value>
    </collection>
  </field>
</object-param>
<object-param>
  <name>taxonomy.configuration</name>
  <description>configuration predefined taxonomies to inject in jcr</description>
  <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig">
    <field name="taxonomies">
      <collection type="java.util.ArrayList">
        <!-- cms taxonomy -->
        <value>
          <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig$Taxonomy">
            <field name="name">
              <string>cmsTaxonomy</string>
            </field>
            <field name="path">
              <string>/cms</string>
            </field>
            <field name="permissions">
              <collection type="java.util.ArrayList">
                <value>
                  <object type="org.exoplatform.services.cms.taxonomy.impl.TaxonomyConfig$Permission">
                    <field name="identity">
                      <string>*:/platform/users</string>
                    </field>
                    <field name="read">
                      <string>true</string>

```

```

        </field>
        <field name="addNode">
          <string>true</string>
        </field>
        <field name="setProperty">
          <string>true</string>
        </field>
        <field name="remove">
          <string>false</string>
        </field>
      </object>
    </value>
  </collection>
</field>
</object>
</value>
</collection>
</field>
</object-param>
</init-params>
</component-plugin>
</external-component-plugins>
</component>

```

3.5. Nodetypes

Every node has a type. Node types can be used to define complex storage objects consisting of multiple sub-nodes and properties, possibly many deep layers.

3.5.1. Fields

`org.exoplatform.services.jcr.core.nodetype.ExtendedNodeTypeManager`

Node Type	Type	Description
name	String	Name of the node type. This field is required
isMixin	boolean	mixin type
hasOrderableChildNodes	boolean	Orderable childnodes
primaryItemName	String	Primary item name
supertype	String	Name of supper type
propertyDefinition	Object	Define properties of node type

3.5.2. Examples Nodetype configuration

The node definition should be placed in a special XML file (see DTD below) and declared in the service's configuration file to eXo component plugin mechanism, described as follows:

```

<external-component-plugins>
  <target-component>org.exoplatform.services.jcr.RepositoryService</target-component>
  <component-plugin>
    <name>add.namespaces</name>
    <set-method>addPlugin</set-method>
    <type>org.exoplatform.services.jcr.impl.AddNamespacesPlugin</type>
  </component-plugin>
</external-component-plugins>

```

```

<init-params>
  <properties-param>
    <name>namespaces</name>
    <property name="publication" value="http://www.exoplatform.com/jcr/publication/1.1/" />
  </properties-param>
</init-params>
</component-plugin>
<component-plugin>
  <name>add.nodeType</name>
  <set-method>addPlugin</set-method>
  <type>org.exoplatform.services.jcr.impl.AddNodeTypePlugin</type>
  <priority>99</priority>
  <init-params>
    <values-param>
      <name>autoCreatedInNewRepository</name>
      <description>Node types configuration file</description>
      <value>jar:/conf/nodetypes-publication-config.xml</value>
    </values-param>
  </init-params>
</component-plugin>
</external-component-plugins>

```

This is a Nodetype definition file format:

```

<nodeTypes xmlns:nt="http://www.jcp.org/jcr/nt/1.0" xmlns:mix="http://www.jcp.org/jcr/mix/1.0"
  xmlns:jcr="http://www.jcp.org/jcr/1.0">
  <nodeType name="publication:publication" isMixin="true" hasOrderableChildNodes="false" primaryItemName="">
    <propertyDefinitions>
      <propertyDefinition name="publication:lifecycleName" requiredType="String" autoCreated="false" mandatory="true"
        onParentVersion="COPY" protected="false" multiple="false">
        <valueConstraints/>
      </propertyDefinition>
      <propertyDefinition name="publication:currentState" requiredType="String" autoCreated="false" mandatory="true"
        onParentVersion="COPY" protected="false" multiple="false">
        <valueConstraints/>
      </propertyDefinition>
      <propertyDefinition name="publication:history" requiredType="String" autoCreated="false" mandatory="true"
        onParentVersion="COPY" protected="false" multiple="true">
        <valueConstraints/>
      </propertyDefinition>
    </propertyDefinitions>
  </nodeType>
</nodeTypes>

```

3.6. Views

A view can include many object parameters. Parameters are used to create default views, templates and actions of **Manage View** service. View enables administrators to customize view classification that can impact on users in exploring workspace. Each object-param has a type that is a class representing all properties of a view.

3.6.1. Fields

- **target-component:** `org.exoplatform.services.cms.views.ManageViewService`
- **Name:** `manage.view.plugin`
- **Set-method:** `setManageViewPlugin`
- **Type:** `org.exoplatform.services.cms.views.impl.ManageViewPlugin`
- **Description:** This plugin manages user views

Object type: *org.exoplatform.services.cms.views.ViewConfig*

Name	Type	Default value	Description
name	String	system-view	The name of the view. It must be unique inside WCM.
permissions	String	*:/platform/administrators	Visibility of the view based on eXo rights.
template	String	/exo:ecm/views/templatespecify path to the template location.	Specify a path to the template location.
tabList	ArrayList	java.util.ArrayList	Include a set of view names.

Object type: *org.exoplatform.services.cms.views.ViewConfig\$Tab*

Name	Type	Default value	Description
tabName	String	Info	The name of the tab. It must be unique.
button	String	viewNodeType; viewPermissions; viewProperties; showJCRStructure	Specify a set of view component names.

Object type: *org.exoplatform.services.cms.views.TemplateConfig*

Name	Type	Default value	Description
type	String	ecmExplorerTemplate	Specify if a name is truly a class representing all properties of a view.
name	String	system-view	Specify a set of view component names.
warPath	String	/ecm-explorer/SystemViewSpecify a template location to view.	Specify a template location to view.

3.6.2. Example of configuration

```
<external-component-plugins>
  <target-component>org.exoplatform.services.cms.views.ManageViewService</target-component>
  <component-plugin>
    <name>manage.view.plugin</name>
    <set-method>setManageViewPlugin</set-method>
    <type>org.exoplatform.services.cms.views.impl.ManageViewPlugin</type>
    <description>this plugin manage user view</description>
    <init-params>
      <value-param>
        <name>autoCreateInNewRepository</name>
```

```

    <value>true</value>
  </value-param>
  <value-param>
    <name>predefinedViewsLocation</name>
    <value>war:/conf/dms-extension/dms/artifacts</value>
  </value-param>
  <value-param>
    <name>repository</name>
    <value>repository</value>
  </value-param>
  <object-param>
    <name>System-View</name>
    <description>View configuration for System workspace</description>
    <object type="org.exoplatform.services.cms.views.ViewConfig">
      <field name="name">
        <string>system-view</string>
      </field>
      <field name="permissions">
        <string>*:/platform/administrators</string>
      </field>
      <field name="template">
        <string>/exo:ecm/views/templates/ecm-explorer/SystemView</string>
      </field>
      <field name="tabList">
        <collection type="java.util.ArrayList">
          <value>
            <object type="org.exoplatform.services.cms.views.ViewConfig$Tab">
              <field name="tabName">
                <string>Info</string>
              </field>
              <field name="buttons">
                <string>viewNodeType; viewPermissions; viewProperties; showJCRStructure</string>
              </field>
            </object>
          </value>
        </collection>
      </field>
    </object>
  </object-param>
  <object-param>
    <name>System Template</name>
    <description>Template for display documents in list style</description>
    <object type="org.exoplatform.services.cms.views.TemplateConfig">
      <field name="type">
        <string>ecmExplorerTemplate</string>
      </field>
      <field name="name">
        <string>SystemView</string>
      </field>
      <field name="warPath">
        <string>/ecm-explorer/SystemView.gtmpl</string>
      </field>
    </object>
  </object-param>
</init-params>
</component-plugin>
</external-component-plugins>

```

3.7. Templates

3.7.1. Application template

A template is a presentation while displaying the saved information.

Template service is used to select the right template corresponding to the saved content.

3.7.1.1. Available configuration

3.7.1.1.1. Init-params

Configuration name	Data type	Default Value	Description
autoCreateInNewRepository	Boolean	true	Enable the application to import predefined templates at the start-up of template service automatically.
storedLocation	String	war:/conf/dms-extension/Location	Location of stored templates
repository	String	repository	Location of stored templates
object-param	Structure		Configuration for each instance.

3.7.1.1.2. Object-param

Configuration name	Data type	Default Value	Description
name	String	template.configuration	The name of this configuration
description	String	configuration for the location of templates to inject in jcr	Description of template instance
object-type	Structure		Details configuration for each instance type

Object-type defines all available template files, using the "collection type" configuration

3.7.1.1.3. Object

type: It is the name of each object type. It means the type of template, the further configurations for this type are defined by some specified fields.

Field name	Data type	Description
nodetypeName	String	The name of template that is saved as a node in system
documentTemplate	Boolean	Determine if the node type is a document type
label	String	Visual display of the title for this node

There are three further information related to the presentation of each template:

- **referencedView** : Determine how to display a view.
- **referencedDialog** : Determine how to display a dialog to input information.
- **referencedSkin** : Determine the stylesheet for displaying.

Each type includes some definitions as an object type="org.exoplatform.services.cms.templates.impl.TemplateConfig\$Template" with the fields as the properties.

Field name	Data type	Description
templateFile	String	The location of the file store for the template's presentation
roles	String	Determine who can access this object (View/Dialog/CSS)

3.7.1.2. Example of template configuration

This below example is configuration for the *nt:file_ template*, any other template will be put in the same level with this template start from the line `<object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$NodeType">` as the another *NodeType*.

```
<external-component-plugins>
  <target-component>org.exoplatform.services.cms.templates.TemplateService</target-component>
  <component-plugin>
    <name>addTemplates</name>
    <set-method>addTemplates</set-method>
    <type>org.exoplatform.services.cms.templates.impl.TemplatePlugin</type>
    <init-params>
      <value-param>
        <name>autoCreateInNewRepository</name>
        <value>true</value>
      </value-param>
      <value-param>
        <name>storedLocation</name>
        <value>war:/conf/dms-extension/dms/artifacts/templates</value>
      </value-param>
      <value-param>
        <name>repository</name>
        <value>repository</value>
      </value-param>
      <object-param>
        <name>template.configuration</name>
        <description>configuration for the location of templates to inject in jcr</description>
        <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig">
          <field name="nodeTypes">
            <collection type="java.util.ArrayList">
              <value>
                <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$NodeType">
                  <field name="nodetypeName">
                    <string>nt:file</string>
                  </field>
                  <field name="documentTemplate">
                    <boolean>true</boolean>
                  </field>
                  <field name="label">
                    <string>File</string>
                  </field>
                  <field name="referencedView">
                    <collection type="java.util.ArrayList">
                      <value>
                        <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
```

```

        <field name="templateFile">
            <string>/file/views/view1.gtmpl</string>
        </field>
        <field name="roles">
            <string>*</string>
        </field>
    </object>
</value>
<value>
    <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
        <field name="templateFile">
            <string>/file/views/admin_view.gtmpl</string>
        </field>
        <field name="roles">
            <string>*/platform/administrators</string>
        </field>
    </object>
</value>
</collection>
</field>
<field name="referencedDialog">
    <collection type="java.util.ArrayList">
        <value>
            <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
                <field name="templateFile">
                    <string>/file/dialogs/dialog1.gtmpl</string>
                </field>
                <field name="roles">
                    <string>*</string>
                </field>
            </object>
        </value>
        <value>
            <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
                <field name="templateFile">
                    <string>/file/dialogs/admin_dialog.gtmpl</string>
                </field>
                <field name="roles">
                    <string>*/platform/administrators</string>
                </field>
            </object>
        </value>
    </collection>
</field>
<field name="referencedSkin">
    <collection type="java.util.ArrayList">
        <value>
            <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
                <field name="templateFile">
                    <string>/file/skins/Stylesheet-lt.css</string>
                </field>
                <field name="roles">
                    <string>*</string>
                </field>
            </object>
        </value>
        <value>
            <object type="org.exoplatform.services.cms.templates.impl.TemplateConfig$Template">
                <field name="templateFile">
                    <string>/file/skins/Stylesheet-rt.css</string>
                </field>
                <field name="roles">
                    <string>*</string>
                </field>
            </object>
        </value>
    </collection>
</field>
</object>
</value>
</collection>
</field>
</object>
</init-params>
</component-plugin>
</external-component-plugins>

```

3.7.2. Nodetype template

3.8. SiteSearchService

SiteSearchService is used in the Search portlet that allows users to find all information matching with your given keyword.

It is configured in the *core/core-configuration/src/main/webapp/WEB-INF/conf/configuration.xml* file as follows:

```
<import>war:/conf/wcm-core/core-search-configuration.xml</import>
```

3.8.1. Component Configuration

The component configuration maps the *SiteSearchService* component with its own implementation: *SiteSearchServiceImpl*.

```
<component>
  <key>org.exoplatform.services.wcm.search.SiteSearchService</key>
  <type>org.exoplatform.services.wcm.search.SiteSearchServiceImpl</type>
  <component-plugins>...</component-plugins>
  <init-params>...</init-params>
</component>
```

The component consists of the following init-parameters:

Init-Params	Default Value	Possible Value	Description
isEnabledFuzzySearch	true	Boolean	Allow administrators to enable/disable the fuzzy search mechanism.
fuzzySearchIndex	N/A	N/A	Allow the approximate level between the input keyword and the found key results. In case of the invalid configuration, the default value is set to 0.8.

To have more information about the fuzzy search, please refer to [Fuzzy Search](#).

3.8.2. Component Plugin Configuration

ExcludeMimeType is used in the *SiteSearchService* component to filter the search results before these results are presented on the search page.

Set-method: *addExcludeIncludeDataTypePlugin*

Type: *org.exoplatform.services.wcm.search.ExcludeIncludeDataTypePlugin*

Properties-Params	Description
search.exclude.datatype	Exclude some data types when doing search.

The `search.exclude.datatype` property includes two attributes:

Attributes	Values	Description
name	mimetypes	Name of the property param.
value	text/css,text/javascript,application/x-javascript;text/ecmascript	list of mime types which will be excluded from the search results.

3.8.3. Sample Configuration

```
<component>
  <key>org.exoplatform.services.wcm.search.SiteSearchService</key>
  <type>org.exoplatform.services.wcm.search.SiteSearchServiceImpl</type>
  <component-plugins>
    <component-plugin>
      <name>ExcludeMimeTypes</name>
      <set-method>addExcludeIncludeDataTypePlugin</set-method>
      <type>org.exoplatform.services.wcm.search.ExcludeIncludeDataTypePlugin</type>
      <init-params>
        <properties-param>
          <name>search.exclude.datatypes</name>
          <description>exclude some data type when search</description>
          <property name="mimetypes" value="text/css,text/javascript,application/x-javascript;text/ecmascript"/>
        </properties-param>
      </init-params>
    </component-plugin>
  </component-plugins>
  <init-params>
    <value-param>
      <name>isEnabledFuzzySearch</name>
      <value>true</value>
    </value-param>
    <value-param>
      <name>fuzzySearchIndex</name>
      <value/>
    </value-param>
  </init-params>
</component>
```

Chapter 4. Inside WCM Templates

4.1. Content types

Overview

The templates are applied to a NodeType or a metadata MixinType. Two kinds of templates exist :

- **dialogs** : are html forms that allow to create node instances.
- **views** : are html fragments used to display nodes.

From the ECM admin portlet, *Manage Template* lists existing NodeType that have been associated to Dialog and/or View templates. These templates can be attached to permissions (in the usual *membership:group_form*), so that a specific one is displayed according to the rights of the user (very useful in a content validation workflow activity).

DocumentType

1. checkbox allows to say if the NodeType should be considered as a **DocumentType**. File Explorer considers such nodes as user content and applies the following behavior :
 - View template will be used to display the DocumentType nodes
 - DocumentTypes nodes can created by the 'Add Document' action
 - non DocumentType are hidden (unless 'Show non document types' option is checked)

Templates are written using [Groovy Templates](#) and will require some experience with JCR API and HTML notions.

4.1.1. Dialog

Dialogs are groovy templates that generate forms by mixing static HTML fragments and groovy calls to the components responsible for building the UI at runtime. The result is a simple but powerful syntax.

4.1.1.1. Common parameters

These following parameters are common and can be used for every input fields.

Parameter	Type	Required	Description	Example
jcrPath	String		relative path inside the current node	jcrPath=/node/exo:title
mixintype	String with comma , character		List of the mixin types you want to initialize when	mixintype= mix:i18n

Parameter	Type	Required	Description	Example
			creating the content	<code>mixintype=mix:votable, mix:co</code>
validate	String with comma , character		List of the validators you want to apply to the input. Possible values are : name, email, number, empty, null, datetime, length OR validator classes	<code>validate=empty</code> <code>validate=empty,name</code> <code>validate=org.exoplatform.web</code>
editable	String		The input will be editable only if the value of this parameter is if-null and the value of this input is null or blank	<code>editable=if-null</code>
multiValues	Boolean		Show a multi values component if true. Must be used only with corresponding multi-values properties. The default value of this parameter is false	<code>multiValues=true</code>
visible	Boolean		The input is visible if this value is true	<code>visible=true</code>

See also:

- [Text field](#)
- [Hidden field](#)
- [Text area field](#)
- [Rich text field](#)
- [Calendar field](#)
- [Upload field](#)
- [Radio field](#)

- [Select box field](#)
- [Checkbox field](#)
- [Mixin field](#)
- [Action field](#)

Warning

Note that `mixintype` can be used only in the root node field (commonly known as the name field)

4.1.1.2. Text Field

4.1.1.2.1. Additional parameters

See also: [Common parameters](#)

4.1.1.2.2. Example

```
<%  
String[] fieldTitle = ["jcrPath=/node/exo:title", "validate=empty"] ;  
uicomponent.addTextField("title", fieldTitle) ;  
%>
```

4.1.1.3. Hidden Field

4.1.1.3.1. Additional parameters

See also: [Common parameters](#)

4.1.1.3.2. Example

4.1.1.4. Text Area Field

4.1.1.4.1. Additional parameters

Parameter	Type	Required	Description	Example
rows	Number		The initial textarea's number of rows. The value is 10 by default	rows=20
cols	Number		The initial textarea's number of cols. The value is 30 by default	cols=50

See also: [Common parameters](#)

4.1.1.4.2. Example

```
<%
    String[] fieldDescription = ["jcrPath=/node/exo:description", "validate=empty"] ;
    uicomponent.addTextAreaField("description", fieldDescription)
%>
```

4.1.1.5. Rich Text Field

4.1.1.5.1. Additional parameters

Parameter	Type	Required	Description	Example
options	String with semicolon character		Some options for CKEditor field: toolbar, width and height	options=CompleteWCM;width:'100%'

Parameter	Type	Required	Description	Example
toolbar	String		The pre-define toolbar for CKEditor. The value can be: Default, Basic, CompleteWCM, BasicWCM, SuperBasicWCM	options=CompleteWCM
width	String		The width of CKEditor. The value can be the percent of pixel	options=width:'100%'
height	String		The height of CKEditor. The value can be the percent of pixel	options=height:'200px'

See also: [Common parameters](#)

4.1.1.5.2. Example

```
<%
    String[] fieldSummary = ["jcrPath=/node/exo:summary", "options=toolbar:CompleteWCM,width:'100%',height:'200px'"];
    uicomponent.addRichtextField("summary", fieldSummary) ;
%>
```

4.1.1.6. Calendar Field

4.1.1.6.1. Additional parameters

Parameter	Type	Required	Description	Example
options	String		An option for calendar field: Display time	options=displaytime

See also: [Common parameters](#)

4.1.1.6.2. Example

```
<%
    String[] fieldPublishedDate = ["jcrPath=/node/exo:publishedDate", "options=displaytime", "validate=datet
    uicomponent.addCalendarField("publishedDate", fieldPublishedDate) ;
%>
```

4.1.1.7. Upload Field

4.1.1.7.1. Additional parameters

See also: [Common parameters](#)

4.1.1.7.2. Example

There are 2 main cases when creating an upload form: You want to store the image as a property OR as a node.

- If you want to use property so you can do as follow:

```
<%
    String[] fieldMedia = ["jcrPath=/node/exo:image"] ;
    uicomponent.addUploadField("media", fieldMedia) ;
%>
```

- If you want to use node so you can do as follow:

```
<%
    String[] hiddenField1 = ["jcrPath=/node/exo:image", "nodetype=nt:resource", "visible=false"] ;
    String[] hiddenField2 = ["jcrPath=/node/exo:image/jcr:encoding", "visible=false", "UTF-8"] ;
    String[] hiddenField3 = ["jcrPath=/node/exo:image/jcr:lastModified", "visible=false"] ;
    uicomponent.addHiddenField("hiddenInput1", hiddenField1) ;
    uicomponent.addHiddenField("hiddenInput2", hiddenField2) ;
    uicomponent.addHiddenField("hiddenInput3", hiddenField3) ;

    String[] fieldMedia = ["jcrPath=/node/exo:image"] ;
    uicomponent.addUploadField("media", fieldMedia) ;
%>
```

- But, this code is not complete. If you want to display the **upload** field, the image must be blank, otherwise you can display the image and an action enables you to remove it. You can do as follows:

```
<%
    def image = "image";
    // If you're trying to edit the document
    if(uicomponent.isEditing()) {
        def curNode = uicomponent.getNode();
```

```

// If the image existed
if (curNode.hasNode("exo:image")) {
    def imageNode = curNode.getNode("exo:image") ;
    // If the image existed and available
    if (imageNode.getProperty("jcr:data").getStream().available() > 0 && (uicomponent.findCo
        def imgSrc = uicomponent.getImage(curNode, "exo:image");
        def actionLink = uicomponent.event("RemoveData", "/exo:image");
        %>
        <div>
            
            <a href="$actionLink">
                

```

4.1.1.8. Radio Field

4.1.1.8.1. Additional parameters

Parameter	Type	Required	Description	Example
options	String with comma , characters		Some radio values	options=radio1,radio2,radio3

See also: [Common parameters](#)

4.1.1.8.2. Example

```

<%
    String[] fieldDeep = ["jcrPath=/node/exo:isDeep", "defaultValues=true", "options=radio1,radio2,radio3"];
    uicomponent.addRadioBoxField("isDeep", fieldDeep);
%>

```

4.1.1.9. SelectBox Field

Parameter	Type	Required	Description	Example
options	String with comma , characters		Some option values	options=option1,option2,opti

See also: [Common parameters](#)

4.1.1.9.1. Example

```
<%
    String[] fieldDeep = ["jcrPath=/node/exo:isDeep", "defaultValues=true", "options=checkbox1,checkbox2,checkbox3"];
    uicomponent.addCheckBoxField("isDeep", fieldDeep);
%>
```

4.1.1.10. CheckBox Field

4.1.1.10.1. Additional parameters

Parameter	Type	Required	Description	Example
options	String with comma , characters		Some checkbox values	options=checkbox1,checkbox2,checkbox3

See also: [Common parameters](#)

4.1.1.10.2. Example

```
<%
    String[] fieldDeep = ["jcrPath=/node/exo:isDeep", "defaultValues=true", "options=checkbox1,checkbox2,checkbox3"];
    uicomponent.addCheckBoxField("isDeep", fieldDeep);
%>
```

4.1.1.11. Mixin Field

4.1.1.11.1. Additional parameters

See also: [Common parameters](#)

4.1.1.11.2. Example

```
<%
    String[] fieldId = ["jcrPath=/node", "editable=false", "visible=if-not-null"] ;
    uicomponent.addMixinField("id", fieldId) ;
%>
```

4.1.1.12. Action Field

4.1.1.12.1. Additional parameters

Parameter	Type	Required	Description	Example
selectorClass	String		The component to display	selectorClass=org.exoplatform
selectorIcon	String		The action icon	selectorIcon>SelectPath24x24

Parameter	Type	Required	Description	Example

Depending on the selectorClass, some other parameters can be added.

For example: The component `org.exoplatform.ecm.webui.tree.selectone.UIOneNodePathSelector` need these parameters

Parameter	Type	Required	Description	Example
workspaceField	String		The field which allow to select a workspace	<code>workspaceField=targetWorkspace</code>

The component `org.exoplatform.ecm.webui.selector.UIPermissionSelector` does not need any special parameters.

See also: [Common parameters](#)

4.1.1.12.2. Example

```
<%
    String[] fieldPath = ["jcrPath=/node/exo:targetPath", "selectorClass=org.exoplatform.ecm.webui.tree.selectone.UIOneNodePathSelector"];
    uicomponent.addActionField("targetPath", fieldPath) ;
%>
```

4.1.1.13. Interceptors

To add an interceptor into a dialog, we can use this method `uicomponent.addInterceptor(String scriptPath, String type)`

		Parameters
scriptPath	String	The relative path to the script file
type	String	The type of interceptor: prev or post

4.1.1.13.1. Example

```
<%
    uicomponent.addInterceptor("ecm-explorer/interceptor/PreNodeSaveInterceptor.groovy", "prev");
%>
```

4.1.1.14. How to add new ECM template with tabs

To avoid refreshing the first tab for every action execution, we add a new private function to the template with tabs. In the template, we must insert new piece of code like the following:

```
private String getDisplayTab(String selectedTab) {
    if ((uicomponent.getSelectedTab() == null && selectedTab.equals("mainWebcontent"))
```

```

        || selectedTab.equals(uicomponent.getSelectedTab())) {
            return "display:block";
        }
        return "display:none";
    }

    private String getSelectedTab(String selectedTab) {
        if (getDisplayTab(selectedTab).equals("display:block")) {
            return "SelectedTab";
        }
        return "NormalTab";
    }
}

```

Changing in every event of onclick is have to be done like this :

```

<div class="UITab NormalTabStyle">
    <div class="<%=getSelectedTab("mainWebcontent")%>">
        <div class="LeftTab">
            <div class="RightTab">
                <div class="MiddleTab" onClick="<%=uicomponent.event("ChangeTab", "mainWebcontent")%>">
                </div>
            </div>
        </div>
    </div>
</div>

<div class="UITab NormalTabStyle">
    <div class="<%=getSelectedTab("illustrationWebcontent")%>">
        <div class="LeftTab">
            <div class="RightTab">
                <div class="MiddleTab" onClick="<%=uicomponent.event("ChangeTab", "illustrationWebcontent")%>">
                </div>
            </div>
        </div>
    </div>
</div>

<div class="UITab NormalTabStyle">
    <div class="<%= getSelectedTab("contentCSSWebcontent")%>">
        <div class="LeftTab">
            <div class="RightTab">
                <div class="MiddleTab" onClick="<%=uicomponent.event("ChangeTab", "contentCSSWebcontent")%>">
                </div>
            </div>
        </div>
    </div>
</div>

```

Finally, to display the selected tab, we will add it into the style of UITabContent class.

```

<div class="UITabContent" style="<%=getDisplayTab("mainWebcontent")%>">

```

4.1.2. View

```

<%
    def node = uicomponent.getNode() ;
    def originalNode = uicomponent.getOriginalNode()
%>

```

```

<%=node.getName()%>

```

```

<%if(node.hasProperty("exo:title")) {%>
    <%=node.getProperty("exo:title").getString()%>
<%}%>

```

```
<%  
    import java.text.SimpleDateFormat ;  
    SimpleDateFormat dateFormat = new SimpleDateFormat() ;  
%>  
...  
  
<%if(node.hasProperty("exo:date")) {  
    dateFormat.applyPattern("MMMM dd yyyy") ;  
%>  
    <%=dateFormat.format(node.getProperty("exo:date").getDate().getTime())%>  
<%}%>
```

```
<%=_ctx.appRes("Sample.view.label.node-name")%>
```

4.2. List of Contents

4.2.1. Folder based Template

4.2.2. Category tree Template

Chapter 5. Inside WCM Explorer

5.1. CSS

- By using WCM, all the stylesheets of each site can be managed online easily. You do not need to access to the file system to modify and wait for the server restarted. About the structure, each site has its own CSS folder, this folder can contain one or more CSS files. These CSS files have the data, and the priority. If they have the same CSS definition, the bigger priority will be applied. You also can disable some of them to make sure the disabled style sill not to be applied in to the site.
- For example: By default, a WCM demo package has two sites: ACME and Classic. The Classic site has a CSS folder which contains a CSS file called **DefaultStylesheet**. Most of the stylesheets of this site are defined within this stylesheet. Moreover, the ACME site has two CSS files called **BlueStylesheet** and **GreenStylesheet**. The blue one is enabled and the green one is disabled by default. All you need to test is to disable the blue one (by editing it and setting Available equals false) and enable the green one. Now, back to the homepage and you will see the magic.

Note

Remember the cache and refresh the browser first if you do not see any changes. Normally, this is the main reason why the new style is not applied.

5.2. Javascript

5.3. CKEditor

Basically, if you want to add a rich text area into your dialogs, you can use [addRichtextField](#) method. However, sometimes you want to add the rich text editor manually. So, first, you need to use [addTextAreaField](#) method and some additionl javascripts like the below:

```
<%
    String[] fieldDescription = ["jcrPath=/node/exo:description"] ;
    uicomponent.addTextAreaField("description", fieldDescription)
%>
<script>
    var instances = CKEDITOR.instances['description'];
    if (instances) instances.destroy(true);
    CKEDITOR.replace('description', {
        toolbar : 'CompleteWCM',
        uiColor : '#9AB8F3'
    });
</script>
```

Chapter 6. Extensions

6.1. REST Services

6.1.1. REST Overview

REST-style architectures consist of clients and servers. Clients initiate requests to servers; servers process requests and return appropriate responses. Requests and responses are built around the transfer of "representations" of "resources". A resource can be essentially any coherent and meaningful concept that may be addressed. A representation of a resource is typically a document that captures the current or intended state of a resource.

At any particular time, a client can either be in transition between application states or "at rest". A client in a REST state is able to interact with its user, but creates no load and consumes no per-client storage on the set of servers or on the network.

The client begins sending requests when it is ready to make the transition to a new state. While one or more requests are outstanding, the client is considered to be in transition. The representation of each application state contains links that may be used the next time, the client chooses to initiate a new state transition.

REST is initially described in the context of HTTP, but is not limited to that protocol. RESTful architectures can be based on other Application Layer protocols if they already provide a rich and uniform vocabulary for applications based on the transfer of meaningful representational state. RESTful applications maximize the use of the pre-existing, well-defined interface and other built-in capabilities provided by the chosen network protocol, and minimize the addition of new application-specific features on its top.

6.1.2. Restful Web Service

6.1.2.1. HTTP Methods

Here is the convention we should follow:

Method	Definition
GET	Get a Resource. It should never modify a state
POST	Create a Resource (or anything that don't fit elsewhere)
PUT	Update a Resource
DELETE	Delete a Resource

6.1.2.2. Formats

We should support this format for all our APIs:

- [Json](#): because it's easy to parse in a lot of language like Javascript, Python or Ruby

- [XML](#): Java developers like it
- [Atom](#): It is the standard, it can be used by many applications.

listener

6.1.2.3. Parameters common to every APIs

6.1.2.4. Data Format

The default format is JSON.

The format of the response can be specified by a parameter in the request: *"format"* Specify the format requested.

6.1.2.5. REST configuration

First, we have to register REST service class to the configuration file in the package named **conf.portal**

```
<configuration
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.exoplaform.org/xml/ns/kernel_1_1.xsd http://www.exoplaform.org/xml/ns/kernel_1_1.xsd"
  xmlns="http://www.exoplaform.org/xml/ns/kernel_1_1.xsd">

  <component>
    <type>org.exoplatform.services.ecm.publication.REST.presentation.document.publication.PublicationGetDoc
  </component>
</configuration>
```

6.1.2.6. Create a REST service

We start to create GetEditedDocumentRESTService that implements from the ResourceContainer interface.

```
@Path("/presentation/document/edit/")
public class GetEditedDocumentRESTService implements ResourceContainer {
    @Path("/{repository}/")
    @GET
    public Response getLastEditedDoc(@PathParam("repository") String repository,
        @QueryParam("showItems") String showItems) throws Exception {
        .....
    }
}
```

Parameters	Definition
@Path("/presentation/document/edit/")	Specify the URI path that a resource or class method will serve requests for.
@PathParam("repository")	Bind the value repository of a URI parameter or a path segment containing the template parameter to a resource method parameter, resource class field, or resource class bean property.
@QueryParam("showItems")	Bind the value showItems of a HTTP query parameter to a resource method parameter, resource class field, or resource class bean property.

6.2. UI Extensions

This part describes how to create a sample UI extension.

6.2.1. Overview

Since DMS 2.5, it is possible to extend the **File Explorer** and the **ECM Administration** with the **UI Extension Framework**. Indeed, you can add your own action buttons to the **File Explorer** and/or add your own managers to the **ECM Administration**.

6.2.2. How to add your own tab in ECM Administration

6.2.2.1. Add your own UIAction

- Create a pom.xml from the following content:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:sch
  <modelVersion>4.0.0</modelVersion>
  <parent>
    <groupId>org.exoplatform.ecms</groupId>
    <artifactId>exo-ecms-examples-uiextension-framework</artifactId>
    <version>2.2.0-SNAPSHOT</version>
  </parent>
  <artifactId>exo-ecms-examples-uiextension-framework-manage-wcm-cache</artifactId>
  <name>eXo WCM Cache Examples </name>
  <description>eXo WCM Cache Examples </description>
  <dependencies>
    <dependency>
      <groupId>org.exoplatform.kernel</groupId>
      <artifactId>exo.kernel.container</artifactId>
      <version>2.2.12-GA</version>
      <scope>compile</scope>
    </dependency>
    <dependency>
      <groupId>org.exoplatform.commons</groupId>
      <artifactId>exo.platform.commons.webui.ext</artifactId>
      <version>1.0.8</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>org.exoplatform.ecms</groupId>
      <artifactId>exo-ecms-core-webui</artifactId>
      <version>2.1.8</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>org.exoplatform.ecms</groupId>
      <artifactId>exo-ecms-core-webui-administration</artifactId>
      <version>2.1.8</version>
      <scope>provided</scope>
    </dependency>
  </dependencies>
  <build>
    <resources>
      <resource>
        <directory>src/main/java</directory>
        <includes>
          <include>/**/*.xml</include>
        </includes>
      </resource>
      <resource>
        <directory>src/main/resources</directory>
        <includes>
          <include>/**/*.properties</include>
          <include>/**/*.xml</include>
        </includes>
      </resource>
    </resources>
  </build>
</project>
```

```

<include>**/*.jar</include>
<include>**/*.pom</include>
<include>**/*.conf</include>
<include>**/*.gtmpl</include>
<include>**/*.gif</include>
<include>**/*.jpg</include>
<include>**/*.png</include>
</includes>
</resource>
</resources>
</build>
</project>

```

- Create the directories `src/main/java` and start launching `mvn eclipse:eclipse_`. You can then, launch your eclipse and import this new project.
- Create a new class called **org.exoplatform.wcm.component.cache.UIWCMCacheComponent** that extends **org.exoplatform.ecm.webui.component.admin.manager.UIAbstractManagerComponent**.

6.2.2.2. Add your own ActionListener

The webui framework allows you to be notified when a given action has been triggered, you just need to call your own action listener as follows (*ACTIONNAME*) **ActionListener**. For example: You create your own action listener name **CacheView**, so your action listener then will be named as **CacheViewActionListener**.

- First, add a static inner class called **CacheViewActionListener** that extends **org.exoplatform.ecm.webui.component.admin.listener.UIECMAdminControlPanelActionListener**.

See the expected code below:

```

public class CacheViewComponent extends UIAbstractManagerComponent {
    public static class CacheViewActionListener extends UIECMAdminControlPanelActionListener<UIWCMCacheComponent> {
        public void processEvent(Event<UIWCMCacheComponent> event) throws Exception {UIECMAdminPortlet portlet = event
            UIECMAdminWorkingArea uiWorkingArea = portlet.getChild(UIECMAdminWorkingArea.class);
            uiWorkingArea.setChild(UIWCMCachePanel.class) ;
            event.getRequestContext().addUIComponentToUpdateByAjax(uiWorkingArea);
        }
    }
}

```

- Create the directories `src/main/java` and launch `mvn eclipse:eclipse_`. You can then, launch your eclipse and import this new project.
- Create a new configuration file `conf/portal/configuration.xml` to register your action (see [6.2.2.3](#)) with the service **org.exoplatform.webui.ext.UIExtensionManager**.

6.2.2.3. Register your UI Action

```

<?xml version="1.0" encoding="ISO-8859-1"?>
<configuration
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.exoplaform.org/xml/ns/kernel_1_1.xsd http://www.exoplaform.org/xml/ns/kernel_1_1.xsd"
    xmlns="http://www.exoplaform.org/xml/ns/kernel_1_1.xsd">

    <external-component-plugins>
    <target-component>org.exoplatform.webui.ext.UIExtensionManager</target-component>
    <component-plugin>
        <name>Add.Actions</name>
        <set-method>registerUIExtensionPlugin</set-method>
        <type>org.exoplatform.webui.ext.UIExtensionPlugin</type>
    </component-plugin>
    </external-component-plugins>

```

```

        <init-params>
            <object-param>
                <name>CacheView</name>
                <object type="org.exoplatform.webui.ext.UIExtension">
                    <field name="type"><string>org.exoplatform.ecm.dms.UIECMAdminControlPanel</string></field>
                    <field name="name"><string>CacheView</string></field>
                    <field name="category"><string>GlobalAdministration</string></field>
                    <field name="component"><string>org.exoplatform.wcm.component.cache.UIWCMCacheCo
                </object>
            </object-param>
            <object-param>
                <name>UIWCMCacheManager</name>
                <object type="org.exoplatform.webui.ext.UIExtension">
                    <field name="type"><string>org.exoplatform.ecm.dms.UIECMAdminControlPanel</string></field>
                    <field name="name"><string>UIWCMCacheManager</string></field>
                    <field name="category"><string>GlobalAdministration</string></field>
                    <field name="component"><string>org.exoplatform.wcm.manager.cache.UIWCMCacheManagerCo
                </object>
            </object-param>
        </init-params>
    </component-plugin>
</external-component-plugins>
</configuration>

```

Launch **mvn clean install** and copy the file *target/exo-ecms-examples-webui-2.1.0-SNAPSHOT.jar* into (TOMCATHOME)/lib

6.2.2.4. Define label for your actions and register the resource bundle

Note

All resources can be located in the *src/main/resource* package because the resources (*.xml, images, conf file) and the code are separated. This is very useful in a hierarchical structure.

Create *ExamplePortleten.xml* with the following content and add it to *src/main/resource* package:

```

<?xml version="1.0" encoding="UTF-8"?>
<bundle>
    <!--
    #####
    #                org.exoplatform.wcm.component.cache.UIWCMCacheForm #
    #####
    -->

    <UIWCMCacheForm>
        <action>
            <Cancel>Cancel</Cancel>
            <Save>Save</Save>
            <Clear>Clear the cache</Clear>
        </action>
        <label>
            <maxsize>Max size :</maxsize>
            <livetime>Live time in sec :</livetime>
            <isCacheEnable>Cache enabled(should always be on production enviroment)</isCacheEnable>
            <hit>Hit count :</hit>
            <currentSize>Current size</currentSize>
            <miss>Miss count :</miss>
        </label>
    </UIWCMCacheForm>

    <!--
    #####
    #                org.exoplatform.wcm.manager.cache.UIWCMCacheManagerForm #
    #####
    -->

    <UIWCMCacheManagerForm>
        <action>
            <Cancel>Cancel</Cancel>

```

```

        <Save>Save</Save>
        <Clear>Clear the cache</Clear>
    </action>
    <label>
        <cacheModify>Cache to modify :</cacheModify>
        <maxsize>Max size :</maxsize>
        <livetime>Live time in sec :</livetime>
        <isCacheEnable>Cache enabled(should always be on production enviroment)</isCacheEnable>
        <hit>Hit count :</hit>
        <currentSize>Current size</currentSize>
        <miss>Miss count :</miss>
    </label>
</UIWCMCacheManagerForm>

<UIECMAdminControlPanel>
    <tab>
        <label>
            <GlobalAdministration>Global Administration</GlobalAdministration>
        </label>
    </tab>
    <label>
        <UIWCMCache>WCM Cache</UIWCMCache>
        <UIWCMCachePanel>WCM Cache Administration</UIWCMCachePanel>
        <UIWCMCacheManager>Managing Caches</UIWCMCacheManager>
        <UIWCMCacheManagerPanel>WCM Cache Management</UIWCMCacheManagerPanel>
    </label>
</UIECMAdminControlPanel>
</bundle>

```

You must add the following content to *configuration.xml*- to register the resource bundle.

Note

By being added this configuration, the resource bundle has been completely separated the resource bundle from the original system, this is so clearly useful, you get an independent plugin.

```

<external-component-plugins>
    <!-- The full qualified name of the ResourceBundleService -->
    <target-component>org.exoplatform.services.resources.ResourceBundleService</target-component>
    <component-plugin>
        <!-- The name of the plugin -->
        <name>ResourceBundle Plugin</name>
        <!-- The name of the method to call on the ResourceBundleService in order to register the ResourceBundles -->
        <set-method>addResourceBundle</set-method>
        <!-- The full qualified name of the BaseResourceBundlePlugin -->
        <type>org.exoplatform.services.resources.impl.BaseResourceBundlePlugin</type>
        <init-params>
            <values-param>
                <name>init.resources</name>
                <description>Store the following resources into the db for the first launch </description>
                <value>locale.portlet.cache.ExamplePortlet</value>
            </values-param>
            <values-param>
                <name>portal.resource.names</name>
                <description>The properties files of the portal , those file will be merged into one ResoruceBundle properties </description>
                <value>locale.portlet.cache.ExamplePortlet</value>
            </values-param>
        </init-params>
    </component-plugin>
</external-component-plugins>

```

6.2.2.5. Run your own UI extension sample

- Run tomcat

- Sign in as root
- Go to the ECM Administration.

You will see a new extension has been already added to ECM Administrator.

6.3. Authoring Extension

Publication addons for WCM 2.1.0

6.3.1. Extended Publication Plugin

6.3.1.1. States

In this extended publication, we will allow new states and new profiles. These states already exist in WCM but not used and we will enable them.

1. Profiles

- Author : This profile can edit a content and mark this content as redacted
- Approver : This profile approves a pending content (marked by the Author)
- Publisher : This profile publishes contents or marks them as "Ready for publication" in multi-server mode
- Archiver : An administrative profile which moves contents to an archive storage.

2. States

- enrolled : It's a pure technical state, generally used for content creation.
- draft (Author) : Content is in editing phase
- pending (Author) : Author validates the content
- approved (Approver) : Content is approved by the Manager
- inreview (Manager) : This state can be used when a second approval state is needed (for i18n translation for example)
- staged (Publisher) : Content is ready for publication (multi-server mode)
- published (Publisher or Automatic) : Content is published and visible in Live mode
- unpublished (Publisher or Automatic) : Content is not visible in Live mode
- obsolete : Content can still be published but we consider it's not in an editing lifecycle anymore
- archived (Automatic) : Content is archived and ready to be moved in archive workspace if enabled.

6.3.1.2. Start/End publication dates

In most cases, Customers don't want to publish directly a content but at a defined date and they also want to unpublish automatically the content after that. In the new publication plugin, we add new properties to manage this:

- publication:startPublishedDate
- publication:endPublishedDate

The WCM 2.0 rendering engine doesn't know anything about publication dates, so another service needs to manage that. When the publisher sets start/end publication dates, he can "stage" the content. The content will go automatically to "published" state when start date arrives and to "unpublished" state after end date. A cron job checks every hour (or less) all contents which need to be published (start date in the past + "staged" state) or unpublished (end date in the past + "published" state).

Because of that, publication dates are not mandatory and a content can go to:

- staged : in multi-server mode, publisher can only put the content to staged and wait for auto-publication
- published : in single-server mode, publisher can directly publish a content (with or without publication dates).

6.3.1.3. New Publication Mixin

```
<nodeType hasOrderableChildNodes="false" isMixin="true" name="publication:authoringPublication" primaryItemName=
  <supertypes>
    <supertype>publication:stateAndVersionBasedPublication</supertype>
  </supertypes>
  <propertyDefinitions>
    <propertyDefinition autoCreated="false" mandatory="true" multiple="false" name="publication:startPublishedDate"
      <valueConstraints/>
    </propertyDefinition>
    <propertyDefinition autoCreated="false" mandatory="true" multiple="false" name="publication:endPublishedDate"
      <valueConstraints/>
    </propertyDefinition>
  </propertyDefinitions>
</nodeType>
```

6.3.1.3.1. Publication plugin UI

Note that some labels like "Pr#t # publier" could be not well displayed in the publication UI. You can extend the current UI State button width by adding :

```
.UIPublicationPanel .StatusTable .ActiveStatus {
width:75px !important;
}
```

Another quick note about publication date inputs. UIPublicationPanel should not initialize the dates to any default value. The publishing and unpublish cron jobs will do this :

- a staged document with null publication start date is published instantly
- a document with null publication end date is published forever

See export section for more info about cron jobs.

6.3.2. Publication Manager

The Publication Manager manages lifecycles and contexts in the WCM Platform. It allows to manages different lifecycles based on different publication plugin in the platform.

```
public interface PublicationManager {

    public List<Lifecycle> getLifecycles();

    public List<Context> getContexts();

    public Context getContext(String name);

    public Lifecycle getLifecycle(String name);

    public List<Lifecycle> getLifecyclesFromUser(String remoteUser, String state);

}
```

- getLifecycles : returns a list of lifecycles (see below), with lifecycle name, publication plugin involved and possible states
- getContexts : return a list of Context, with name, related Lifecycle and other properties (see below)
- getContext : return a context by its name
- getLifecycle : return a lifecycle by its name
- getLifecycleFromUser : returns a list of Lifecycles in which the user has rights (based on membership property)

6.3.2.1. Lifecycle

A lifecycle is defined by a simple vertical workflow with steps (states) and profiles (membership). Each lifecycle is related to a Publication plugin (to be compliant with JBPM or Bonita business processes). Example : *Two lifecycles with/without states*

```
<external-component-plugins>
  <target-component>org.exoplatform.services.wcm.publication.PublicationManager</target-component>
  <component-plugin>
    <name>AddLifecycle</name>
    <set-method>addLifecycle</set-method>
    <type>org.exoplatform.services.wcm.publication.lifecycles.StatesLifecyclePlugin</type>
    <init-params>
      <object-param>
        <name>lifecycles</name>
        <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig">
          <field name="lifecycles">
            <collection type="java.util.ArrayList">
              <value>
                <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
                  <field name="name"><string>lifecycle1</string></field>
                  <field name="publicationPlugin"><string>States and versions based publication</string></field>
                </object>
              </value>
              <value>
                <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
                  <field name="name"><string>lifecycle2</string></field>
                  <field name="publicationPlugin"><string>Authoring publication</string></field>
                  <field name="states">
                    <collection type="java.util.ArrayList">
                      <value>
                        <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$State">
                          <field name="state"><string>draft</string></field>
                          <field name="memberships">
                            <collection type="java.util.ArrayList">
                              <value><string>author:/CA/communicationDG</string></value>
                            </collection>
                          </field>
                        </object>
                      </value>
                    </collection>
                  </field>
                </object>
              </value>
            </collection>
          </field>
        </object>
      </object-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

```

        <value><string>author:/CA/alerteSanitaire</string></value>
        <value><string>author:/CA/alerteInformatique</string></value>
        <value><string>author:/CA/informations</string></value>
    </collection>
</field>
</object>
</value>
<value>
    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
        <field name="state"><string>pending</string></field>
        <field name="membership"><string>author:/platform/web-contributors</string></field>
    </object>
</value>
<value>
    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
        <field name="state"><string>approved</string></field>
        <field name="membership"><string>manager:/platform/web-contributors</string></field>
    </object>
</value>
<value>
    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
        <field name="state"><string>staged</string></field>
        <field name="membership"><string>publisher:/platform/web-contributors</string></field>
    </object>
</value>
<value>
    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
        <field name="state"><string>published</string></field>
        <field name="membership"><string>automatic</string></field>
    </object>
</value>
</collection>
</field>
</object>
</value>
<value>
    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
        <field name="name"><string>lifecycle3</string></field>
        <field name="publicationPlugin"><string>Authoring publication</string></field>
        <field name="states">
            <collection type="java.util.ArrayList">
                <value>
                    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
                        <field name="state"><string>draft</string></field>
                        <field name="membership"><string>author:/platform/web-contributors</string></field>
                    </object>
                </value>
                <value>
                    <object type="org.exoplatform.services.wcm.publication.lifecycles.impl.LifecyclesConfig$Lifecycle">
                        <field name="state"><string>published</string></field>
                        <field name="memberships">
                            <collection type="java.util.ArrayList">
                                <value><string>publisher:/CA/communicationDG</string></value>
                                <value><string>publisher:/CA/alerteSanitaire</string></value>
                                <value><string>publisher:/CA/alerteInformatique</string></value>
                                <value><string>publisher:/CA/informations</string></value>
                            </collection>
                        </field>
                    </object>
                </value>
            </collection>
        </field>
    </object>
</value>
</collection>
</field>
</object>
</value>
</collection>
</field>
</object>
</object-param>
</init-params>
</component-plugin>
</external-component-plugins>

```

In the last example, we have two lifecycles:

1. lifecycle 1 : based on *States and versions based publication** This allows to be backward compliant with

older WCM releases. If all your site contents are using an existing plugin, you can create a lifecycle for it and it will work.

- For new instances, we recommend to use the new plugin with dynamic states capabilities
2. lifecycle 2 : based on new *Authoring publication* Visibility : we define only the "visible" steps. In this example, there's no step for 'enrolled'. Even if this step exists, it will not be displayed in the UI.
 - Automatic : we can set a step as "automatic". In this mode, the step will be visible in the UI but it will be managed by the system (a cron job for example).
 3. lifecycle 3 : simulates the *States and versions based publication* plugin
 - Note that this simple lifecycle will work in a single server configuration

6.3.2.1.1. Listening to a lifecycle

When we change state, we broadcast an event in order for partners to add features if they want. Event could look like this:

```
listenerService.broadcast(AuthoringPlugin.POST_UPDATE_STATE_EVENT, null, node);
```

Listener declaration could look like this:

```
<external-component-plugins>
  <target-component>org.exoplatform.services.listener.ListenerService</target-component>
  <component-plugin>
    <name>PublicationService.event.postUpdateState</name>
    <set-method>addListener</set-method>
    <type>org.exoplatform.services.wcm.publication.listener.post.PostUpdateStateEventListener</type>
    <description>this listener will be called every time a content changes its current state</description>
  </component-plugin>
</external-component-plugins>
```

6.3.2.2. Context

A context is defined by simple rules. In WCM 2.1+, we can choose to enroll the content in a specific lifecycle (i.e. publication plugin) based on context parameters. We have 3 parameters we can use to define contexts :

- Remote User : The current user who create/edit the content.
- Current sitename : The Site from where the content is created (not the storage but the navigation)
- Node : The node which we want to enroll.

From these parameters, we can easily connect and define contexts based on :

- Membership : Does the current user have this membership ?
- Site : On this particular site, we want to enroll contents in a specific lifecycle
- Path : We can enroll content in lifecycles based on their path (from the Node).
- Type of content : We can enroll content in lifecycles based on their nodetype (from the Node).

Because each site has a content storage (categories + physical storage), we can choose the right lifecycle for the right storage/site. We can have conflicts on contexts and we will avoid that by setting a priority (less is best)

Example : Different Contexts

```
<external-component-plugins>
  <target-component>org.exoplatform.services.wcm.publication.PublicationManager</target-component>
  <component-plugin>
    <name>AddContext</name>
    <set-method>addContext</set-method>
    <type>org.exoplatform.services.wcm.publication.context.ContextPlugin</type>
    <init-params>
      <object-param>
        <name>contexts</name>
        <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig">
          <field name="contexts">
            <collection type="java.util.ArrayList">
              <value>
                <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig$Context">
                  <field name="name"><string>contextdefault</string></field>
                  <field name="priority"><string>200</string></field>
                  <field name="lifecycle"><string>lifecycle1</string></field>
                </object>
                <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig$Context">
                  <field name="name"><string>context1</string></field>
                  <field name="priority"><string>100</string></field>
                  <field name="lifecycle"><string>lifecycle1</string></field>
                  <field name="membership"><string>*:/platform/web-contributors</string></field>
                  <field name="site"><string>acme</string></field>
                  <field name="path"><string>repository:collaboration:/sites content/live/acme/categories</string></field>
                </object>
                <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig$Context">
                  <field name="name"><string>context2</string></field>
                  <field name="priority"><string>100</string></field>
                  <field name="lifecycle"><string>lifecycle1</string></field>
                  <field name="site"><string>classic</string></field>
                </object>
                <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig$Context">
                  <field name="name"><string>context3</string></field>
                  <field name="priority"><string>80</string></field>
                  <field name="lifecycle"><string>lifecycle3</string></field>
                  <field name="membership"><string>manager:/company/finances</string></field>
                  <field name="path"><string>repository:collaboration:/documents/company/finances</string></field>
                </object>
                <object type="org.exoplatform.services.wcm.publication.context.impl.ContextConfig$Context">
                  <field name="name"><string>context4</string></field>
                  <field name="priority"><string>50</string></field>
                  <field name="lifecycle"><string>lifecycle4</string></field>
                  <field name="memberships">
                    <collection type="java.util.ArrayList">
                      <value><string>manager:/CA/communicationDG</string></value>
                      <value><string>manager:/CA/alerteSanitaire</string></value>
                      <value><string>manager:/CA/alerteInformatique</string></value>
                      <value><string>manager:/CA/informations</string></value>
                    </collection>
                  </field>
                  <field name="path"><string>repository:collaboration:/documents/company/finances</string></field>
                  <field name="nodetype"><string>exo:article</string></field>
                </object>
              </value>
            </collection>
          </field>
        </object-param>
      </init-params>
    </component-plugin>
  </external-component-plugins>
```

The logic is very simple. When we create a content, we will go lifecycle by lifecycle starting with the better priority :

- *context4* is the most important (priority=50) : we will enroll the content in the lifecycle 'lifecycle4' if :

- the content creator has the 'manager:/company/finances' membership
- the content is stored in 'repository:collaboration:/documents/company/finances' or any subfolders
- the content is a 'exo:article'
- if not we will continue with *context3*
- etc

We can see that *context1* and *context2* have the same priority. We can do that if the contexts are different (ex : different sites)

Note

It's important to notice that contexts will be used only when the content is created and when we want to enroll it in a lifecycle for the first time. Once we have the corresponding lifecycle, we will set the lifecycle inside the content (see New authoring Mixin) and the context service will not be called again for this content.

6.3.2.3. New Authoring Mixin

```
<nodeType hasOrderableChildNodes="false" isMixin="true" name="publication:authoring" primaryItemName="">
  <propertyDefinitions>
    <propertyDefinition autoCreated="false" mandatory="false" multiple="false" name="publication:lastUser" onPar
      <valueConstraints/>
    </propertyDefinition>
    <propertyDefinition autoCreated="false" mandatory="false" multiple="false" name="publication:lifecycle" onPa
      <valueConstraints/>
    </propertyDefinition>
  </propertyDefinitions>
</nodeType>
```

When adding the content in a lifecycle, we set the *publication:lifecycle_* property with the corresponding lifecycle.

Note

A content can be in one lifecycle only.

Each time, we change from one state to another, we set the user who changed the state in *publication:lastUser_*.

6.3.2.3.1. Querying based on publication status

By adding this mixin to contents, we can access contents by simple queries based on the current user profile. For example:

- All my draft contents
 - query : select * from nt:base where publication:currentState='draft' and publication:lastUser='benjamin';
- All the contents I have to approve

- call : `PublicationManager.getLifecycles('benjamin', 'approved')` => returns lifecycles where I can go to the 'approved' state.
- query : `select * from nt:base where publication:currentState='pending' and (publication:lifecycle='lifecycle1' or publication:lifecycle='lifecycle3');`
- All the content that will be published tomorrow
- query : `select * from nt:base where publication:currentState='staged' and publication:startPublishedDate>'xxxx';`

Chapter 7. Java Services

7.1. TaxonomyService

Taxonomy service is used to work with taxonomies. In this service, there are many functions which enable you to add, find, delete taxonomies from a node.

Method	Return	Prototype	Description
getTaxonomyTree	Node	<code>getTaxonomyTree(String repository, String taxonomyName, boolean system) throws RepositoryException;</code>	Returns the root node of the given taxonomy tree @param repository: The name of repository @param taxonomyName: The name of the taxonomy @param system: Indicates whether the nodes must be retrieved using a session system or user session @throws RepositoryException: if the taxonomy tree could not be found
getTaxonomyTree	Node	<code>getTaxonomyTree(String repository, String taxonomyName) throws RepositoryException;</code>	Returns the root node of the given taxonomy tree with the user session @param repository: The name of repository @param taxonomyName: The name of the taxonomy @throws

Method	Return	Prototype	Description
			RepositoryException: if the taxonomy tree could not be found
getAllTaxonomyTrees	List<Node>	getAllTaxonomyTrees(String repository, boolean system) throws RepositoryException;	Returns the list of all the root nodes of the taxonomy tree available @param repository: The name of repository @param system: Indicates whether the nodes must be retrieved using a session system or user session @throws RepositoryException: if the taxonomy trees could not be found
getAllTaxonomyTrees	List<Node>	getAllTaxonomyTrees(String repository) throws RepositoryException;	Returns the list of all the root nodes of the taxonomy tree available with the user session @param repository: The name of repository @throws RepositoryException: if the taxonomies could not be found
hasTaxonomyTree	boolean	hasTaxonomyTree(String repository, String taxonomyName) throws RepositoryException;	Checks if a taxonomy tree with the given name has already been defined @param repository: The name of repository

Method	Return	Prototype	Description
			@param taxonomyName: The name of the taxonomy @throws RepositoryException: if the taxonomy name could not be checked
addTaxonomyTree	void	<pre>addTaxonomyTree(Node taxonomyTree) throws RepositoryException, TaxonomyAlreadyExistsException;</pre>	Defines a node as a new taxonomy tree @param taxonomyTree: The taxonomy tree to define @throws TaxonomyAlreadyExistsException: if a taxonomy with the same name has already been defined @throws RepositoryException: if the taxonomy tree could not be defined
updateTaxonomyTree	void	<pre>updateTaxonomyTree(String taxonomyName, Node taxonomyTree) throws RepositoryException;</pre>	Re-defines a node as a taxonomy tree @param taxonomyName: The name of the taxonomy to update @param taxonomyTree: The taxonomy tree to define @throws RepositoryException: if the taxonomy tree could not be updated

Method	Return	Prototype	Description
removeTaxonomyTree	void	removeTaxonomyTree(String taxonomyName) throws RepositoryException;	Remove the taxonomy tree definition @param taxonomyName: The name of the taxonomy to remove @throws RepositoryException: if the taxonomy tree could not be removed
addTaxonomyNode	void	addTaxonomyNode(String repository, String workspace, String parentPath, String taxoNodeName, String creator) throws RepositoryException, TaxonomyNodeAlreadyExistsException;	Adds a new taxonomy node at the given location @param repository: The name of the repository @param workspace: The name of the workspace @param parentPath: The place where the taxonomy node will be added @param taxoNodeName: The name of taxonomy node @param creator: The name of the user creating this node @throws TaxonomyNodeAlreadyExistsException: if a taxonomy node with the same name has already been added @throws

Method	Return	Prototype	Description
			RepositoryException: if the taxonomy node could not be added
removeTaxonomyNode	void	<pre>removeTaxonomyNode(String repository, String workspace, String absPath) throws RepositoryException;</pre>	Remove the taxonomy node located at the given absolute path @param repository: The name of the repository @param workspace: The name of the workspace @param absPath: The absolute path of the taxonomy node to remove @throws RepositoryException: if the taxonomy node could not be removed
moveTaxonomyNode	void	<pre>moveTaxonomyNode(String repository, String workspace, String srcPath, String destPath, String type) throws RepositoryException;</pre>	Copies or cuts the taxonomy node from source path to destination path. The parameter type indicates if the node must be cut or copied @param repository: The name of the repository @param workspace: The name of the workspace @param srcPath: The source path of this taxonomy @param destPath: The destination path of the

Method	Return	Prototype	Description
			taxonomy @param type: If type is equal to cut, the process will be cut. If type is equal to copy, the process will be copied @throws RepositoryException: if the taxonomy node could not be moved
hasCategories	boolean	<pre>hasCategories(Node node, String taxonomyName) throws RepositoryException;</pre>	Returns true if the given node has categories in the given taxonomy @param node: The node to check @param taxonomyName: The name of the taxonomy @throws RepositoryException: if categories cannot be checked
hasCategories	boolean	<pre>hasCategories(Node node, String taxonomyName, boolean system) throws RepositoryException;</pre>	Return true if the given node has categories in the given taxonomy @param node: The node to check @param taxonomyName: The name of the taxonomy @param system: check system provider or not

Method	Return	Prototype	Description
			@throws RepositoryException: if categories cannot be checked
getCategories	List<Node>	<pre>getCategories(Node node, String taxonomyName) throws RepositoryException;</pre>	Returns all the paths of the categories (relative to the root node of the given taxonomy) which have been associated to the given node for the given taxonomy @param node: The node for which we seek the categories @param taxonomyName: The name of the taxonomy @throws RepositoryException: if the categories cannot be retrieved
getCategories	List<Node>	<pre>getCategories(Node node, String taxonomyName, boolean system) throws RepositoryException;</pre>	Returns all the paths of the categories (relative to the root node of the given taxonomy) which have been associated to the given node for the given taxonomy @param node: The node for which we seek the categories @param taxonomyName: The name of the taxonomy @param system

Method	Return	Prototype	Description
			@throws RepositoryException: if the categories cannot be retrieved
getAllCategories	List<Node>	<pre>getAllCategories(Node node) throws RepositoryException;</pre>	Returns all the paths of the categories which have been associated to the given node @param node: The node for which we seek the categories @throws RepositoryException
getAllCategories	List<Node>	<pre>getAllCategories(Node node, boolean system) throws RepositoryException;</pre>	Returns all the paths of the categories which have been associated to the given node @param node: The node for which we seek the categories @param system: check system provider or not @throws RepositoryException
removeCategory	void	<pre>removeCategory(Node node, String taxonomyName, String categoryPath) throws RepositoryException;</pre>	Removes a category to the given node @param node: The node for which we remove the category @param taxonomyName: The name of the taxonomy

Method	Return	Prototype	Description
			@param categoryPath: The path of the category relative to the root node of the given taxonomy @throws RepositoryException: if the category cannot be removed
removeCategory	void	<pre>removeCategory(Node node, String taxonomyName, String categoryPath, boolean system) throws RepositoryException;</pre>	Removes a category to the given node @param node: The node for which we remove the category @param taxonomyName: The name of the taxonomy @param categoryPath: The path of the category relative to the root node of the given taxonomy @param system: check system provider or not @throws RepositoryException: if the category cannot be removed
addCategories	void	<pre>addCategories(Node node, String taxonomyName, String[] categoryPaths) throws RepositoryException;</pre>	Adds several categories to the given node @param node: The node for which we add the categories @param taxonomyName:

Method	Return	Prototype	Description
			The name of the taxonomy @param categoryPaths: An array of category paths relative to the given taxonomy @throws RepositoryException: if the categories cannot be added
addCategories	void	<pre>addCategories(Node node, String taxonomyName, String[] categoryPaths, boolean system) throws RepositoryException;</pre>	Adds several categories to the given node @param node: The node for which we add the categories @param taxonomyName: The name of the taxonomy @param categoryPaths: An array of category paths relative to the given taxonomy @param system: check system provider or not @throws RepositoryException: if the categories cannot be added
addCategory	void	<pre>addCategory(Node node, String taxonomyName, String categoryPath) throws RepositoryException;</pre>	Adds a new category path to the given node @param node: the node for which we add the

Method	Return	Prototype	Description
			category @param taxonomyName: The name of the taxonomy @param categoryPath: The path of the category relative to the given taxonomy @throws RepositoryException: if the category cannot be added
addCategory	void	<pre>addCategory(Node node, String taxonomyName, String categoryPath, boolean system) throws RepositoryException;</pre>	Adds a new category path to the given node @param node: the node for which we add the category @param taxonomyName: The name of the taxonomy @param categoryPath: The path of the category relative to the given taxonomy @param system: check system provider or not @throws RepositoryException: if the category cannot be added
getTaxonomyTreeDefaultUserPermission	<pre>Map<String, String[]></pre>	<pre>getTaxonomyTreeDefaultUserPermission();</pre>	get default permission for the user in taxonomy tree

Method	Return	Prototype	Description
addTaxonomyPlugin	void	addTaxonomyPlugin(Component plugin);	Add a new taxonomy plugin to the service @param plugin: The plugin to add
init	void	init(String repository) throws Exception;	Initialize all taxonomy plugins that have been already configured in .xml files @param repository: The name of repository @see TaxonomyPlugin @throws Exception
getCategoryNameLength	String	getCategoryNameLength()	Gets the limited length of the category name.

7.2. LinkManager

Supply API to work with the linked node or the link included in a node.

Package *org.exoplatform.services.cms.link.LinkManager*

Method	Return	Prototype	Description
createLink	Node	createLink(Node parent, String linkType, Node target) throws RepositoryException;	Creates a new link, add it to the parent node and returns the link @param parent: The parent node of the link @param linkType: The primary node type of the link must be a sub-type of

Method	Return	Prototype	Description
			exo:symLink, the default value is "exo:symLink" @param target The target of the link @throws RepositoryException: if the link cannot be created for any reason
createLink	Node	<pre>createLink(Node parent, Node target) throws RepositoryException;</pre>	Creates a new node of type exo:symLink, add it to the parent node and returns the link node @param parent: The parent node of the link to create @param target: The target of the link @throws RepositoryException: if the link cannot be created for any reason
createLink	Node	<pre>createLink(Node parent, String linkType, Node target, String linkName)</pre> throws RepositoryException;	Creates a new link, add it to the parent node and returns the link @param parent: The parent node of the link @param linkType: The primary node type of the link must be a sub-type of

Method	Return	Prototype	Description
			exo:symLink, the default value is "exo:symLink" @param target: The target of the link @param linkName: The name of the link @return @throws RepositoryException: if the link cannot be created for any reason
updateLink	Node	updateLink(Node link, Node target) throws RepositoryException;	Updates the target node of the given link @param link: The link node to update @param target: The new target of the link @throws RepositoryException: if the link cannot be updated for any reason
getTarget	Node	getTarget(Node link, boolean system) throws ItemNotFoundException, RepositoryException;	Gets the target node of the given link @param link: The node of type exo:symLink @param system: Indicates whether the target node must be retrieved using a

Method	Return	Prototype	Description
			session system or user session in case we cannot use the same session as the node link because the target and the link are not in the same workspace @throws ItemNotFoundException: if the target node cannot be found @throws RepositoryException: if an unexpected error occurs while retrieving the target node
getTarget	Node	getTarget(Node link) throws ItemNotFoundException, RepositoryException;	Gets the target node of the given link using the user session @param link: The node of type <code>exo:symlink</code> @throws ItemNotFoundException: if the target node cannot be found @throws RepositoryException: if an unexpected error occurs while retrieving the target node

Method	Return	Prototype	Description
isTargetReachable	boolean	isTargetReachable(Node link) throws RepositoryException;	Checks if the target node of the given link can be reached using the user session @param link: The node of type <code>exo:symLink</code> @throws RepositoryException: if an unexpected error occurs
isTargetReachable	boolean	isTargetReachable(Node link, boolean system) throws RepositoryException;	Checks if the target node of the given link can be reached using the user session @param link: The node of type <code>exo:symLink</code> @param system @throws RepositoryException if an unexpected error occurs
isLink	boolean	isLink(Item item) throws RepositoryException;	Indicates whether the given item is a link @param item: the item to test @return <code>true</code> : if the node is a link, <code>false</code> otherwise

Method	Return	Prototype	Description
			@throws RepositoryException: if an unexpected error occurs
getTargetPrimaryNodeType	String	<pre>getTargetPrimaryNodeType(String link) throws RepositoryException;</pre>	Gives the primary node type of the target @param link: The node of type <code>exo:symlink</code> @return: the primary node type of the target @throws RepositoryException: if an unexpected error occurs
getAllLinks	List<Node>	<pre>getAllLinks(Node targetNode, String linkType, String repoName) {}throws Exception;</pre>	Gives all links of the given node @param targetNode: The target node to get links @param linkType: The type of link to get @param repoName: Name of the repository @return: the list of link of the target node with given type @throw Exception

7.3. PublicationManager

PublicationService to manage the publication

Method	Return	Prototype	Description
addLifecycle	void	addLifecycle(Component plugin);	Add plugins context for the publication service
getLifecycle	Lifecycle	Lifecycle getLifecycle(String name) ;	Get a specific Lifecycle with the given name @param name: Name of wanted Lifecycle
getLifecycles	List<Lifecycle>	List<Lifecycle> getLifecycles();	Get all the Lyfecycle which were added to service instance
getContext	Context	Context getContext(String name) ;	Get a specific context with the given name
getContexts	List<Context>	List<Context> getContexts();	Get all the context which were added to service instance
getContents	List<Node>	List<Node> getContents(String fromstate, String tostate, String date, String user, String lang , String workspace) throws Exception;	Get all the node @param fromstate/tostate: the current range state of node @param @param user: The last user of node @param lang: the node's language @param workspace: the Workspace of node's location
getLifecyclesFromUser	List<Lyfecycle>	List<Lyfecycle> getLifecyclesFromUser(String remoteUser, String state);	Get all the Lifecycle of a specific user @param remoteUser: current user of publication service @param state: Current state of the node

Method	Return	Prototype	Description

7.4. WCMComposer

This class is used to get contents inside the WCM product. You should not access contents directly from the jcr on the front side.

In general, this service stands between publication and cache.

Package *org.exoplatform.services.wcm.publication.WCMComposer*

Method	Return	Prototype	Description
getContent	Node	<pre>getContent(String repository, String workspace, String nodeIdIdentifier, HashMap<String, String> filters, SessionProvider sessionProvider) throws Exception ;</pre>	returns content at the specified path based on filters. repository the repository workspace the workspace @param path: the path @param filters: the filters @param sessionProvider: the session provider @return a jcr node @throws Exception: the exception
getContents	List<Node>	<pre>getContents(String repository, String workspace, String path, HashMap<String, String> filters, SessionProvider sessionProvider) throws Exception ;</pre>	returns contents at the specified path based on filters. @param repository: the repository

Method	Return	Prototype	Description
			@param workspace: the workspace @param path: the path @param filters: the filters @param sessionProvider: the session provider @return a jcr node @throws Exception: the exception
updateContent	boolean	<pre>updateContent(String repository, String workspace, String nodeIdentifier, HashMap<String, String> filters) throws Exception;</pre>	Update content. repository the repository @param workspace: the workspace @param path: the path @param filters: the filters @return true, if successful
getAllowedStates	List<String>	<pre>getAllowedStates(String mode) throws Exception ;</pre>	returns allowed states for a specified mode. @param mode: the mode @return a jcr node

Method	Return	Prototype	Description
			@throws Exception: the exception
cleanTemplates	void	cleanTemplates() throws Exception ;	initialize the templates hashmap @throws Exception: the exception
isCached	boolean	isCached() throws Exception;	Check isCache or not @return the state of cache @throws Exception: the exception
updateTemplatesSQLFilter	String	updateTemplatesSQLFilter(repository) throws Exception;	Updating all document nodetypes and write a query cause. @param repository: the repository @return: A part of the query allow search all document node and taxonomy link also. Return null if there is any exception. @throws Exception: the exception

7.5. NewFolksonomy

Package *org.exoplatform.services.cms.folksonomy.NewFolksonomyService*;

Method	Return	Prototype	Description
addPrivateTag	void	addPrivateTag(String[]	

Method	Return	Prototype	Description
		tagName, Node documentNode, String repository, String workspace, String userName) throws Exception ;	Add a private tag to a document. A folksonomy link will be created in a tag node @param tagName: Array of tag name as the children of tree @param documentNode: Tagging this node by creating a folksonomy link to the node in tag @param repository: Repository name @param workspace: Workspace name @param userName: User name @throws Exception
addGroupsTag	void	addGroupsTag(String[] tagName, Node documentNode,String repository, String workspace, String[] roles) throws Exception ;	Add a group tag to a document. A folksonomy link will be created in a tag node @param tagName: Array of tag name as the children of tree @param documentNode: Tagging this node by creating a folksonomy link to the node in tag @param repository: Repository name @param workspace: Workspace name
			83

Method	Return	Prototype	Description
			@param roles: User roles @throws Exception
addPublicTag	void	<pre>addPublicTag(String treePath, String[] tagsName, Node documentNode, String repository, String workspace) throws Exception ;</pre>	Add a public tag to a document. A folksonomy link will be created in a tag node @param treePath: Path of folksonomy tree @param tagNames: Array of tag name as the children of tree @param documentNode: Tagging this node by creating a folksonomy link to the node in tag @param repository: Repository name @param workspace: Workspace name @throws Exception
addSiteTag	void	<pre>addSiteTag(String siteName, String[] tagsName, Node node, String repository, String workspace) throws Exception ;</pre>	Add a site tag to a document. A folksonomy link will be created in a tag node @param siteName: Portal name @param treePath: Path of folksonomy tree @param tagNames: Array of tag name as the children of tree

Method	Return	Prototype	Description
			@param documentNode: Tagging this node by creating a folksonomy link to the node in tag @param repository: Repository name @param workspace: Workspace name @throws Exception
getAllPrivateTags	List<Node>	<pre>getAllPrivateTags(String userName, String repository, String workspace) throws Exception ;</pre>	Get all private tags @param userName: User name @param repository: repository name @param workspace: Workspace name @return List<Node>
getAllPublicTags	List<Node>	<pre>getAllPublicTags(String treePath, String repository, String workspace) throws Exception ;</pre>	Get all public tags @param treePath: Folksonomy tree path @param repository: Repository name @param workspace: Workspace name @return List<Node> @throws Exception
getAllGroupTags	List<Node>	<pre>getAllGroupTags(String[] roles, String</pre>	Get all tags by groups

Method	Return	Prototype	Description
		repository, String workspace) throws Exception ;	@param roles: Roles of user @param repository: Repository name @param workspace: Workspace name @return List<Node> @throws Exception
getAllGroupTags	List<Node>	getAllGroupTags(String role, String repository, String workspace) throws Exception ;	Get all tags by group @param role: Role of user @param repository: Repository name @param workspace: Workspace name @return List<Node> @throws Exception
getAllSiteTags	List<Node>	getAllSiteTags(String siteName, String repository, String workspace) throws Exception ;	Get all tags of Site @param siteName: Portal name @param treePath: Folksonomy tree path @param repository: Repository name @param workspace: Workspace name

Method	Return	Prototype	Description
			@return List<Node> @throws Exception
getAllDocumentsByTag	List<Node>	<pre>getAllDocumentsByTag(String tagPath, String repository, String workspace, SessionProvider sessionProvider) throws Exception ;</pre>	Get all documents which are stored in a tag @param treeName: Name of folksonomy tree @param tagName : Name of tag @param repository: Repository name @return: List of documents in tag @throws Exception
getTagStyle	String	<pre>getTagStyle(String tagPath, String repository, String workspace) throws Exception ;</pre>	Get HTMLSTYLEPROP property in styleName node in repository @param tagPath: Tag path @param workspace Workspace name @param repository: Repository name @return: value of property of styleName node @throws Exception
addTagStyle	void	<pre>addTagStyle(String styleName, String tagRange, String htmlStyle, String</pre>	Update the properties TAGRATEPROP and HTMLSTYLEPROP,

Method	Return	Prototype	Description
		repository, String workspace) throws Exception ;	following the values tagRate, htmlStyle for node in tagPath in repository @param styleName: Style name @param tagRate: The range of tag numbers @param htmlStyle: Tag style @param repository: Repository name @param workspace: Workspace name @throws Exception
updateTagStyle	void	updateTagStyle(String styleName, String tagRange, String htmlStyle, String repository, String workspace) throws Exception ;	Update the properties TAGRATEPROP and HTMLSTYLEPROP, following the value tagRate, htmlStyle for node in tagPath in repository @param styleName: Style name @param tagRate: The range of tag numbers @param htmlStyle Tag style @param repository Repository name

Method	Return	Prototype	Description
			@param workspace: Workspace name @throws Exception
getAllTagStyle	List<Node>	<pre>getAllTagStyle(String repository, String workspace) throws Exception ;</pre>	Get all tag style bases of folksonomy tree @param repository: Repository name @param workspace: Workspace name @return List<Node> List tag styles @throws Exception
init	void	<pre>init(String repository) throws Exception ;</pre>	Initialize all TagStylePlugin with session in repository name @param repository: repository name
removeTagOfDocument	void	<pre>removeTagOfDocument(String tagPath, Node document, String repository, String workspace) throws Exception;</pre>	Remove a tag of a given document @param treeName: Name of folksonomy tree @param tagName: Name of tag @param document: Document which is added a link to tagName @param repository: Repository name

Method	Return	Prototype	Description
			@return @throws Exception
removeTag	void	removeTag(String tagPath, String repository, String workspace) throws Exception;	Remove tag @param tagPath: Path of tag @param repository: Repository name @param workspace: Workspace name
modifyTagName	Node	modifyTagName(String tagPath, String newTagName, String repository, String workspace) throws Exception;	Modify tag name @param tagPath: Path of tag @param newTagName: New tag name @param repository: Repository name @param workspace Workspace name @return @throws Exception
getLinkedTagsOfDocument	List<Node>	getLinkedTagsOfDocument(Node documentNode, String repository, String workspace) throws Exception;	(Node Get all tags linked to given document @param documentNode Document node @param repository: Repository name

Method	Return	Prototype	Description
			@param workspace: Workspace name @return @throws Exception
getLinkedTagsOfDocumentByScope		<pre>getLinkedTagsOfDocumentByScope(int scope, String value, Node documentNode, String repository, String workspace) throws Exception;</pre>	ByScope(int Get all tags linked to given document by scope @param documentNode: Document node @param repository: Repository name @param workspace: Workspace name @return @throws Exception
removeTagsOfNodeRecursively		<pre>removeTagsOfNodeRecursively(Node node, String repository, String workspace, String username, String groups) throws Exception;</pre>	Remove all tags linked to children of given node @param node @param repository @param workspace @throws Exception
addTagPermission	void	<pre>addTagPermission(String usersOrGroups);</pre>	Add given users or groups to tagPermissionList @param usersOrGroups
removeTagPermission	void	<pre>removeTagPermission(String usersOrGroups);</pre>	Remove given users or groups from

Method	Return	Prototype	Description
			tagPermissionList @param usersOrGroups
getTagPermissionList	List<String>	getTagPermissionList();	Returns tagPermissionList
canEditTag	boolean	canEditTag(int scope, List<String> memberships);	Set the permission for a user to edit tag. @param scope: Scope @param memberships: Memberships @return true If it is possible
getAllTagNames	List<String>	getAllTagNames(String repository, String workspace, int scope, String value) throws Exception;	Get all tag names which start within a given scope @param repository: Repository @param workspace: Workspace @param scope: scope of tags @param value: value, according to scope, can be understood differently @return true if it is possible

7.6. ApplicationTemplateManager

This class is used to manage dynamic groovy templates for ecm-based products.

Package org.exoplatform.services.cms.views.ApplicationTemplateManager;

Method	Return	Prototype	Description
addPlugin	void	addPlugin(PortletTemplateRepository repository, portletTemplatePlugin) throws Exception	Adds the plugin. portletTemplatePlugin the portlet template plugin
getAllManagedPortletNames	List<String>	getAllManagedPortletNames(PortletTemplateRepository repository) throws Exception	Retrieve all the portlet names that have dynamic groovy templates managed by service. repository the repository @throws Exception the exception
getTemplatesByApplication	List<Node>	getTemplatesByApplication(PortletTemplateRepository repository, String portletName, SessionProvider provider) throws Exception;	Retrieve the templates node by application. @param repository: the repository @param portletName: the portlet name @param provider: the provider @return the templates by application @throws Exception: the exception
getTemplatesByCategory	List<Node>	getTemplatesByCategory(PortletTemplateRepository repository, String portletName, String category, SessionProvider sessionProvider) throws Exception;	Retrieve the templates node by category.. @param repository: the repository @param portletName: the portlet name

Method	Return	Prototype	Description
			@param category: the category @param sessionProvider: the session provider @return the templates by category @throws Exception: the exception
getTemplateByName	Node	<pre>getTemplateByName(String repository, String portletName, String category, String templateName, SessionProvider sessionProvider)</pre> throws Exception;	Retrieve the template by name @param repository: the repository @param portletName: the portlet name @param category: the category @param templateName: the template name @param sessionProvider: the session provider @return the template by name @throws Exception: the exception
getTemplateByPath	Node	<pre>getTemplateByPath(String repository, String templatePath, SessionProvider sessionProvider)</pre> throws Exception ;	Get the template by path: @param repository: the repository @param templatePath: the template path

Method	Return	Prototype	Description
			@param sessionProvider: the session provider @return the template by path @throws Exception: the exception
addTemplate	void	addTemplate(Node portletTemplateHome, PortletTemplateConfig config) throws Exception;	Adds the template: @param portletTemplateHome: the portlet template home @param config: the config @throws Exception: the exception
removeTemplate	void	removeTemplate(String repository, String portletName, String category, String templateName, SessionProvider sessionProvider) throws Exception;	Remove the template: @param repository: the repository @param portletName: the portlet name @param category: the category @param templateName: the template name @param sessionProvider: the session provider @throws Exception: the exception

7.7. NodeFinder

NodeFinder is used to find a node with a given path. If the path to the node contains sub-paths to `exo:symlink` nodes, find real link node.

Method	Return	Prototype	Description
getNode	Node	getNode(Node ancestorNode, String relativePath) throws PathNotFoundException, RepositoryException;	Return the node at relPath related to ancestor node. @param ancestorNode: The ancestor of the node to retrieve from which we start. @param relativePath: The relative path of the node to retrieve. @throws PathNotFoundException: If "no", the node exists at the specified path. @throws RepositoryException: if another error occurs.
getNode	Node	getNode(Node ancestorNode, String relativePath, boolean giveTarget) throws PathNotFoundException, RepositoryException;	Return the node at relPath related to ancestor node. If the node is a link and giveTarget has been set to <code><code>true</code></code>, the target node will be returned @param ancestorNode: The ancestor of the node to retrieve from which we start. @param relativePath: The relative path of the node to retrieve. @param giveTarget:

Method	Return	Prototype	Description
			Indicate if the target must be returned in case the item is a link @throws PathNotFoundException: If no node exists at the specified path. @throws RepositoryException: if another error occurs.
getItem	Item	getItem(String repository, String workspace, String absPath) throws PathNotFoundException, RepositoryException;	Return the item at the specified absolute path. @param repository: The name of repository @param workspace: The name of workspace @param absPath: An absolute path. @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
getItemSys	Item	getItemSys(String repository, String workspace, String absPath, boolean system) throws PathNotFoundException, RepositoryException;	Return the item at the specified absolute path. @param repository: The name of repository @param workspace: The name of workspace @param absPath: An

Method	Return	Prototype	Description
			absolute path. @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
getItem	Item	<pre>getItem(String repository, String workspace, String : absPath, boolean giveTarget) throws PathNotFoundException, RepositoryException;</pre>	Return the item at the specified absolute path. If the item is a link and giveTarget has been set to <code>true</code>, the target node will be returned @param repository: The name of repository @param workspace: The name of workspace @param absPath: An absolute path. @param giveTarget: Indicates if the target must be returned in case the item is a link @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
getItemGiveTargetSys	Item	<pre>getItemGiveTargetSys(String repository, String</pre>	Return the item at the specified absolute path. If the item is a link and

Method	Return	Prototype	Description
		workspace, String absPath, boolean giveTarget, boolean system) throws PathNotFoundException, RepositoryException;	giveTarget has been set to <code><code>true</code>, the target node will be returned</code> @param repository: The name of repository @param workspace: The name of workspace @param absPath: An absolute path. @param giveTarget: Indicates if the target must be returned in case the item is a link @param system: system provider @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
getItem	Item	getItem(Session session, String absPath) throws PathNotFoundException, RepositoryException;	Return the item at the specified absolute path. @param session: The session to use in order to get the item @param absPath: An absolute path. @throws PathNotFoundException: if the specified path

Method	Return	Prototype	Description
			cannot be found. @throws RepositoryException: if another error occurs.
getItem	Item	getItem(Session session, String absPath, boolean giveTarget) throws PathNotFoundException, RepositoryException;	Return the item at the specified absolute path. If the item is a link and giveTarget has been set to <code>true</code> , the target node will be returned @param session: The session to use in order to get the item @param absPath: An absolute path. @param giveTarget: Indicates if the target must be returned in case the item is a link @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
getItemTarget	Item	getItemTarget(Session session, String absPath, boolean giveTarget, boolean system) throws PathNotFoundException, RepositoryException;	Return the item at the specified absolute path. If the item is a link and giveTarget has been set to <code>true</code> , the target node will be returned @param session: The session to use in order to get the item
			100

Method	Return	Prototype	Description
			@param absPath: An absolute path. @param giveTarget: Indicates if the target must be returned in case the item is a link @param system: system provider @throws PathNotFoundException: if the specified path cannot be found. @throws RepositoryException: if another error occurs.
itemExists	boolean	itemExists(Session session, String absPath) throws RepositoryException;	Return <code>true</code> if an item exists at absPath; otherwise returns <code>false</code> Also return <code>false</code> if the specified absPath is malformed. @param session: The session to use in order to get the item @param absPath: An absolute path. @return <code>true</code> if an item exists at absPath; otherwise returns <code>false</code>. @throws

Method	Return	Prototype	Description
			RepositoryException: if an error occurs.

7.8. JodConverter

JodConverter is used to convert documents into different office formats.

Package *org.exoplatform.services.cms.jodconverter.JodConverterService*

Method	Return	Prototype	Description
convert	void	convert(InputStream input, String formatInput, OutputStream out, String formatOutput) throws Exception;	Convert InputStream in with formatInput format to OutputStream out with formatOutput @param input @param formatInput @param out @param formatOutput @throws Exception

7.9. SiteSearchService

SiteSearchService is used in the Search portlet that allows users to find all information matching with your given keyword.

Method	Return	Prototype	Description
addExcludeIncludeDataTypePlugin		addExcludeIncludeDataTypePlugin(ExcludeIncludeDataTypePlugin plugin)	Filter mimetypes data in the search results. @param plugin: The plugin.
searchSiteContents	AbstractPageList<Result>	searchSiteContents(SessionProvider sessionProvider, QueryCriteria)	Find all child nodes whose contents match

Method	Return	Prototype	Description
		queryCriteria, int pageSize, boolean isSearchContent) throws Exception;	with the given keyword. These nodes will be put in the list of search results. @param queryCriteria: The query criteria for SiteSearchService. Based on search criteria, SiteSearchService can easily create the query statement to search. @param sessionProvider: The session provider. @param pageSize: The number of search results on a page.

Chapter 8. FAQ

8.1. How to deploy a workflow?

The *addPlugin()* function of **WorkflowServiceContainer** service is used to register a Business Process when a workflow is implemented. Thus, if you want to use a workflow, you are required to configure the workflow service to invoke the *addPlugin()* function by adding the *external-component-plugins* element to the configuration file.

You have to set values for the name and location of the workflow which you want to use. There are **TWO** ways to configure the location of the workflow.

8.1.1. Deploy a workflow inside a .war file

You can use "war:(FOLDER_PATH)" to configure which **.jar** files contain your workflow processes inside the **.war** file.

```
<external-component-plugins>
  <target-component>org.exoplatform.services.workflow.WorkflowServiceContainer</target-component>
  <component-plugin>
    <name>deploy.predefined.processes</name>
    <set-method>addPlugin</set-method>
    <type>org.exoplatform.services.workflow.PredefinedProcessesPlugin</type>
    <init-params>
      <object-param>
        <name>predefined.processes</name>
        <description>load of default business processes</description>
        <object type="org.exoplatform.services.workflow.ProcessesConfig">
          <field name="processLocation"><string>war:/conf/bp</string></field>
          <field name="predefinedProcess">
            <collection type="java.util.HashSet">
              <value><string>/exo-ecms-ext-workflow-bp-jbpm-content-2</string></value>
              <value><string>/exo-ecms-ext-workflow-bp-jbpm-payraise-2</string></value>
              <value><string>/exo-ecms-ext-workflow-bp-jbpm-holiday-2</string></value>
            </collection>
          </field>
        </object>
      </object-param>
    </init-params>
  </component-plugin>
</external-component-plugins>
```

8.1.2. Deploy a workflow inside a .jar file

You can use "classpath:" to configure which **.jar** files contain your workflow processes inside the **.jar** file.

```
<external-component-plugins>
  <target-component>org.exoplatform.services.workflow.WorkflowServiceContainer</target-component>
  <component-plugin>
    <name>deploy.predefined.processes</name>
    <set-method>addPlugin</set-method>
    <type>org.exoplatform.services.workflow.PredefinedProcessesPlugin</type>
    <init-params>
      <object-param>
        <name>predefined.processes</name>
        <description>load of default business processes</description>
        <object type="org.exoplatform.services.workflow.ProcessesConfig">
          <field name="processLocation"><string>classpath:</string></field>
          <field name="predefinedProcess">

```

```
                <collection type="java.util.HashSet">
                    <value><string>/exo-ecms-ext-workflow-bp-jbpm-content-my
                </collection>
            </field>
        </object>
    </object-param>
</init-params>
</component-plugin>
</external-component-plugins>
```

The notification message is displayed when you deploy a workflow on Jboss. If you use "classpath:" to register, you must put your workflow in the **.jar** files inside the *gatein.ear/lib* folder (instead of the **lib** folder) to make it work.