EXO PLATFORM
VERSION 2.0

A complete guide to

eXo platform technology

END USER
# Table of Contents

Overview........................................................................................................................................3
  Why use this documentation........................................................................................................4
  Comments welcome!......................................................................................................................4

User Guide Documentation.............................................................................................................4

1.1 eXo Portal 1.1 Best Features ...........................................................................................................5
  1.1.1 Web Content Accessibility...................................................................................................6
  1.1.2 Rules Engine (JSR 94)........................................................................................................6
  1.1.3 Enhanced Security................................................................................................................6
  1.1.4 Chart Capabilities................................................................................................................6
  1.1.5 Drag and Drop.....................................................................................................................6

1.2 Basic definitions............................................................................................................................6
  1.2.1 Portal................................................................................................................................7
  1.2.2 Portlet................................................................................................................................7
  1.2.3 Portlet Container................................................................................................................8
  1.2.4 JSR 168................................................................................................................................9

1.3 General Concept...........................................................................................................................10
  1.3.1 Portal owner and remote user.............................................................................................10
  1.3.2 Multi Portal Concept ..........................................................................................................10
  1.3.3 eXo platform layout...........................................................................................................11
  1.3.4 Security Concept.................................................................................................................12

2.0 Quick Tour....................................................................................................................................14
  2.1 Logging in for the first time.......................................................................................................14
  2.2 Customization and Personalization............................................................................................15
    2.2.1 Edit Portal and Page Mode..............................................................................................15
    2.2.2 Navigation Mode..............................................................................................................16
  2.3 Icons Description.........................................................................................................................17

3.0 Customization and Personalization............................................................................................20
  3.1 Managing Content.....................................................................................................................20
    3.1.1 Overview of Editing Mode...............................................................................................20
    3.1.2 Adding a container...........................................................................................................21
    3.1.3 Adding a portlet................................................................................................................23
    3.1.5 Remove window application............................................................................................27
    3.1.6 Edit default portal properties..........................................................................................27
  3.2 Manage Navigation....................................................................................................................28
    3.2.1 Adding a node..................................................................................................................29
    3.2.2 Edit a node......................................................................................................................32
    3.2.3 Copy and Paste................................................................................................................33
  3.3 Browse Pages............................................................................................................................35
    3.3.1 Create a new page............................................................................................................35
    3.3.2 Add view and edit permission in browse page.................................................................37
    3.3.2 Delete and copy pages.......................................................................................................39
  3.4 Managing Permission................................................................................................................40

4.0 Look and Feel.............................................................................................................................45
  4.1 Placing your components..........................................................................................................45
    4.1.1 Drag and Drop..................................................................................................................45
    4.1.2 Shifting component.........................................................................................................47
  4.2 Themes and skin........................................................................................................................47
    4.2.1 Renderer..........................................................................................................................47
Overview

eXo platform vision of delivering innovative technologies that are designed to work together to enhance information sharing and collaboration by focusing on a reliable and scalable portal platform. We are very excited to introduce a whole new set of products line for our users which deliver more flexibility and extensibility.

In eXo platform version 2.0 we include eXo portal 1.1 and eXo ECM 1.0 which promise a much more ease of use and a powerful collaborative tools to effectively share
information. eXo platform product lines provide the groundwork for an effective and efficient workplace. Whether you are an IT administrator or a user looking for a solution sharing, eXo platform gives you a fast and robust way to build and share these information. We have taken portal technology to a new level by providing flexible, cost-effective, and scalable products to help small to large business increase their productivity. eXo platform is available under GPL license and we have a subscription model that support all of our client's questions.

Why use this documentation

This documentation is a useful guide for administrators and content managers who wish to learn more about eXo platform technology in details. It gives an in depth examples and easy explanation of eXo platform technology that not only allows technical but also non-technical people to create and manage very fast and powerful website with just a click of a mouse.

Before going through this documentation make sure that your system has been installed properly otherwise refer to eXo platform installation and configuration guide book for all your installation questions.

Comments welcome!

At eXo platform, we are always delighted to hear from you. We want this documentation to be as much help to you as possible. Please contact us at the following email address for any questions or comments. Support@exoplatform.com

User Guide Documentation

In the user guide section you will begin the process of starting to work with eXo platform following features:

➢ Portal Environment
➢ Customize and Personalized Content
➢ Look and Feel

Right from the point after eXo portal is installed and running, you will get a quick start to eXo platform portal environment which you will be familiar with all the
different portal features and icons. Once you walk through the portal environment with ease we will take you to the customization and personalization section to help you manage your content. We will show you how to add, edit, or delete your content so that you can take control of your information. Then you can learn how to set your portal environment content according to your creative style with our look and feel section.

1.1 eXo Portal 1.1 Best Features

eXo platform 1.1 can quickly help corporate build connected solutions with an infrastructure that is secure and essential for developing an effective portal. eXo portal 1.1 latest features includes:

- Web Content Accessibility
- Rules Engine
- Enhanced Security
- Chart Capabilities
- Drag and drop
1.1.1 Web Content Accessibility

Web Content Accessibility (US 508/WCAG 1.0 compliance). Coding with everyone in mind. Web content accessibility lets people with disabilities perceive, understand, navigate, and interact with the web.

1.1.2 Rules Engine (JSR 94)

Rules Engine (JSR 94). Business rule technology provides a solution to manage dynamic business logic. JSR 94 provides a vendor-neutral interface to access rule engines.

1.1.3 Enhanced Security

eXo portal introduces different security layers to ensure that information are being presented to the right user based on their role and profile.

1.1.4 Chart Capabilities

eXo portal 1.1 can display statistic result in chart which allows better interpretation of portal monitoring capabilities.

1.1.5 Drag and Drop

eXo allows for the repositioning of portlets with a new drag-and-drop feature. A user can click on the title bar of a portlet to drag-and-drop it into a new position dynamically.

1.2 Basic definitions

In this section, we discuss the basic definitions surrounding portal technologies such as portal life cycle, portlet, and JSR 168. eXo platform continuously base its technologies from the latest industry standard and java specification.

1.2.1 Portal

Companies are often faced with issues of integrating with legacy systems. Portal are the next-generation technologies that provide site users with a single point of access to multiple types of information and application regardless of where the
information resides. A complete portal solution should give user every convenient they need to get their tasks done efficiently and effectively. eXo portal 1.1 is pleased to be one of the best Open Source companies to help businesses become truly responsive with a flexible framework that integrate the best of the breed solution. By continuously improving portal ease of use, eXo platform helps company enhance productivity and efficiency thus helping company increase revenue.

A portal in general term is a website that provides end users with a single point of access to the company information system and resources. For example, a corporate portal acts as a starting point for employees to access corporate information and applications.

In summary, the characteristics of a portal are:

- Content aggregation from different sources
- Host presentation layer of information systems
- Sophisticated personalization features to provide customized content to users

1.2.2 Portlet

Think of portlet as the building blocks of your portal and these building blocks are applications that contain user's content. These portlet applications are visible in your portal as a single small block and portal pages can have either one or many of these blocks as shown in figure 1 below.
An easy way to understand portlets is to visualize it as the content inside a single small window and not the window itself. Each portlet can be managed and displayed independently from each other but it must be hosted by the portal portlet container. Portlet container manages portlet life cycle which make portlet a server side application. The life cycle starts with the initialization of a portlet into service then comes the handle request which is a process of request and response. However, it is not possible to execute directly portlet functionality via http because all functionalities are managed by the portlet container. At the end of the portlet cycle, portlet is destroyed by a portlet container putting it out of service.

1.2.3 Portlet Container

A portal can contain one or many portlets, and it is responsible for aggregating the content produced by these portlets. However, a portal does not provide a runtime environment to manage portlets life cycles; that job belongs to the portlet container which allows portlets to be instantiated, used and finally destroyed.

In simple term, portlet must sit inside a portlet container to receive request from the portal in order to execute its action because portlet container roles is to provides portlet with the required runtime environment. But the portal is responsible to provide Input and Output objects to the portlet container.

eXo portlet container service is a facade to the portlet API and the facade
combined with the IoC (Inversion of Control) mechanism makes it simple for portal vendors to integrate eXo portlet container.

### 1.2.4 JSR 168

JSR 168 is first and foremost an industry standard developed by the software community. It stands for Java Specification Request 168 which enables interoperability among portlets and portals. Before JSR 168 standard, applications can't be delivered through any portal immediately because developers and portal vendors use different portlet API. This created an unfavorable condition for corporate who wants the flexibility to use portlet application from different vendors.

By using the JSR 168 industry standard API for creating portlets, eXo platform portal 1.1 adhere to a standard that allows the integration component between application as shown in figure 2 below.

![Diagram](image)

Figure 2 Depicts eXo platform architecture using JSR 168.

The foundation architecture in eXo platform is java which lets you support technologies such as services container inversion of control (IoC), portlet container JSR 168, portal, JCR-JSR 170, and portlets.
1.3 General Concept

Learning more about portal concepts can help user better understand eXo portal technology. In this section, we will discuss the following concepts:

- Portal owner and remote user
- Multi portal and concept
- eXo platform layout
- Security concept
- Indexing and search

1.3.1 Portal owner and remote user

The eXo portal defines two types of users for a session:

- The **user context** is the portal owner who defines the page configuration and owns the user profile associated with the viewed portal.
- The **remote user** is the user who visits the portal.

When a user logs in whether they are a remote or a context user the portal environment will be the same. The different is the context user will use the private link portal/faces/private whereas the remote user will use a public link portal/faces/public. In this case, the remote user can only view the public pages of that user context.

Note that with the eXo portal, you can turn any user context into the default home page by setting some pages of that user as public with an URL.

Finally note that the eXo platform admin can load any portal of any user context in its admin user context. Therefore, the admin can modify any user portal layout or look and feel without the need to enter the user name and password of that user.

1.3.2 Multi Portal Concept

The multi-portal concept has been introduced to allow the deployment of several company or organization portals within the same application server.

One important constraint in such a model is that each portal should be able to share some portlets and some non secured resources with other portals but still being able to own their own critical resources such as dedicated data sources to reach a remote database.

Each portal or portlet is in fact a Web Archive (WAR) that can be deployed in the same application server. When a user request a page from one portal this portal will returned an aggregated content that may contain some markup generated by a shared portlet. One obvious advantage of such a model is its use in a hosting
environment.

As you can see from the picture above, the remote user in portal B can access its portlets and can share the portlets from another portal A.

1.3.3 eXo platform layout

Most portals are actually based on static template mechanisms, and only allow 2 or 3 columns of portlets. Thanks to our use of the Java Server Faces framework it allows the creation of any layout that HTML code may provide. Thereby it is possible to create nested rows and columns as well as tabbed components.

A portal page is composed of two parts:

- The portal template is a set of rows and columns that is viewable on all the pages. We call this a template portal page, which can be modified by using the 'Edit Portal Mode' link while logged in. Basically, it contains the banner and footer portlets, as well as the navigation portlets. You may also add any portlet you would like to see on all pages, such as a portlet containing ads or weather information.
- The page content is also a set of nested rows and columns. It is binded to one or several nodes from the previously described navigation tree. The portlets located in that page layout content change each time the user clicks on another node of the navigation tree. The user may edit the content of the current page by using the 'Edit Page Mode' link.

The main configuration "secret" is in the block and floating idea. Basically you
have two types of blocks: one is a portlet that cannot have the children block and the container that can have the portlet and containers as children. A page is a special container with some additional information tag. For the container you have renderers that control the floating of its children, one is Horizontal renderer, one is vertical renderer, and one is a tab renderer. Consider the pictures below to see how portlets are layout with a container according to the renderer setting.

1.3.4 Security Concept

There are many security features in eXo platform but we will discuss in this section the security concept of membership type which bind membership users and groups together.

Definition

**User:** A user can be an entity or an application program that can be authenticated
with a unique identity.

**Group:** A group is a collection of users that share common attributes such as employees working in the same accounting department under senior manager group.

**Membership type:** Membership type defines the relationship for which a user belongs to a group. A user can be in one or many groups but to know which group a user belongs in, eXo platform requires that a user have a membership type.

Security identity in eXo platform is handled through the permission notion. A permission is a privilege that authorized a subject to perform a specific task on a particular resource.

A user may self registered or be registered by the portal administrator. Once registered the user is given a unique identity and limited privileges. To manage a large number of users permission setting you can put all these users into a group. Set this group with a certain permission to portal resources and users in this group will share the same security privilege. In many instances, a user can belong in one or many groups and as a result it will be hard to track which user belongs to which groups. Bridging this gap requires a concept of membership type to define the relationship between a user and a group as shown in figure 1 below.

*Figure 1 Mapping membership type to groups and users*

When you are asked to set permission for your portal pages you are required to select a membership type for your group.
2.0 Quick Tour

In this tutorial we will walk with you through the portal environment starting from logging in for the first time, better discover the customization environment, and get acquainted with each portal icons in details.

2.1 Logging in for the first time

eXo platform installation comes with a fictional user called 'community' and default password of 'exo'. We will use this user throughout our documentation. Before starting make sure that your system has been installed properly otherwise please refer to our installation documentation guide.

So let's begin by logging in for the first time and we'll be taken to the portal home as shown in figure 1 below.

![Figure 1 Portal home](image)

We'll take a short orientation to be familiar with eXo platform portal environment. In between the banner on top and the footer at the bottom is the portal page which contains users information. To the upper right hand side is the customization icons starting with edit portal mode, edit navigation mode, and edit page mode as shown in figure 2 below.
These icons let you manage your portal environment. The edit portal lets you control the whole portal layout, the edit navigation lets you create new navigation link nodes, and the edit page lets you manage your content by choosing the kind of content you want to display in your portal.

On the left hand side is the portal menu with --Home, My portal, Search, and Site Map as shown in figure 3 below.

2.2 Customization and Personalization

In the customization and personalization section we will go through each editing mode to give you a feel for the portal environment starting with edit portal and edit page mode, and then with the navigation mode.

2.2.1 Edit Portal and Page Mode

Edit portal and edit page let you add containers and portlets. The different between the two is the separation of content and layout. Edit page holds users content whereas edit portal holds the overall layout of your portal as shown in figure 4 below.

Figure 2 Customization icons

Figure 3 Portal menu bar

Figure 4 Displaying containers and portlets
As you can see from the picture above, the whole portal environment is within a big container referred as the main portal container. Within this main container are portlets and other containers. The user's page container is also within the main container and can not be deleted.

**Note: A container provides a runtime environment for portlet and manage its life cycle.**

Icons that allow you to add, edit, delete container and portlet are in the window title bar on the upper left hand side as shown in the figure 5 below.

**Figure 5 Shows container and portlet windows**

### 2.2.2 Navigation Mode

The edit navigation mode is the place where you can change the state of your
navigation tree. The navigation tree is composed of nodes that can reference pages. This means that you can control all aspects of navigation linkages between pages by setting the reference pages and setting the access permission. Clicking the navigation icon brings you to the navigation environment where you can see on your upper left hand side three icons: browse pages, save navigation, and show navigation. Figure 6 below shows the navigation environment.

![Figure 6 Navigation Environment](image)

Browse page icon lets you set or edit the view permission. Select the page you want to set permission and choose the permission type for your page node. The show navigation icon lets you create new nodes and bind that node to other pages.

### 2.3 Icons Description

Here we will get acquainted with some of the familiar icons in the three editing modes and learn its functionalities. This is a good way to understand more about the mode environment and help you better discover the portal framework.

<table>
<thead>
<tr>
<th>Icons</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Edit Portal Mode" /></td>
<td>Edit Portal Mode</td>
</tr>
<tr>
<td><img src="image" alt="Edit Navigation Mode" /></td>
<td>Edit Navigation Mode</td>
</tr>
<tr>
<td>Icons</td>
<td>Functionality</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>📊</td>
<td>Edit Page Mode</td>
</tr>
<tr>
<td>📜</td>
<td>Hierarchy</td>
</tr>
<tr>
<td>📋</td>
<td>Save Navigation</td>
</tr>
<tr>
<td>📚</td>
<td>Browse</td>
</tr>
<tr>
<td>🟢</td>
<td>Add properties</td>
</tr>
<tr>
<td>🟪</td>
<td>Add container</td>
</tr>
<tr>
<td>🟤</td>
<td>Edit container properties</td>
</tr>
<tr>
<td>🟥</td>
<td>Remove</td>
</tr>
<tr>
<td>🟦</td>
<td>Edit portlet properties</td>
</tr>
<tr>
<td>🟧</td>
<td>Place the body page</td>
</tr>
<tr>
<td>🟨</td>
<td>Move up</td>
</tr>
<tr>
<td>🟩</td>
<td>Move down</td>
</tr>
<tr>
<td>🟪</td>
<td>Move left</td>
</tr>
<tr>
<td>🟥</td>
<td>Move right</td>
</tr>
<tr>
<td>🟦</td>
<td>Link back</td>
</tr>
<tr>
<td>🟧</td>
<td>Edit portal properties</td>
</tr>
</tbody>
</table>

*Table 1 Editing Mode Icons*
In this chapter you will learn how to create tailored layout and content based on user specification and user profile.
3.0 Customization and Personalization

Customization and personalization are two of eXo platform many strengths. eXo platform defines customization as the ability to present tailored layout and content based on user specification, and personalization as the ability to present content based on user profile.

From the default portal web page user can have one or many personalize blocks. Each block has different portlets with personalized content selected by end users or by administrators depending on their access rights for that block. Sometimes, administrators can restrict certain portlets from end users to disallow them from removing or rearranging it.

Editing properties mode let you customized and personalized your portal page content. These editing properties are organized into portal, navigation and page mode editing. It allows you to define or modify the physical look and feel of your portal page in terms of rows and columns as well as skins and themes.

3.1 Managing Content

eXo platform portal allows user to manage their own content. For example, if a user wishes to have a website that contains information about the weather they can choose a portlet application that displays the weather within their portal as well as other relevant portlets. Managing content can be done in edit portal properties and edit page properties mode.

Using the editing mode properties you can:

➤ Select your own portlet application
➤ Edit your content preferences
➤ Delete your content

3.1.1 Overview of Editing Mode

Before learning how to use each editing mode properties you can learn how it is organized.

Tips:

➤ Scroll your cursor on any icon to find out its functionality

The three editing modes are located on the menu bar to the upper right hand side of the portal page. The first icon is the edit portal mode, the second icon is the edit navigation mode, and the third icon is the edit page mode. To manage portal content you should go to the edit portal mode. In this mode you can change the
overall content of your portal, for example, if you navigate through different pages in the portal you will notice that the banner and footer always stay the same you can choose to take them out.

The navigation edit mode allows you to reference pages and it also allows you to set the permission to each of these pages to restrict access from unauthorized users.

A portal contains pages like a home page, a search page, or even a site map page. To edit these pages, you need to go to the page edit mode.

We will show you the different ways you can manage your portal.

3.1.2 Adding a container

A container is a runtime environment for a portlet. If you need to add a portlet in your portal you must first add a container for it. Let's see how we can add a container in the following example.

1. Click on the edit portal mode.
2. In the edit portal mode environment you will see that there are many containers and portlets.
3. Locate a container and click on the add container icon to see the add/edit container form as shown in figure 7 below.
4. Description for each field

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Container Id</td>
<td>Id is managed by eXo platform framework</td>
</tr>
<tr>
<td>Container Title</td>
<td>The name of your container</td>
</tr>
<tr>
<td>Renderer</td>
<td>The container renderer controls the visual form of your components. Choosing one of the options in the renderer field will let you manage the visual look of your container.</td>
</tr>
<tr>
<td>Style</td>
<td>Choosing one of the cascading style sheet options to provide web design custom for your container. The CSS is defined by your administrator.</td>
</tr>
<tr>
<td>Width/ Height</td>
<td>The default width/height is empty but you can define your container width/height in terms of relative or absolute value. Relative value is from 0%-100% and it is relative to the container that contains your container. As for sizing your container using absolute value, you can set your width/height according to the pixel value for example 40px width and 50px height.</td>
</tr>
</tbody>
</table>

Table 1 Description for each field

5. Click on save to add your container.

Adding a container in the edit page mode is the same as the edit portal mode except that you only add a container in the page container. This means that not all containers are available for you to add another container as shown in figure 8.
3.1.3 Adding a portlet

Adding a portlet from a portlet container. The layout of the portlet depends on the container itself. Setting the renderer properties will position the portlet according to the renderer layout. You can add a portlet in the edit portal or page mode. We will use the edit portal mode as an example to add our portlet.

1. Click on edit portal mode icon.
2. Locate the add portlet icon from a container icon menu and click on the add portlet icon icon. It is important for you to choose the container for which you want to add your portlet.
3. A portlet list will appear as shown in figure 9 below.

Note:
- Whenever you get a message “No portlet category available” it means that your administrator hasn’t defined any portlet categories in the portlet registry yet.
4. For our example, we will click on the select icon next to the DisplaySelectContent portlet.
5. You will see the DisplaySelectContent portlet window inside the container you have added your portlet.

### 3.1.4 Editing a portlet

We have learned how to add a portlet, if you have not please refer to section 3.1.3, and we are going to show you how to edit your portlet. Editing your portlet allows you to control the layout of your portlet windows. Below is a table that gives you a general description of the portlet properties.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portlet Title</td>
<td>The name of your portlet</td>
</tr>
<tr>
<td>Renderer</td>
<td>There are three options to render your portlets: InfoPortletRenderer, BoxPortletRenderer, and PortletRenderer. To enable color border for your portlet use BoxPortletRenderer.</td>
</tr>
<tr>
<td>Style</td>
<td>The style is defined by the Admin</td>
</tr>
</tbody>
</table>
Decorator

The portlet decorator is a subset of a renderer that controls the skin of the portlet border. For example, if you select the BoxPortletRenderer in the renderer option you will see a subset of options in the decorator belonging to that renderer such as box-2, box-3 etc… Each of these boxes controls the type of border for that portlet.

Width/Height

You can leave this field empty and the portlet will resize automatically. You may otherwise set the width/height using absolute pixel. For example, you can set 175 px width and 90 px height.

Edit Preferences Permission

Choosing who has permission to edit your portlet

Show Info Bar

It shows a bar containing info such as title, portlet window states and modes.

Show Portlet Mode

It shows portlet help, edit and config modes

Show Window State

To allow window maximized or minimized states

| Table 2 Portlet properties |

We will show you how your portlet window changes when you check click on the info bar, portlet mode, and window state check box.

1. Locate the footer portlet and click on the edit portlet icon.
2. Check click on show info bar, show portlet mode, and show window state properties of the edit form as shown in figure 10 below.
3. Click save to save changes in your portlet.
4. Look on the upper right hand side of the footer portlet and you will see three new icons appeared after you have selected the three edit properties as shown in the figure 11 below.
3.1.5 Remove window application

eXo portal is composed of portlets and containers windows to form a portal website. We will show you how to delete these windows. Locate a container window you want to delete and click on the remove container icon. If you want to delete a portlet then locate a portlet window and click on the remove portlet icons. However, there are some rules you need to know:

- You cannot remove a container that contains a page.
- If you want to remove a portlet in a page, you cannot remove it in the edit portal mode but only in a edit page mode.
- You cannot remove the main container.
- You should not remove a portlet that contain the 'back' navigation icon because you would not be able to exit out of the edit mode.

3.1.6 Edit default portal properties

Users of the portal has a default setting predefined by their portal administrator. The setting consist of the default language, view/edit permission, render, and style. User can modify these setting to accommodate their portal environment. To edit these setting, click on the edit icon from the main container of your portal in the edit portal mode as shown in figure 12 below.
Below is the table containing description of each fields in the default setting.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Locale</td>
<td>Setting default language</td>
</tr>
<tr>
<td>View permission</td>
<td>Setting permission</td>
</tr>
<tr>
<td>group</td>
<td></td>
</tr>
<tr>
<td>Edit permission</td>
<td>Edit permission</td>
</tr>
<tr>
<td>group</td>
<td></td>
</tr>
<tr>
<td>Render</td>
<td>Default render</td>
</tr>
<tr>
<td>Style</td>
<td>Setting style and theme</td>
</tr>
</tbody>
</table>

Table 3 Edit portal properties

3.2 Manage Navigation

The edit navigation mode lets you manage how pages are link together and how pages reference each other. In this mode you are able to change the state of your navigation tree. The navigation tree is composed of nodes that can reference pages. You can add, edit, copy, or paste a node to another node. To access this mode features you must:

1. Click on the edit navigation mode icon.
2. When you are in the navigation mode environment, locate the show navigation icon on your upper left hand side.
3. Click on the show navigation as shown in figure 1.
In the figure above you can see icons that let you add and edit a node and icons that let you copy and paste one node to another.

3.2.1 Adding a node

After creating your page you would like to link it with an existing page, you can do that with the add icon in the show navigation environment.

1. There are two add icon in the show navigation environment. The one next to the home on the upper left hand side allows you to add a page in the home node. The other add locate next to each pages on the right hand side that lets you add your page to that node. For our example, click on the add icon next to the “My Portal” page as shown in the figure 2 below.
2. Table 2 below is the description of each fields in the add node form.

<table>
<thead>
<tr>
<th><strong>Field</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>URI</td>
<td>The URI field shows the current location path. You cannot edit this field.</td>
</tr>
<tr>
<td>Name</td>
<td>The name of your page. If you are in the editing form the name field must be the same as the last value in your URI line and it must be unique for the same parent.</td>
</tr>
<tr>
<td>Display Name</td>
<td>The display name field is used to create the label in your navigation portlets. It is possible to internationalize it by using the following syntax: ${i18n_key} where the i18n_key exists in one property file registered.</td>
</tr>
<tr>
<td>View/ Edit Permission</td>
<td>The view and edit permission allows you to define who can view and edit your page.</td>
</tr>
<tr>
<td>Icon</td>
<td>The icon name, if filled can be used instead of the display name.</td>
</tr>
<tr>
<td>Page Reference</td>
<td>The page reference field allows you to bind the current node with a page. The associated search link can be used to search for a page to bind among all the viewable ones.</td>
</tr>
</tbody>
</table>
Visible | The visible check box tells the navigation portlets to render or not the current node. If the box is checked then no child of the hidden parent will be viewable for that markup type.

Mobile Page Reference | The mobile page reference allows you to bind a custom page for mobile devices. This field is optional and if not filled than the page defined for normal browser devices will be used.

Description | The description field lets you comment

*Table 1 Add new node properties*

3. In our example we enter the following required field as shown in table 2 and figure 3 below.

<table>
<thead>
<tr>
<th>Name</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Name</td>
<td>My product</td>
</tr>
<tr>
<td>View Permission</td>
<td>*:/admin</td>
</tr>
<tr>
<td>Edit Permission</td>
<td>*:/guest</td>
</tr>
<tr>
<td>Page Reference</td>
<td>community:/home/my-portal</td>
</tr>
</tbody>
</table>

*Table 2 Node field*

![Figure 3 Entering field form](image)

4. Click on save. You will see that My product is now part of My portal navigation node as shown in figure 4 below.
5. Click on the save navigation icon on your upper left hand side to save your new page node.

3.2.2 Edit a node

Editing a node allows you to have the possibility to modify the page properties. We will continue with our example started in section 3.2.1. We will change our view permission and edit permission.

1. Click on the edit icon next to the My product node as shown in figure 5 below.
2. You notice that in the edit form you can change everything except the URL field. We will modify the permission of this page.

<table>
<thead>
<tr>
<th>View permission</th>
<th>member:/community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit permission</td>
<td>validator:/guest</td>
</tr>
</tbody>
</table>

*Table 3 Edit permission.*

3. Click save to save your field modification.
4. You will be taking to the home navigation tree. Click on save navigation icon on your upper left hand side to save your node changes.

**3.2.3 Copy and Paste**

Copy and paste icon lets you to quickly reference one page to another. You can copy one node and paste it in another node. The node being pasted become the link node. We will go through how to copy and paste a node by continuing with our example in 3.2.1 and 3.2.2.

1. In the home navigation tree page as shown in figure 6 below. Click on the copy icon next to My product.

*Figure 6 Home navigation tree*
2. Next to the Search node click on the paste icon and the node My product will be referenced under the Search node as shown in figure 7 below.

*Figure 7 Navigation references*
3.3 Browse Pages

Browse pages portlet lets you browse through each pages and lets you create a new page. We will first learn how to create a page then we will go through how we can edit an existing page.

3.3.1 Create a new page

1. Create a page for the first time you must be in the browse pages as shown in figure 1 below. To get to the browse pages just click on the browse pages icon. You can find the icon located in two places: edit page mode and edit navigation mode.

2. Click on the new page icon on the upper left hand side.
3. Enter “My Example” in the name field and select the second template layout as shown in figure 2.

Figure 1 Browse page

Figure 2 Choose template
4. Click save and you will see that your newly created page is the browse pages as shown in figure 3 below.

![Figure 3 Browse pages](image)

5. You can see that your newly created page My Example has no view and edit permission.
3.3.2 Add view and edit permission in browse page

You can view and edit permission in either preview or select icon. We will set the permission for your newly created page in the preview icon locate on the right hand side.

1. Click on the preview icon locate next to the My Example page row as shown in figure 4 below.

![Figure 4 Preview page](image)

2. As you can see from the figure 4 above, there is nothing in your page. That's because you have not yet select your portlet to put in it. Click on the edit icon which is the pencil on your upper left hand side.

3. When you created your page in section 3.3.1 you have select a template that has three column as shown in figure 6 below. Click on the edit page properties icon on the page menu bar.

![Figure 6 Preview page](image)
4. Select member and guest in your view and edit permission as shown in figure below.

5. Click save to save changes in your form then click on save page icon to save.
all the changes of your page.

6. Click browse pages icon and then click on the search icon to refresh your page as shown in figure 8.

![Figure 8 Browse page](image)

3.3.2 Delete and copy pages

In the browse pages you can delete a page by clicking on the delete icon and you can copy a page and rename it. We will show you how to copy a page.

1. Click on the copy icon in the My Example as shown in figure 9 below.

![Figure 9 Copy new page](image)

2. Change the name to My Example 2 and click save. As you can see below, the newly copy page is identical to the original one except for the name.
3.4 Managing Permission

Managing permission within your portal is very important because of security reasons. Suppose you are a sales manager and you want to have a website that contains information relevant to your department but you only want to allow a certain employee in another department to view and edit your content. What do you need to do? You need to have a role-based security. You need to set each user with a certain role and group them together. A user can be in one or many groups. Then for each page you created, you can set the view and edit permission. When you set the view or edit permission, you select a membership type and a group ID in the properties field. We will go through the permission selection together.

1. Click on the permission icon next to the permission field as shown in figure 1 below.

*Figure 1 Setting permission*
2. Click on either view or edit permission will bring you to the permission container as shown figure 2 below.

3. In the permission container you can see a table with a list of group id and group name. The column action lets you select the membership type. There are
four membership types: any, member, owner, and validator as shown in figure 3 below.

4. We will select member in the action column in the guest group name row.
5. We will do the same thing for the edit permission to get the same as the view permission as shown in figure 4 below.

*Figure 3 Membership types.*

*Figure 4 Permission*
LOOK & FEEL

In this section you will learn how to arrange your content layout to enhance user’s experience with an appealing look and feel.
4.0 Look and Feel

eXo portal allows you to personalize your portal by letting you create a website that enhances user's experience with an appealing look and feel. In this section, you will get to learn how to arrange your components, add some nice color and render it.

4.1 Placing your components

Components are placed sporadically on the website but you can rearranged it according to your aesthetic. eXo portal lets you drag and drop your components as well as letting you move your components up, down, left, and right.

4.1.1 Drag and Drop

eXo platform lets you personalize your homepage quickly and easily with the use of drag and drop. Simply move one component window to another and drop your component either a portlet or a container within the allowable zone colored by blue lines. This zone indicates the allowable space for which you can drop your components. A little reminder about containers and portlets. A container can contain one or many containers and portlets. But portlet cannot contain a container or any other portlets. Therefore, when you drag a container to a portlet the system won't allow you to drop that container in your portlet. We will show you how drag and drop work.

1. Drag and drop is done in the edit portal and edit page mode. But we will show our example in the edit portal mode. When you are in the edit mode move your cursor to the upper left hand side of the component window menu bar you want to move. When you see that your cursor transforms to a four direction arrow start dragging.

2. As you begin dragging your component to another component both window border turns blue. In our example, we drag the banner portlet and drop it in a container under it. You can see that the exterior main container and the target container border window turns blue as shown in figure 1 below.

Figure 1 Drag and drop
3. The result of dropping the banner portlet from the main container to the container under it is shown in figure 2 below. As you can see, the main container no longer contains the banner portlet. The banner is now in a container that contains the menu bar and the log out portlet.

*Figure 2 Drag and drop*
Tips: To move a component on top of another component simply drag your component to the title bar of your target component drop it there. eXo portal framework will know to place your drag component on top of your target component.

4.1.2 Shifting component

Beside the ability to move your component by dragging and dropping, you can move your component up, down, left, and right with a simple click. In the edit portal mode, you can see that for every components there is a tool bar on the right hand side. Depending on the layout of the component, it can move up and down or left and right but never in four direction.

4.2 Themes and skin

Themes and skin are tied with user visual experience. In this section you will learn how to render your container and decorate it with a cascading style sheet.

4.2.1 Renderer

Render options allow user to control the layout of a component. Components can be placed in row, in column, or in tab within another components. We will show you how each of the render options work.

1. When you add or edit a container, you will be asked to select the renderer
options. If you don't select any renderer option then it will be default. Default renderer is defaulted to place components in row layout as shown in figure 1 below. If you look inside the main container, it has many portlets and containers that are positioned in row layout.

Figure 1 Default renderer

2. Components that are in a container with a ContainerColumnRenderer option lets you render your container in a column layout as shown in the figure 2 below.

Figure 2 ContainerColumnRenderer
What's new in eXo Platform version 2.0

eXo platform™ vision of delivering innovative technologies that are designed to work together to enhance information sharing and collaboration by focusing on a reliable and scalable framework. We are very excited to introduce a whole new set of product lines for our users which promise more flexibility and extensibility.

- eXo Portal 1.1
  - eXo CMS 1.0
    - Web Content Accessibility (US 508/WCAG 1.0 compliance)
    - Rules Engine (JRR 94)
    - Enhanced Security
    - Advanced LDAP Support
    - Chart Capabilities
    - Drag and Drop

- eXo Portal 1.1
  - Java Content Repository (JCR-JCR 170)
  - WebDAV
  - Workflow and BPM
  - Grocery scripting language
  - Template language based on Velocity and Java Server Faces (JSF)