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Course Prerequisites

This course is designed for learners who are new to the Ingeniux environment. To complete this course, you will need a working knowledge of the following:

- Navigating on a PC or Mac
- Using a web browser

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Course Objectives

In this course you will learn to:

- Access the Ingeniux CMS and navigate the environment
- Create and edit web pages in the CMS
- Manage the basics of site administration
- Organize pages within the website
- Publish pages inside and outside of workflow
- Use reports and analytics
Authoring Fundamentals

In this chapter you will learn to:

- Access the CMS and navigate the environment
- Create pages and work with elements in the Edit Form
- Perform common tasks in the XHTML Editor
- Upload documents and images to the CMS
- Save changes to, and preview, pages
- Advance pages in workflow
- Edit existing pages
Getting Started with Ingeniux CMS

The Ingeniux CMS provides the tools needed to create, update, publish, and manage web pages. Users access the CMS via the CMS Client, which can display all options and commands available in the CMS or a predefined subset of options. The options and commands displayed depend upon the permissions that have been set for the user accessing the client.

The CMS Client works on both PC and Mac operating systems and runs on Internet Explorer, Firefox, Chrome, and Safari.

- Refer to product documentation for supported platform and browser versions.

Accessing Ingeniux CMS

The CMS is installed on a server. Once it’s installed and configured, users can access the CMS as a web application, without installing any software.

To Access Ingeniux CMS:

1. Open a web browser.
2. Navigate to the URL provided by the web server administrator.
3. Enter your network credentials at the login screen and click Login.

Working in Different Languages

The CMS provides translation packs for Spanish, French Canadian, German, Simplified Chinese, and Japanese. All content that is part of the CMS Client user interface (UI) and is not provided by administrators or content contributors is translated. The multilingual UI is designed so that content contributors can interact with the CMS in the language in which they are providing content. New language packs may be added in future releases.

To Change the UI Language:

1. Click Language above the toolbar in the CMS Client. A drop-down menu will display available language choices.
2. Select the language in which you’d like to work in the CMS.
The language setting will be saved for future sessions on the same computer. The login screen adapts to your browser or OS locale and appears in the correct language automatically.

Using the language feature will not affect content entered by users. Page content will appear on the site in the language in which it was written. Administrative text (e.g. workflow and page creation labels) will not be translated. Other features are available for localizing administrator provided content.

Examining the Dashboard Tab

When you first access the CMS, the Dashboard tab appears in the right-hand pane. This view provides a brief snapshot of content management and system information. It can be accessed at any time from the first button on the client toolbar.

![The Dashboard in Ingeniux CMS.](image)

The Dashboard is divided into the following sections:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>Lists wizards for creating new content. Wizards are built from the page creation rules available to the user.</td>
</tr>
<tr>
<td>In Progress</td>
<td>Displays pages currently checked out to the user.</td>
</tr>
<tr>
<td>Favorites</td>
<td>Allows the user to create links to pages in the tree for ease of access in the future.</td>
</tr>
</tbody>
</table>
### Creating Pages

By default, new web pages can be created anywhere in the site tree. However, it’s a good idea to keep the site’s information architecture in mind when you place a new page. By placing pages logically and consistently, you’ll help site visitors find the content they’re looking for.

To help preserve the integrity of the site, website administrators can define page creation rules that restrict where users can create new pages. The page creation rules available to the logged-in user are listed as “Wizards” on the Dashboard tab. Because these rules are permission-based, different groups of users may see different lists of rules.

#### Creating a New Page on the Dashboard Tab

The Dashboard tab displays page creation wizards in the “New” menu under the label “Wizards for creating new content.” These wizards, which are based on page creation rules, provide users with a simple way to create new pages.

**To Create a New Page:**

1. Choose **Dashboard** on the toolbar.
2. Select a wizard (page creation rule). A text field appears for entering the name of the new page.
3. Enter the name of the new page.
4. Choose ✅ Pressing ENTER also creates the page.
5. The new page appears in the site tree and its elements display in the Edit Form on the right.

The new page will appear in the first place in the site tree where the current user has permission to create a page. The page can be

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recently Visited</td>
<td>Lists pages or components that the user has recently viewed.</td>
</tr>
<tr>
<td>Active Users</td>
<td>Displays all users currently logged in to the CMS and the number of pages assigned to them.</td>
</tr>
<tr>
<td>Publish Status</td>
<td>Shows when the site was last published and the number of pages published.</td>
</tr>
<tr>
<td>CMS Statistics</td>
<td>Displays the version of the software the site is using, the total number of pages in the site, and the number of users with access to the site.</td>
</tr>
</tbody>
</table>
dragged to a new location in the site tree, if the user has sufficient permissions.

When the page is selected in the site tree in the left pane, the right pane displays the Edit Form for the page. In the Edit Form you can add and update page content.

**Identifying Elements on a Page**

The Edit Form displays the possible pieces of content available for use on the page.

![Figure 2: The Edit Form in Ingeniux CMS.](image)

In general, the elements available vary according to the purpose of the page. For example, an Event Page might contain an event location element, whereas a generic Detail Page would probably not.

Even though the specific elements vary by page type, there are a fixed number of element types. Different element types take different forms of input (e.g. text, image, media). The icon next to an element provides a visual clue about the input needed to complete the element.

The table below provides a list of elements that are currently available for use in the CMS.
<table>
<thead>
<tr>
<th>Icon</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Plain Text</td>
<td>Contains only unformatted text. The Plain Text element is often used for titles, abstracts, captions, or contact information.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>XHTML Editor</td>
<td>Contains text that accepts formatting as well as hyperlinks, images, tables, etc. Typically used for the main body of a page to create formatted content.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Image</td>
<td>Selects an image from the xml\images folder on the server to display on the current page.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Media</td>
<td>Selects a media file from the xml\media folder on the server to display on the current page. Typically used to link to media such as a sound or video file.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Document</td>
<td>Links directly to a document from the xml\documents folder on the server. Typically used to link to a PDF or Word document.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Link</td>
<td>Links to either an internal page in the site tree, an external web site, or a document in the xml\documents folder. Typically used to create hyperlinks to other locations.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Link Set</td>
<td>Selects a series of links in a re-orderable list as well as a text title for the set of links. This element generates content in a typical navigation-page node format and supports structured URLs. Content will update automatically when linked pages are checked in.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Component</td>
<td>Creates a relationship between two nodes in the site tree. This element is a slot into which a chunk of content can be dropped for other pages to use.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Insert</td>
<td>Pulls in content from either an outside source, such as a webpage, or from an internal source. Typically used to pull in content from a webpage outside the site.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Com Execute</td>
<td>Connects to a .dll file such as for a DbQuery, SMTP connector, or SOAP connector. Typically used to retrieve records from external data.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Java Execute</td>
<td>Calls a Java Execute object to import data into a page. Typically, this information originates from a database.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Password</td>
<td>Encrypts information used by JavaExecute and ComExecute components. Typically used to encrypt a database connection string.</td>
</tr>
<tr>
<td>Icon</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td><img src="image" alt="Group Icon" /></td>
<td>Group</td>
<td>Visually groups elements on the <strong>Edit Form</strong> tab. Typically used to group elements that are similar in nature, for example, event-related elements like Event Name, Event Date, and Event Location.</td>
</tr>
<tr>
<td><img src="image" alt="List Icon" /></td>
<td>List</td>
<td>Provides end users the ability to add a variable number of additional subelements. Typically used when the number of desired items is unknown.</td>
</tr>
<tr>
<td><img src="image" alt="Navigation Icon" /></td>
<td>Navigation</td>
<td>Automatically pulls content from a location in the site tree. Typically used to create navigation lists at the top, left, and/or bottom of pages.</td>
</tr>
<tr>
<td><img src="image" alt="Taxonomy Navigation Icon" /></td>
<td>Taxonomy Navigation</td>
<td>Pulls page references based on taxonomical categories applied to pages throughout a site. Unlike standard Navigation elements, Taxonomy Navigation does not rely on the hierarchical structure of the site tree to return values.</td>
</tr>
<tr>
<td><img src="image" alt="References Navigation Icon" /></td>
<td>References Navigation</td>
<td>Allows a page to reference other content items within the site. Typically used to create cross-references within a site.</td>
</tr>
<tr>
<td><img src="image" alt="Date Icon" /></td>
<td>Date</td>
<td>Lets users select a date by way of a calendar date-picker interface. Date content is stored as server time with a GMT offset in UTC format.</td>
</tr>
<tr>
<td><img src="image" alt="Local Date Icon" /></td>
<td>Local Date</td>
<td>Lets users select a date from a calendar date-picker interface. Local Date content is stored as YYYY-MM-DD and has no offset.</td>
</tr>
<tr>
<td><img src="image" alt="Local Time Icon" /></td>
<td>Local Time</td>
<td>Lets users select a time. Local time content is stored as HH:MM:SS and has no offset.</td>
</tr>
<tr>
<td><img src="image" alt="Checkbox Icon" /></td>
<td>Checkbox</td>
<td>Selects a binary option such as yes/no or on/off. Typically used to turn on or off some function in the site or some chunk of displayed content.</td>
</tr>
<tr>
<td><img src="image" alt="Dropdown Icon" /></td>
<td>Dropdown</td>
<td>Provides a dropdown list from which a single item can be selected from a predefined list of items. The source for the items in this list can be defined in the schema itself, or can be dynamically generated from nodes within the site tree.</td>
</tr>
<tr>
<td><img src="image" alt="Multi-Select Icon" /></td>
<td>Multi-Select</td>
<td>Lets users select multiple choices from a list. The various versions of the Multi-Select element have the same editing interface, but differ on how the list of choices is assembled. The source for items in this list can be hard-coded in the schema, queried from a database, executed by a custom script, or dynamically generated from nodes in the site tree.</td>
</tr>
</tbody>
</table>

**Selection**

- ![Hard-coded Icon](image)
- ![DbQuery Icon](image)
- ![CMS node-set Icon](image)
- ![External Scripting Icon](image)
Accessing Element Help Text

The element type provides clues about how to fill out the element. Help text provides additional, more specific, information for each element.

If help text is available, it appears when a user hovers the cursor over the question mark icon on the right side of an element.

To Access Help Text in the CMS Client:

1. Locate the element for which you’d like to see help.
2. Hover over the question mark icon with the mouse cursor.
Completing Page Elements

The edit form displays all possible pieces of content for a page. Since content varies from page to page, not every page will have values for every element.

✓ Elements marked Required must have a value before the page can be checked in (which is necessary in order for a page to be published). The website administrator determines which elements are required.

If values are added, the content will appear on the page as prescribed by the built-in stylesheets; if values are omitted, that portion of the page is not displayed. The preview tab shows the content entered on the edit form as it will appear when published.

Completing Text Elements

Text elements contain plain text with no formatting. Text can be entered by typing directly into the field, by dragging and dropping, or by cutting and pasting from another location. Text boxes expand to accommodate the length of the entry.

To Complete a Text Element:

1. Click in the text element.
2. Type the desired text.
   - Or -
   1. Select the desired text in another source.
   2. Drag the text into the text element.
   - Or -
   1. Copy the desired text from another source.
   2. Paste the text into the text element using CTRL + V.

✓ Some HTML formatting, such as superscript and italics, can be added to text elements using the appropriate HTML tags. However, the developer must ensure that the XSLT template match for the text element has the disable-output-escaping attribute set to “yes.”
Working with List Groups

List groups provide a way to add multiple pieces of similar content. For example, a list group could be used to generate a list of links, with the author entering each link separately.

Each list group element displays an arrow at the top right that collapses or expands the group. When the element is expanded, you can see the individual items in the list. Each item in the list can be modified in the same way as a regular element.

The number of items in a list group is flexible. Items can be added or removed to meet content needs.

To Add Items to a List Group:
1. Expand the list group, if necessary.
2. Locate the list item to appear immediately above the new item.
3. Choose Add Item. A new element appears in the list.

Removing elements from a list also removes the content stored in the item.

To Remove Items from a List Group:
1. Locate the list item to remove.
2. Choose Remove Item.

Completing Link Elements

Link elements can create links to internal pages, external pages, and documents uploaded to the web server. The process for completing a link element varies depending on the type of link it contains.

Creating Internal Links

You can create an internal link by searching for the name of the page, by entering the xID for the page, or by dragging the desired page from the site tree into the link element.

To Create an Internal Link:
1. Choose Internal, if necessary.
2. Enter the first three letters of the name of the page to which the link will point or enter the xID. A list of pages with matching names appears.
3. Select the desired page from the list.
   -Or-

1. Choose Internal, if necessary.
2. Locate the page to which the link will point in the site tree. (Do not select the page; just ensure it is visible in the tree.)
3. Drag the page from the site tree into the Edit Form so that it lands in the box for the link element.

   ✔ For links to internal pages, the text that displays on the published page will come from the page to which the link points. If you want to display different text, you’ll need to create the link as an external link rather than an internal link.

Creating External Links

External links point to pages that live outside of the Ingeniux site. To create an external link, you need to provide the address that the link will point to and the text to be used for the link itself.

To Create an External Link:

1. Choose External.
2. Enter the URL of the page to which the link points.
3. Choosing Browse lets you proof the link without leaving the CMS.
4. Expand the link element so that the Link Name field appears.
5. Enter a link name.
6. [Optional] Check Display in new window to display the page in a new browser window.
7. Choose Preview and test the link.

   ✔ To prevent broken links due to typing errors, you can use the browse option to verify any external link by navigating to the link from within the CMS.

Creating Document Links

Document links point to files stored on the web server. These files have to be uploaded to the server before links can point to them.

To Create a Document Link:

2. Choose **Browse**.

3. The Asset Manager dialog appears, looking at the documents folder.

![Image](image1.png)

*Figure 3: The documents folder in the Asset Manager.*

4. Use the folder structure on the left to navigate to a documents folder.

5. If the file you need hasn’t been uploaded, choose **Upload**

   a. Choose **Select File to Upload** to locate the file to be uploaded.

   b. Choose **Upload**.

![Image](image2.png)

*Figure 4: Document upload screen in the Asset Manager.*
6. Select a file and choose **OK**.
7. Expand the link element so that the Link Name field appears.
8. Enter the desired link name.
9. [Optional] To display the page in a new browser window, choose **Display in new window**.
10. Click **Preview** and test the link.

✓ Files referenced by a document link are stored in the xml/Documents directory on the server.

**Working with Image Elements**

In the image element you can choose an image to display on a page. You can also edit the image and, depending on the site implementation, alter an image’s layout, spacing, and size.

**Adding an Image to a Page**

Image elements point to files stored on the web server. These files have to be uploaded to the server before they can be included in an image element.

**To Add an Image to an Image Element:**

1. Choose **Browse** in the image element. The Asset Manager dialog appears, looking at the images folder.

![Figure 5: The images folder in the Asset Manager.](image)

2. Use the folder structure on the left to navigate to an image folder.
3. If the image hasn’t been uploaded, upload it (see *Uploading Images* below).

![Image upload screen in the Asset Manager.]

*Figure 6: Image upload screen in the Asset Manager.*

4. Select an image on the right and choose **OK**.

5. [Optional] Expand the link element so that the Alt Text field appears. Enter alternative text and values for layout, spacing, and size.

![Alternative text and value options for images.]

*Figure 7: Alternative text and value options for images.*

6. Choose **Preview** to view the image in the context of the page.

---

**Uploading Images**

Images are uploaded via the Manage Assets dialog. During an image upload, you have the following options:

- To overwrite existing files that have the same file name as the file being uploaded.
- To create a reusable image component.
- To enter the image editor upon successful upload.

**To Upload an Image:**

1. Access the Manage Assets dialog by selecting **Assets** from the tool bar or by selecting **Browse** in an image element.
2. Go to the Images directory, if necessary, and navigate to the folder where you want to upload the image(s).

3. [Optional] Check any options you’d like to apply to the image upload: Overwrite Existing Files, Create Component, and/or Edit Image. Image components can only be created if the corresponding page creation rule has been created by administrators and the current user has the ability to use it.

![Image upload screen in the Asset Manager.](image.png)

Figure 8: Image upload screen in the Asset Manager.

4. Click Select File to Upload and choose the image(s) you’d like to upload. Using the CTRL + CLICK command, you can select multiple images at once. The options selected in the previous dialog will apply to all images uploaded during this upload.

5. Click Upload. The top of the upload dialog shows the number of files remaining to be uploaded and the current speed of the upload process in megabits per second. Progress bars will be displayed for each image to be uploaded, along with the amount of time remaining for the upload. At any time before completion, you can click the “X” to the right of the progress bar to stop the selected image(s) from uploading.
6. Upon completion of the upload, if you left **Edit Image** unchecked, the dialog will return to the asset management view.

---

**Editing an Image**

If you check the Edit Image box before uploading images, an Edit Image button will appear next to each uploaded image. Clicking the button opens the Image Editor. All images uploaded during this process will be queued in the editor.

You can also open the Image Editor by selecting an image (or multiple images) in the Manage Assets dialog and clicking **Edit Image**.
What’s New in Ingeniux CMS

Figure 10: Image editing tools in the Asset Manager.

The Image Editor gives content contributors the ability to manipulate images in preparation for displaying them on the page. Images can be resized, cropped, rotated, or flipped.

Resize

To change the dimensions of an image, click Resize. There are three options available for resizing images: Keep Aspect Ratio, Width, and Height. Checking the Keep Aspect Ratio box will constrict changes to width and height so that both numbers change by the same proportion. With this box checked, you will only be able to enter a new value for width, and the value for height will automatically change proportionally. If the box is unchecked, you can change both width and height values independently.

Width and height attributes are measured in pixels.

✓ In general, it’s not a good idea to increase the size of an image by more than a few pixels. Size increases of more than five percent will result in a blurry picture. Images with text overlays should never be enlarged this way.

Crop

The crop feature removes part of an image along one or more edges. When selected, the crop tool places edge and corner markers on the image. Dragging these markers to their desired end point and clicking the green check button will remove any part of the image that is left outside the markers.
Rotate

Selecting Rotate will bring up controls to turn the orientation of the image 90 degrees to the left or right.

Flip

The flip tool provides controls for mirroring the image horizontally or vertically.

Undo and Redo

The undo and redo actions reverse or reinstate an edit, respectively. After an undo action, making a new edit will remove actions that were previously possible.

Saving Images

There are two options for saving images in the Image Editor. Save Changes replaces the original image with the edited image. Save As opens a dialog in which you can save the edited image with a different name. The Save As option allows you to keep both the original and the edited image.

Working in the XHTML Editor

Most authoring work occurs in the XHTML Editor element. In the XHTML Editor you can format text and insert hyperlinks, images, and tables.

✓ The XHTML Editor is an open-source plug in called TinyMCE. It can be configured in the Administration pane at System Options | Design-Time | XHTML Editor.

You can type text directly into the editor or copy and paste it from another source.

![Figure 11: XHTML Editor field in the CMS.](image)

The XHTML Editor does not reflect the final display of the HTML as it will appear in a web browser. The Preview tab provides a view of
what the page will look like when the HTML is combined with the associated stylesheet.

At the bottom of the XHTML editor is the element path. This feature displays the current depth and path in the HTML markup. It can be useful for building HTML literacy and for troubleshooting.

To the right of the element path is a resize handle. Resizing makes it easier to work with long blocks of content.

The HTML button opens a separate window in which the HTML markup for the formatted text is rendered. You can enter and edit marked-up text in this view.

Figure 12: HTML Source Editor field in the CMS.

Pasting Text from Other Sources

To preserve the integrity of page display across all computer configurations, you should observe HTML conventions when formatting a document. If you use the XHTML Editor to format text typed directly into the editor, your content should always be valid XHTML.

When text is copied and pasted from other sources, non-compliant formatting can slip into the page. To avoid this complication, the XHTML editor provides paste options that strip unwanted formatting.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Paste Icon]</td>
<td>Paste</td>
<td>Pastes clipboard contents with all formatting.</td>
</tr>
<tr>
<td>![Paste from Word Icon]</td>
<td>Paste from Word</td>
<td>Pastes text copied from Word without Word-specific formatting.</td>
</tr>
<tr>
<td>![Paste as Text Icon]</td>
<td>Paste as Text</td>
<td>Pastes clipboard contents without any formatting from the original; hard returns are also removed.</td>
</tr>
</tbody>
</table>
When you use the keyboard shortcut or the secondary mouse button to paste, the Smart Paste dialog appears. The options in this dialog correspond to the three paste buttons in the table above.

![Smart Paste dialog](image)

**Figure 13: Pasting text from other sources in the XHTML Editor field.**

**Adding a Hyperlink to an Internal Page**

Hyperlinks are an important part of web writing. In the Ingeniux CMS environment, links to other pages in the site are considered internal links. Internal links rely on the xID of the page to which the link points. By relying on this unique page identifier, the link will retain its integrity even if the page is moved elsewhere in the site.

**To Link to an Internal Page:**

1. Select the text to be hyperlinked in the XHTML Editor.
2. Choose **Insert/Edit Link**. The Insert/Edit Link dialog appears.
3. Type the first few letters of the desired page name in the Page field and select the desired page from the list.
   - Or -
   Enter the xId for the page to which the link will point. Be sure to include .xml at the end.

4. Specify a target, title, and class, if desired.

5. Choose **Insert**.

---

**Adding a Hyperlink to an External Page**

In the Ingeniux environment, links to pages outside the site are considered external links. When you create an external link, it's important to test the link to ensure accuracy.

**To Link to an External Page:**

1. Select the text to be hyperlinked in the XHTML Editor. (Select from right to left to avoid selecting the blank space at the end of the word or phrase.)

2. Choose **Insert/Edit Link**. The Insert/Edit Link dialog appears.

3. Choose **External**.
4. Choose **Browse**.
5. Type the URL for the desired page in the address line and click **Go**. (Pressing ENTER also locates the page.)
6. Verify that the expected page appears and click **Save Address**.
7. [Optional] Specify a target, title, and class.
8. Choose **Insert**.

---

**Adding a Hyperlink to a Document or File**

Links to files stored on the web server are called document links. Files referenced by document links must be uploaded to the `xml/documents` directory on the Design-Time server.

**To Link to a Document or File:**

1. Select the text to be hyperlinked in the XHTML Editor. (Select from right to left to avoid selecting the blank space at the end of the word or phrase.)
2. Click **Insert/Edit Link**. The Insert/Edit Link dialog appears.
3. Choose **Document**.
What’s New in Ingeniux CMS

Figure 16: Inserting a document link in the XHTML Editor field.

4. Click **Browse**. The Asset Manager dialog appears, looking at the Documents folder.

5. Use the folder structure on the left to navigate to the file you want to link to.

6. If the file hasn’t been uploaded, choose **Upload**.
   
   a. Choose **Select File to Upload** and locate the file.
   
   b. Click **Upload**.
7. Select the file and click **OK**.
8. [Optional] Specify a target, title, and class.
9. Choose **Insert**.

---

**Removing a Hyperlink**

Links that are no longer valid can be removed without deleting the underlying text.

**To Remove a Hyperlink:**
1. Right-click the hyperlinked text in the XHTML Editor.
2. Choose **Unlink**.

---

**Working with Images**

Some pages may have predefined image elements; an image element controls the position of the image on the page. When more flexible positioning is called for, or when there’s no predefined image element for the image you want to include, you can add an image via the XHTML Editor.

**Inserting Images**

Images have to be uploaded to the Images directory on the web server before they are available through the XHTML Editor. (For a full discussion of uploading options, see *Uploading Images* above.)
Once an image is uploaded and selected, you can configure attributes to control the display of the image on the page.

**To Insert an Image:**

1. Click in the desired image location in the XHTML Editor.
2. Choose **Insert Picture**. The Insert/Edit Image dialog appears.
3. Click **Browse**. The Asset Manager dialog appears, looking at the Images folder.
4. Use the folder structure on the left to navigate to the image you want to include.
5. Select the file on the right and click **OK**.

![Figure 19: Inserting an image in the XHTML Editor field.](image)

![Figure 20: Selecting an image in the Asset Manager.](image)
6. Set image attributes, as desired.
7. Click **Insert**.

**Inserting Tables**

In the past, web developers often used tables to arrange content on the page. This practice has limitations and is now considered somewhat deprecated.

However, there may be times when a tabular arrangement of content is useful. For example, a table could be used to make data more readable. Using the XHTML Editor, you can insert a table into a page.

**To Insert a Table:**

1. Choose **Insert Table**. The Insert/Modify Table dialog appears.
2. Enter the number of columns and rows.
3. Specify any additional options. (Table options are limited to those available in HTML.)
4. Click **Insert**.

*Figure 21: Inserting a table in the XHTML Editor.*
Unlike some other word processing applications, the XHTML Editor does not support the use of the Tab key to move from cell to cell within a table. Use the left and right arrow keys instead.

Deleting Tables

To be deleted, a table has to be selected. Pressing the Tab key shifts focus from inside a cell to the whole table.

To Delete a Table:

1. Click on the table border to select the table.
   - Or -
   
   Click inside the table and press TAB to select the table.

2. Press DELETE on the keyboard.
Using Predefined Content

The Ingeniux CMS makes it easy to reuse content. A single news story abstract may appear in several places throughout the site, even though the news story only exists in one place. Or contact information for an office may appear on multiple pages but only exist in a single component.

This section explores three CMS tools for reusing content: the LinkSet element, the multi-select element, and the component.

Working with LinkSet Elements

With the LinkSet element, you can create a series of links to site pages and arrange them in a re-orderable list. Typically, the LinkSet element generates content for a navigation; it supports structured URLs. The LinkSet content will update automatically when linked pages are checked in, so your navigations always stay up-to-date.

When the LinkSet element is collapsed, you can edit two pieces of content: the title of the list and the set of links to be included.

![Figure 22: The LinkSet Element collapsed.](image)

Expanded properties for the LinkSet include the standard local exports as well as fields for filtering selectable links to those present under a specified parent page and those of a specified page type.

![Figure 23: The LinkSet Element expanded.](image)

The title field can be completed like any other text element, and you can choose links in a dialog.
To Choose LinkSet Links:

1. In the LinkSet element, click Select.

2. To select a link, click the link in the left pane and click the arrow pointing toward the right pane. To remove a link, click it in the right pane and click the arrow pointing to the left pane. You can select multiple items at once using CTRL + CLICK or SHIFT + CLICK.

3. To reorder the selected links in the right pane, use the up and down arrows.

4. When you’re finished selecting and ordering links, click OK to save the content to the Edit Form. (Clicking Cancel will revert the Related Links dialog to the state it was in before the dialog was opened.)

✓ Selected items will appear in the Edit Form in the same order that they appear in the right pane of the dialog.
Working with Multi-Select Elements

The multi-select element can be used to add predefined content to a page. The element provides a list of predefined items of which the user can select one or more.

For example, a page may display abstracts for up to three news stories. The multi-select element can be used to provide a list of possible stories to choose from.

**To Use a Multi-Select Element:**
1. Locate a multi-select element in the edit form.
2. Choose **Browse**.
3. Select the desired item on the left side. Pressing CTRL while clicking on items selects multiple items.
4. Choose **Select**. The selected item(s) will move to the right side of the dialog box.
5. Repeat as needed until all desired items are on the right side.
6. Choose **OK**. The selected item(s) will display in the multi-select text box.

In many Windows applications, double arrow buttons (>>) represent “move all items.” In the Ingeniux environment, they will only move the items that are selected.

Using Components

Another common form of predefined content is the *component*. Sites usually have several different component types; often these component types are specific to the site design. In general, a component is a chunk of content that is:

1. Always viewed in the context of another page.
2. Used in multiple places across the site.

You can add a component to a page by dragging and dropping the component from the site tree into a component element on a page. Alternately, you can pick a component from the Select a Component dialog.
The Select a Component dialog provides several options for finding components.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component Type Filter</td>
<td>Located in the upper left, this drop-down list displays all component types. Selecting a single type restricts the component list to only those of the selected component type.</td>
</tr>
<tr>
<td>Component Name Filter</td>
<td>Located in the upper right, this text box restricts the component list to only those whose names contain the typed text.</td>
</tr>
<tr>
<td>Component List</td>
<td>Located in the middle of the page, this list shows potential components. If you type a letter while the list is selected, the list will jump to components whose names begin with the typed letter.</td>
</tr>
</tbody>
</table>

✓ The preview area in the lower half of the Select a Component dialog displays the content contained within the component selected in the component list. This makes it easier to verify that the component selected is in fact the one you want.

To Use a Component:

1. Locate a component element on the Edit Form.
2. Choose Pick. The Select a Component dialog box appears.
3. Filter for the desired component, if necessary.
4. Preview the values for the selected component.
5. Choose Select.

✓ If a component element is no longer needed on a page, you can use the Clear button to remove any component data from the element.

A Note on Image Components

The UI for the Image Component schema includes the Image Editor within the edit form. Image properties appear in a right side bar. Clicking on the image or the Browse button will bring up the image selection dialog.

![Figure 27: The Image Editor within an image component.](image)

A thumbnail-size image can be created directly from the UI. Default dimensions are 100 x 75 pixels, but this can be changed. This dialog creates an asset in the images directory.
Finishing a Page

Once you have finished editing content, there are a few steps left to complete the page. It’s usually a good idea to do a spell check on the content. Then the page needs to be saved, and it’s also a good idea to preview the page to see how the HTML will display in a browser.

Checking Spelling

The Ingeniux CMS employs an open-source spell-check system called NHunspell. It features customizable OpenOffice dictionaries, and many of the specialty dictionaries (e.g., medical, legal) are also available for free in a variety of languages.

To Spell-Check a Page:

1. Open the Edit Form for the page you’d like to review, if it’s not already open.
2. Click Spell-check on the toolbar at the top of the CMS Client. In all spell-check enabled fields (text or HTML), red lines will appear under misspelled words.
3. For each misspelled word, a drop-down menu will provide options to choose a suggested replacement word, add the word to the dictionary, ignore the word, ignore all instances of the word, or move to the next or previous misspelled word. Make a selection from the drop-down. The suggestion menu will open for another misspelled word.

Figure 28: Checking spelling within the Edit Form.
4. [Optional] To spell-check a particular misspelled word, click on it.

5. When you're finished spell-checking, click **Done** in the drop-down menu.

6. [Optional] To stop the spell-check before it has completed, click **Cancel Spell-check** in the toolbar.

---

**Saving a Page**

A page can be saved at any time. Saving changes does not cause the changes to appear on the published site. Rather, the changes are saved to the copy of the xID.xml page that is stored in the active user’s XML directory on the Design-Time server.

If there are pending changes that have not been saved, an asterisk appears in the title bar next to the page name. Additionally, the Save button on the toolbar is only available when there are pending changes yet unsaved.

**To Save a Page:**

1. Choose **Save**. Pressing CTRL + S also saves the page.

---

**Previewing a Page**

The Page View tab provides a rendering of the current page as it will look when published. This view is completely functional, with all navigation and links appearing and working as they will when the page and its dependencies are published to the live site.

✓ **Visiting Page View saves working changes to the page.**

In addition to the Page View tab, there is a separate Preview window. This window provides additional options for configuring the preview to reflect realistic content.

For example, some processes that are dynamic in a runtime environment (cookies, database queries, etc.) do not execute in Page View. You can add test data in the Preview window to simulate such dynamic processes.

**To Access the External Preview:**

1. Choose **Preview**. Pressing CTRL + SHIFT + P also displays the External Preview.
✓ Refer to the Administrator’s Guide for more information on configuring the Preview window.
Advancing Pages in Workflow

The last step in authoring is to advance the page. In an institution where pages are sent for approval, advancing the page might mean sending it to a web editor. In a situation where the author has permission to publish, advancing the page may mean publishing the page. In either case, advancing the page sends it to the next workstate and to a user or group associated with that workstate.

✓ Workflows must be configured by the web site administrator and pages added to workflow (manually or through page creation rules) before a page can be advanced.

Advancing a Page

By default, the Advance in Workflow button appears between the Assign To and Spellcheck buttons on the toolbar. The Advance in Workflow button options change to reflect the available transitions at that point in the page work cycle.

For example, if the page must now go to an editor for approval, the advance button might include “Send to Editor.” When the editor gets the page, the Advance button might include “Publish” and “Send Back to Author.”

To Advance a Page:

1. Click the arrow next to the Advance in Workflow button.
2. Select the desired option. The Advance Page in Workflow dialog appears.

![Figure 29: The Advance Page in Workflow dialog.](image)
3. Confirm that the appropriate transition is selected.
4. Click **Advance**.

**Viewing Page Properties**

At the top of each page in the Edit Form is the *Page Properties* box. It displays basic information about a page and, if expanded, provides details about the page’s workflow status.

![Page Properties box on the Edit Form](image)

*Figure 30: The Page Properties box on the Edit Form.*

The table below describes the various page properties. The last workflow comment also appears under the heading Last Transition Comment.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page Name</td>
<td>Displays the name of the page as it appears in the site tree; the name can also be changed in the site tree.</td>
</tr>
<tr>
<td>Schema</td>
<td>Indicates the page type (template) used to create the page.</td>
</tr>
<tr>
<td>ID</td>
<td>Distinguishes the page from all others in the site. This unique number is assigned sequentially when the page is created.</td>
</tr>
<tr>
<td>Assigned To</td>
<td>Identifies the user to whom the page is currently assigned.</td>
</tr>
<tr>
<td>Created</td>
<td>Displays the date and time when the page was created.</td>
</tr>
<tr>
<td>Created By</td>
<td>Indicates which user created the page.</td>
</tr>
<tr>
<td>Last Modified</td>
<td>Displays the date and time when the page was last checked in.</td>
</tr>
<tr>
<td>Last Modified By</td>
<td>Indicates which user last checked in the modified page.</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Start Date</td>
<td>Specifies when the page will be available on the live site, as set in the Page Properties dialog.</td>
</tr>
<tr>
<td>End Date</td>
<td>Specifies when the page will no longer display in the live site, as set in Page Properties dialog.</td>
</tr>
<tr>
<td>Publish As</td>
<td>Displays a friendlier name for the page URL. The Publish As value is deprecated as of CMS 7.5.</td>
</tr>
</tbody>
</table>

The Page Properties area in the Edit Form differs from the Page Properties dialog. In the Page Properties dialog, users with appropriate permissions can configure additional page settings.

**To Access the Page Properties Dialog:**

1. Right-click the desired page in the site tree.
2. Choose **Page Properties**. Pressing ALT + ENTER also displays the Page Properties dialog, as does clicking the page icon in the upper-left corner of the Page Properties field in the Edit Form.
Editing Existing Pages

Creating new pages is an important part of the authoring process, but most work in a website involves editing existing pages. When an existing page is edited, the published version of the page remains intact until the revised version of the page is published.

Before a page can be edited, it must be located and assigned to the person who will make the changes.

Locating Pages by xID

In the CMS, each page and component has a unique identifier known as an xID. Each xID is composed of the letter x followed by a number. These numbers are assigned incrementally as each new page or component is created.

The xID for a page is displayed in the Page Properties area of the Edit Form. It also appears when you hover over a page in the site tree.

If you know the xID for a page, you can search for it by entering the xID into the Go To field on the toolbar.

To Locate a Page by xID:

1. Click in the Go To field.
2. Enter the xID of the page. (You can also search by page name.)
3. Select the page from the drop-down list that appears under the Go To field.

Using Search

If you don’t know a page’s xID or name, but you know a little bit about the page content, you can locate the page using the Search feature.

Accessed via Search in the accordion pane, the search engine indexes individual text fields on the Design-Time site and can be configured to search for recycled pages and previous versions of pages.

There are a few details to keep in mind about the search functionality:

- Search is not case sensitive.
• Only whole and hyphenated words are searchable. The strings “academics” and “academic-s” will return pages with the word “academics” in them. But “aca” or “academic” will not return “academics.”

• Depending on the size of the site, there may be up to a ten-second delay between content updates and indexing.

• A search will only return the 200 highest-ranked matches.

• The search results table can be sorted by column, in ascending or descending order.

You can enter either keywords or queries in the search field. Queries follow the syntax **field:value** and can be joined by **and** / **or**. For example, the following string would return pages with “academics” in either the title field or the abstract field:

```
title:academics or abstract:academics
```

**To Search for a Page or Component:**

1. Select **Search** in the left pane.
2. Enter the search term(s) or query in the search field.
3. Click the search button to the right of the search field. The results of the search will show below the text field.

---

**Using Advanced Search Features**

With advanced searching enabled, you can choose to search checked-out pages, recycled pages, and previous versions of pages.

**Use checked-out page content** is selected by default. With this setting selected, a search returns content from checked-out pages if a) the pages are checked out to the user or b) the user is an administrator. Also, the “Checked out” column appears in the search table results.

When **Include recycled pages** is selected, searches include pages that have been deleted to the recycle bin, and the “Deleted” column appears in the search results table.

If you select **Include content from page’s previous versions**, searches will include content from older versions of pages, and the “Version” column will appear in the search results table.

You can also narrow your search using the Page Type and Field drop-down menus. The field values available are dependent upon the page type selected.
To Perform an Advanced Search:
1. Check the Advanced option beneath the search field.
2. Configure the search using the available checkboxes and dropdown menus.
3. Perform a search as described above. The results of the search will show below the Advanced area.

Assigning a Page

Only the user to whom a page is assigned can make changes to the page. Users can see the pages assigned to them in the Assignments pane.

Figure 31: The Assignments pane in the CMS.

Clicking on one of these entries will load the selected page’s information to the right. The list of assignments can be sorted alphabetically by clicking on the headings at the top: Name, ID, Date Modified, and Comments.

Pages can also be assigned to entire groups. If a page is assigned to a group, a user from that group will have to claim the page before editing it.

To Assign a Page:
1. Select a page in the site tree.
2. Choose **Assign To**. (Pressing CTRL + K also assigns the page.) The Assign To drop-down menu appears.

3. Choose to whom the page will be assigned: **Me, User, or Group** (all these options may not be available). If you choose **Me**, the page will be assigned to you, and you can edit it. Otherwise, proceed to the next step.

4. A dialog will open, prompting you to select a user or group. Names shown in blue are currently logged into the system. Choose the user or group to whom you would like to assign the page.

   ![Select User Dialog]

   *Figure 32: Assigning a page to a select user.*

5. Click **OK**.

   ✓ **The name of the person to whom the selected page is assigned will appear in the Page Properties area of the Edit Form, though the Edit Form may need to be refreshed to show the change in assignment. Use the Refresh button to refresh the display of the page.**

### Renaming a Page

There are two ways to rename a page:

1. Enter a new name directly into the Page Name field in the Page Properties area of the Edit Form.

2. Right-click a page in the site tree and select **Rename**.
In either case, it’s only possible to rename a checked-out page. If the page is checked in, the Page Name field will be grayed out and the Rename command will be unavailable.
Using In-Context Editing

In-Context Editing (ICE) is designed to bridge the gap between entering content and previewing the results. Authors can now enter content directly into the layout and see the results of their work immediately.

The ICE feature is accessed through the Page View tab. By default, Page View opens in Preview mode, displaying the selected page with the XSL stylesheet applied. The stylesheet “wraps” the page content in HTML and CSS, thereby rendering it as it will appear on the live site.

In Edit mode, it becomes possible to edit this rendered content directly, as long as the user has appropriate permissions. Arrow icons point to content that can be edited, and editable fields are highlighted when a user hovers over them with the cursor.

![Figure 33: In-Context Editing on the Page View tab.](image)

To Access In-Context Editing:

1. In the site tree, select the page you want to edit.
2. Open the Page View tab and click **Edit** (located beneath the Edit Form tab).

![Figure 34: Selecting Edit on the Page View tab.](image)
3. Click on editable fields to open them for in-context editing. Areas that are reserved for content but as yet unfilled will show the element name in square brackets.

---

**Editing Text in ICE Mode**

When you click a text element in ICE view, a text field will open with the content (if any) inside. You can type text directly into the field, delete text, or copy and paste it. The size of the field will adjust to show all the content.

Clicking away from the field onto the background or hitting ESC will submit changes back to the layout, close the text field, and provide an immediate preview of the change. You can then use the Save button in the toolbar to confirm changes and submit them back to the Edit Form.

✓ *Because text fields are limited to showing plain text without markup or line breaks, the enter button is disabled for these fields in ICE mode.*

**Using the XHTML Editor in ICE Mode**

In ICE mode, as in the Edit Form, the XHTML element differs from regular text elements. When you click text contained in the XHTML element—usually the body text of the page—a version of the XHTML editor will open. The ICE version of the XHTML editor will display the same toolbar buttons that you see when using the XHTML editor in the Edit Form.

Use the magnifying glass button in the upper-right corner to expand and contract the editor.
Changing Components in ICE Mode

When you click a content area that takes a component, the “Select a Component” dialog will open, just as it does when you click Pick in a component element on the Edit Form.

Picking a Date in ICE Mode

Date and time elements can also be edited in ICE mode. When you click on this content, depending on the element type, the date picker or time picker will open.
What’s New in Ingeniux CMS

Working with Static Files in ICE Mode

When you click on an editable image, document, or media element, the “Choose File” dialog appears. In this dialog, depending on your permissions, you can select, upload, and edit files.

Figure 37: The date picker in ICE mode.

Figure 38: The Choose File dialog in ICE mode.
Advanced Authoring Tasks

In this chapter you will learn to:

- Work with hidden and read-only element-levels
- Revert to earlier versions of a page
- Delete pages and restore pages from the Recycle Folder
- Access help through the Ingeniux support site
Working with Hidden Elements

Elements on the edit form can be marked as hidden. Only groups with permission to view hidden elements can work with them. There is no indication on the edit form that elements are hidden; they simply don't appear for users without permission to view them.

An element may also be marked as read only. In this case, only users who are in the administrators group can modify them. Many navigation elements, for example, are marked as hidden and read only.

✓ Hidden and read-only attributes are set within the schema by the site developer.
Reverting to a Previous Version of a Page

During the content editing process, there may be times when an author or editor would like to reinstate a previous version of a page. With the rollback feature, this is possible, as long as the user has sufficient permissions.

Each time a page is modified and checked in, the CMS creates a new version of the page. In a typical workflow scenario, a page is checked in each time it’s advanced in workflow. Thus, the rollback feature can be used to undo undesirable changes made during the previous workstate.

**Using Rollback**

Rollback will undo any changes to the previously checked-in version of a page.

**To Rollback Changes:**

1. Display the Edit Form for the desired page. Ensure that the page is assigned to you and ready for changes to be made.
2. Right-click the page in the site tree and choose Rollback.
3. Choose OK to confirm.

---

**Using the History Tab**

While rollback undoes the last checked-in version of the page, the History tab provides a list of all earlier versions of the page. Using this list, you can review and reinstate different versions of a page.

**To Revert to an Earlier Version:**

1. Ensure the desired page is assigned to you and ready for changes to be made.
2. Select the History tab.
3. Select the desired version from the list.
4. Verify that the desired version displays in the lower portion of the tab.
5. Choose Revert to selected version.

---

✓ There is no versioning of Taxonomy categories.
Deleting and Restoring Pages

When a page is deleted, it moves to the Recycle Folder in the site tree. Pages can also be moved from the Recycle Folder back into the site tree, as long as the Recycle Folder hasn’t been emptied. Permission to delete pages is granted at the group level by the site administrator.

Deleting a Page

When a page is deleted, several things happen to it:

- If the page is checked out, the checkout is cancelled, and any saved or unsaved changes made since the last checkout are dropped.
- The page is unmarked for publish.
- The page is removed from workflow and no longer assigned to a user.
- The page moves to the Recycle Folder.

Pages can be dragged and dropped to the Recycle Folder as well; this also causes the above actions to occur.

To Delete a Page:

1. In the site tree, select the page to be deleted.
2. Right-click on the page and choose Delete.
3. Choose Delete to confirm.
   
✓ Deleting a node in the tree deletes not just the page, but any descendants it has as well.

Restoring a Deleted Page

To restore an item from the Recycle Folder, drag it back to the desired location in the site tree. To completely restore the page, you also have to reverse the actions that occur when a page is deleted. It may be necessary to check the page back in, add it back to workflow, mark it for publish, and recreate content (if content was lost from a checked-out page).
Accessing Help for the CMS

As a rule, it’s a good idea for site administrators to create site-specific documentation for their end users. Users can also access general help features in the CMS.

To access CMS help, click Help above the toolbar and make a selection from the drop-down menu.

Exploring Help Options

The Ingeniux Help menu provides the following options:

- Ingeniux CMS Help – Online help tailored to the installed version of the CMS.
- Online Support – Links to the Ingeniux support site, where you can find Knowledge Base articles about the CMS, as well as contact information for the support team.
- Custom Helper – Site-specific help created by the site administrator. If no such help exists, the page will display a generic message directing the user to contact the system administrator for more information.

Using the Ingeniux Support Site

The Ingeniux support site (http://support.ingeniux.com) is the most up-to-date source of information for Ingeniux products. In order to use this site, the user must have credentials provided by Ingeniux at the request of the site administrator.

The Ingeniux support site includes:

- Troubleshooting
- Forums
- How To
- FAQs
- Downloads
Organizing Content

In this chapter you will learn to:

- Organize pages in the site tree
- Create new pages and components in the site tree
- Organize pages using folders
- Categorize pages using taxonomy
Working in the Site Tree

In the Ingeniux CMS, web content is stored in a flat directory structure. On the Design-Time server, there is no hierarchical relationship among web pages and components.

But in the site tree that appears in left pane of the CMS Client, things are different. Here you can create a virtual hierarchy of pages components, and folders. Site navigations will take their content and organization from the site tree, and—if structured URLs are enabled—the Run-Time site’s URLs will also follow the hierarchy of the site tree.

Working in the site tree is similar to working with the file structure of a hard drive. Each item in the site tree is known as a node. A genealogical model is used to describe the relationships between nodes.

Consider the following example.

Figure 39: The nodes in the Ingeniux CMS site tree.

The following relationships exist among nodes in the site tree above.

- The Academics page is said to be the parent of the Faculty and Departments pages. Conversely, the Faculty and Departments pages are called children of Academics.
• Academics, Admission, Campus Life, and About Central are said to be *siblings*. So are Art and Math.
• Home and Academics are said to be *ancestors* of the Faculty page. Conversely, the Faculty page is said to be a *descendant* of Home and Academics.

The site tree can be expanded and collapsed by clicking on the plus and minus icons to the left of each node. A “plus” icon indicates there are child pages; clicking on the icon will expand that node. Clicking the “minus” icon will collapse the node.

**Structuring Navigations**

The structure of content as it is displayed in the site tree defines the structure and navigation of the website. A navigation displayed on a page pulls dynamically from the relationships defined in the site tree.

For example, consider a page with the following left navigation.

![Site Tree Example](image)

*Figure 40: The navigation of the site is defined by the site tree.*

The links to Academics, Faculty, Departments, Art, and Math are pulled from the site tree shown below.
Figure 41: The navigation is determined by the page order in the site tree.

When the pages are reordered in the site tree, the left navigation displayed on the page would typically reflect the change as well. That is, if you switched Art and Math in the site tree, the page navigation would reverse Art and Math too.

- Folders are not typically displayed in navigations. Pages that represent supplemental content are often stored in folders. Links should be made directly to these supporting pages, rather than listing them dynamically in the main site navigations.

The relationship between the site tree and page navigations makes it easy to restructure a site. This interdependency makes the site tree a powerful content management tool, and you should always keep it in mind if you’re reordering pages. One quick change in the site tree can affect navigations on many pages.

Organizing the Site Tree

As a general rule, content in the site tree should be arranged to reflect the order in which it appears on the site. In the example below, the hierarchy on the left reflects the navigation structure of the site. The hierarchy on the right does not.
Also, it’s usually a good idea to use pages, not folders, to organize and group like pages. Folders break the natural flow of navigations and should only be used when pages need to be isolated from a navigation.

For example, a folder might contain pages used in a top navigation or a footer navigation.

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Home</td>
</tr>
<tr>
<td>Section 1</td>
<td>Section 1</td>
</tr>
<tr>
<td>Sub Section A</td>
<td>Sub Section A</td>
</tr>
<tr>
<td>Detail 1</td>
<td>Detail 1</td>
</tr>
<tr>
<td>Detail 2</td>
<td>Detail 2</td>
</tr>
<tr>
<td>Sub Section B</td>
<td>Sub Section B</td>
</tr>
<tr>
<td>Detail 1</td>
<td>Detail 1</td>
</tr>
<tr>
<td>Detail 2</td>
<td>Detail 2</td>
</tr>
<tr>
<td>Footer Navigation (folder)</td>
<td>Footer Navigation</td>
</tr>
<tr>
<td>Detail 1</td>
<td>Detail 1</td>
</tr>
<tr>
<td>Detail 2</td>
<td>Detail 2</td>
</tr>
<tr>
<td>Detail 3</td>
<td>Detail 3</td>
</tr>
</tbody>
</table>

✔ Although the Internal Components folder is typically installed as a sibling of Site Folder, Ingeniux recommends making Internal Components a child of Site Folder.
Managing Pages in the Site Tree

The site administrator can give user groups permission to move pages in the site tree. If you’re part of a group with this permission, you can drag and drop pages in the tree, and the site navigations will automatically update to reflect the new site hierarchy. Just remember that, when you reorder pages, you change all the site navigations that link to those pages.

Moving a Page in the Site Tree

Pay attention to the shape and location of the mouse selection indicator when you move a page. It shows where a page will be placed in the site hierarchy.

In the example above, the selection indicator shows a box around Academics. When dropped with this indicator, the moving page (News) will become the last child under Academics.
In this second example, the selection indicator shows a line under the name “Academics” (but not under the page icon to the left of it). When dropped with this indicator, the moving page (News) will become the first child under Academics.
In this last example, the selection indicator shows a line extending all the way under the icon next to Academics. When dropped with this indicator, the moving page will be inserted between Academics and Admission as their sibling.

**To Move a Page:**
1. Select a page in the site tree.
2. Drag and drop the page into the desired location.

---

✓ *Refer to CMS 201 for more information on restricting where different page types may live in the site tree.*

**Copying a Page in the Site Tree**

Using the CTRL key while dragging and dropping a page changes the move action into a copy action. Pages can also be moved by copying the page and pasting it into the desired location.

**To Copy a Page:**
1. Select the page in the site tree so that it displays in the Edit Form.
2. Drag the page icon in the Page Properties area at the top of the Edit Form and drop it in the desired location in the site tree.

-Or-

1. Select the page in the site tree.
2. With CTRL pressed, drag and drop the page into the desired location.

-Or-

1. Right-click the page and choose Copy.
2. Right-click the parent page of the new copy; choose Paste.

When a copy of a page is made, all aspects of the page will be the same with two exceptions. First, the new page will not be marked for publish, even if the original is. This ensures that the new page will not be prematurely published. Second, the xID for the new page will be different from that of the original. The new page needs a unique identifier to distinguish it from the original, since the pages have the same name.

**Renaming a Page in the Site Tree**

The name of a page is used in various ways throughout a site, and the specific uses depend upon the design of the site. In some cases, the name is included in the browser bar title; in other situations, it is used when creating breadcrumb navigation. Within the CMS, the page name is used to label content in the site tree and to identify internal links.

You can rename a page at any time, provided that the page is assigned to you. Keep in mind that, if a site uses structured URLs, renaming the page will change its URL. This could affect external links to the page.

**To Rename a Page:**

1. Select a page and ensure that the page is assigned to you and ready for changes to be made.

2. Right-click on the page and choose Rename. Pressing CTRL + SHIFT + R also opens the Rename Page dialog.

3. Enter the new name for the page and click **Rename**.
Multi-Selecting Nodes

Using CTRL + CLICK or SHIFT + CLICK, you can select multiple pages at the same time in the site tree. You can also multi-select by clicking in the white background area and dragging a box around a set of pages. Once you’ve selected multiple pages, you can move them by left-clicking a destination or by dragging and dropping the pages into a new destination. You can also right-click to bring up the context menu and perform an action on multiple pages at once.

When multiple pages are selected, the following options will be enabled on the context menu:

- Cut
- Copy
- Delete
- Assign To...
- Check Out
- Check In
- Mark/Unmark for Publish

✓ You can only perform these actions on multiple pages via the context menu. Toolbar buttons will perform the action on the first selected page only.

When multiple pages are selected, the item with the most restrictions will determine the actions that can be performed. Thus, it wouldn’t possible to move a selection of pages if the selection included one immobile page.
Creating Pages, Components, and Folders

Three kinds of nodes can be created in the site tree: pages, components, and folders. This section explains how to create all three. For more detailed information on creating and completing new pages, review the Authoring Fundamentals section of this manual.

Creating Pages Outside of Page Creation Rules

For most content contributors, the easiest way to create a new page is with a page creation rule (PCR). Configured by site administrators, PCRs help users create the correct page types in the correct areas of the site.

But pages can also be created outside of page creation rules. This method is most commonly employed by power users and administrators. If you’re going to create a page outside of page creation rules, you need to know what type of page you want to create and where you want to put it.

✓ Pages created outside of page creation rules are not automatically placed in workflow. As a result, these pages must be manually added to workflow if they are to go through the workflow process.

To Create a New Page:

1. Select the parent page for the new page.

2. Choose New | Page.

   -Or-

   Right-click the parent page for the new page; choose New | Page. Pressing CTRL + N also creates a new page.

   The Create New Page dialog box appears.
3. Enter the name for the new page.
4. Choose the desired page type.
5. Choose Create.

Creating Components

Components contain content that can be reused in multiple places in the site. Typically, components are stored in a folder in the lower portion of the site tree.

From a technical perspective, pages and components are very similar. But pages have a stylesheet layout associated with them, and components do not.

To Create a Component:
1. Select the parent folder for the new component.
2. Choose New | Component 🌟.
   -Or-
   Right-click the parent folder for the new component; choose New | Component. Pressing CTRL + SHIFT + N also creates a new component.

The new component dialog box appears.
3. Enter the name for the new component.
4. Choose the desired component type.
5. Choose Create.

---

Creating Folders

Folders can be created from the toolbar or the site tree context menu. In either case, if you first select a location for the new folder in the site tree, you’ll avoid the extra step of moving the folder after it’s created.

To Create a Folder:

1. Select the parent page for the new folder.
2. Choose New | Folder.
   - Or-
   
   Right-click the parent page for the new folder; choose New | Folder. Pressing CTRL + ALT + N also creates a new folder.

The Create New Folder dialog appears.
3. Enter the name for the folder.
4. Choose **Create Folder**.

When a folder is selected in the site tree, its children display in the right pane. This provides an at-a-glance view of the pages the folder contains.
Working with Taxonomies

You can use taxonomies to organize content in ways that don’t involve the site’s information architecture. Taxonomies are useful for repurposing content for different audiences and for presenting content by topic.

For example, consider an alumni gateway page. In a traditional web site, the list of links on this page might be editorially selected. With the taxonomy feature, pages can be tagged with an alumni gateway category and then automatically pulled into navigations on the gateway page.

Taxonomy categories are created by users who have permission to manage the taxonomy system. Typically, the site administrator will create these categories.

A user with permission to modify hidden and/or read only elements (again, typically the site administrator) configures a page to pull in other pages or components with a specified taxonomy category match.

Taxonomy categories are then associated with pages and components. This is done by users who have this specific permission.

Categorizing Pages and Components

For users with permission to categorize pages and components, the Categorize tab appears along with the Edit and Preview tabs.

*Figure 49: The Categorize tab in the CMS.*
The taxonomy categories created by the site administrator are listed on the left. Categories that have been selected display in a list on the right; a green check mark indicator also appears next to associated categories on the left.

**To Categorize a Page or Component:**

1. Select a page or component and ensure that the item is assigned to you.
2. Open the Categorize tab.
3. Use the taxonomy tree on the left to locate a category.
   - Or-
   Type the first few letters of a category into the Search field.
4. Select a category and click the right blue arrow.
   - Or-
   Double-click the desired category in the taxonomy list.
5. Click **Save**.

✓ *Categories can be removed by selecting them in the right pane and clicking the left blue arrow.*

**Using the Taxonomy Manager**

Users with permission to manage taxonomy categories can access the taxonomy manager in the Administration pane.

The taxonomy manager provides an interface for creating categories, associating them with pages, setting security, and adding synonyms. It also displays a hierarchical category tree similar to the site tree.
To Create a Taxonomy Category:

1. In the left pane of the CMS Client, navigate to Administration | Taxonomy.
2. Expand the existing categories and position the cursor over the node under which you’d like to place the new category.
3. Click the button that appears.
4. Enter the name of the new category in the Title field to the right.
5. Add additional details, if necessary. (Only the Title field is required.)
6. Click Save.

Changes to taxonomy categories do not auto-save. If you navigate away from a category, you will lose any unsaved changes.

Deleting a taxonomy category removes the category, its children, and any associations with specific pages or components.

To Delete a Taxonomy Category:

1. Navigate to Administration | Taxonomy.
2. Expand the existing categories to locate the category to be deleted.
   - Or -
   Use the search field to enter the name of the category.
3. Position the mouse over the category.
4. Click the button that appears.
5. Choose OK to confirm the delete.

Associating Categories from the Taxonomy Tab

Using the Categorize tab, you can apply category associations to an individual page or component. In the taxonomy manager, you can make these associations in the opposite direction; you can associate multiple pages and components with an individual category. This is especially useful if you need to make many associations at one time.

![Figure 51: The Taxonomy Manager in the CMS.](image)

To Associate a Category with a Page or Component:

1. Navigate to Administration | Taxonomy.
2. Expand the taxonomy tree to locate a category, or use the search field to enter the name of a category. Then select a category.
3. Open the Associations tab in the right pane. If any pages or components are already associated with the selected category, they will be listed in the Associations tab.
4. Click the button to the left of the ID column at the top of the Associations tab.
Using Taxonomy to Generate Page Content

Pages in the CMS often use navigations to pull in content from other sources in the CMS. For example, an index page generates its list of items by returning the names of pages in the site. The taxonomy feature can also be used to generate navigations. Taxonomy navigations are useful for returning highly selective results. For example, a university could create an index page for its employees, and taxonomy navigations could be used to pull content that has been categorized as employee-related.

In the Edit Form, the taxonomy navigation element looks similar to other navigations, but you can use the Pick button to filter by category.
To Complete a Taxonomy Navigation Element:

1. Click **Pick** and, in the Pick a Category dialog, select one or more categories from the taxonomy tree. Then click **OK**.

2. [Optional] Expand the element and configure other values. By entering appropriate values into the **Filter Schemas** and **Filter Ancestor Pages** fields, you can configure the navigation to pull categories only from specific page types and from specific places in the site tree. Using the Depth drop-down, you can determine how many items the navigation will pull.
Working as an Administrator

In this chapter you will learn to:

- Access the Administration pane
- Send mail from within Ingeniux
- Check pages in and out
- Mark and unmark pages for publish
- Publish pages using full and incremental publish
- Add and remove pages from workflow
Exploring the Administration Pane

Most of the tools and features used for configuring the CMS can be found in the Administration pane.

![Administration Pane](image)

*Figure 54: The Administration pane in the CMS.*

For site administrators, the System Options manager is particularly important. In previous versions of the CMS, a number of system settings had to be configured directly in the XML files. In CMS 7.5, system configurations are exposed in System Options, and you can configure them in the graphic user interface.

Accessing System Options

In System Options, administrators can access and configure many of the settings that govern site management, user experience, and content publication.

To access the System Options settings, go to Administration | System Options.
The main division in the System Options hierarchy is between **Design-Time** and **Run-Time** settings. The various Design-Time and Run-Time settings are discussed in the *Administration Guide*. As a general rule, site administrators working in the Ingeniux environment should become familiar with the organization of the System Options pane.
Communicating in the CMS

Collaboration is an important part of the web authoring process. To facilitate collaborative workflow, the CMS offers several options for communicating about site pages. When you advance a page in workflow, you can leave a comment for the person to whom you’re advancing the page. You can also send email from within the CMS.

Sending Email in the CMS

The email feature in the CMS is designed to make it easy to communicate about site content. When you email other users about a given page or component, the email will automatically include the name and xID of the page in the subject line and a link to the page in the body of the email. You can send messages to individual users and to groups.

- Refer to CMS 201 for more on configuring the site to set up SMTP and email addresses.

To Send an Email Message about a Page:

1. Right-click a page in the site tree and select **Send Mail** in the context menu. The Send Mail dialog will open.
2. Select users and groups from the list on the left and use the **To ->**, **Cc ->**, and **Bcc ->** buttons to populate the address fields.
3. Enter a subject or leave the default, which is the name and xID of the page from which you initiated the email.
4. Type the body of the message.
5. Click **Send**.

- In the Page Properties area on the edit form, the name of the person to whom the page is assigned is hyperlinked. Clicking this link opens a new email message to the assignee in the computer’s default email client.
Examining the Publishing Paradigm

In the Ingeniux CMS, the publishing process is multi-faceted. In most CMS implementations, the publishing process can be divided into three stages.

**Design-Time**

All content creation occurs on the Design-Time server, which is an IIS environment. When content is published from Design-Time, it is sent to a folder in the `xml\pub` directory.

**PeerSync Replication**

PeerSync is a data syncing application that replicates content from the Design-Time server to the Run-Time server. It’s possible to use other applications to replicate content, but PeerSync is the only data syncing service supported by the Ingeniux CMS.

**Run-Time**

The Run-Time server delivers the content viewed by site visitors. It’s a web server environment, but not necessarily IIS. Content only becomes available to the viewing public when it is replicated to the Run-Time server.

It’s important not to confuse a publish on the Design-Time site with a replication of content to Run-Time. A Design-Time publish only sends content to a directory on the Design-Time server. Site visitors won’t be able to see this content until after PeerSync has done its work.

In the Design-Time environment (i.e. within the Ingeniux CMS application), a page has to go through three steps in order to be published:

**Check In**

To modify a page, a user has to check it out. Before the page can be published, it has to be checked in again, either by the user or by a workflow action.

**Mark for Publish**

A page has to be marked for publish in order to be included when the rest of the site is published. Unmarking a page for publish pulls the page out of the publish loop, and changes to the page won’t be sent to the live site.
Publish

This action makes pages available for PeerSync to copy to the Run-Time server, where it will be available to site visitors.
Checking Pages In and Out

Pages that are checked in cannot be edited until they are checked out. Conversely, changes made to pages that are checked out do not take effect until the page is checked in.

The site tree reflects check in/out status: If a page is checked in, the icon next to the page is grayed out; if it's checked out, the icon is brighter.

✓ New pages are automatically checked out and assigned to the creator.

It's also possible to check in a page toward a specific publishing target. By checking in a page only toward a specific target, you limit the environment(s) to which you'll publish content. For example, you could check in an updated page toward a test environment without sending it to production.

Checking Pages Out

The check out action enables the page to be modified and assigns the page to the person performing the action. Only person who checks out the page can make changes to it.

To Check Out a Page:

1. Select a page in the site tree.
2. Click the Check Out button on the tool bar, or right-click the page and select Check Out. Pressing CTRL + SHIFT + O also checks out the page.

✓ If the page has children, an option to check out the page and all its children will be available in the context menu.

On the server side of things, when a page is checked out, a copy of the xID.xml file in the root XML directory is copied into the XML directory for the user checking out the page.

For example, page x27.xml lives in xml\x27.xml. When it is checked out by Joe Smith, a copy of the file is placed in xml\users\joesmith\xml. It is this user XML file to which Joe saves his work.
Checking Pages In

The check-in action creates a new version of the page that includes the changes made since the page was checked out. If the page is marked for publish, these changes will take effect with the next publish that includes the page in its scope.

✓ When a page is checked in outside of workflow, it will no longer be assigned to anyone.

To Check In a Page:

1. Select a page in the site tree.
2. Click the Check In button on the tool bar, or right-click the page and select Check In. Pressing CTRL + SHIFT + I also checks in the page.

✓ If the page has children, an option to check in the page and all its children will be available in the context menu.

Let’s continue with the example above. When Joe is done working with x27.xml, he checks the page in. This takes the copy of x27.xml that was in his user XML directory and moves it to the main xml directory. Before it overwrites the file in this directory, the old, soon-to-be-overwritten file is copied to versions\x27\ and a version number is appended to the file. (Versioning must be turned on in System Options | Versioning for this to occur.)

Undoing Check Out

In some situations, changes are inadvertently made to a page. Rather than check in the page, which would save these changes as a new version, the check out that began the changes can be undone. When you undo a check out, the page reverts to the state it was in before it was last checked out.

✓ Taxonomy categories assigned between checking out and undoing a check out will remain intact and be unaffected by the intended "undo" action.

To Undo a Check Out:

1. Right-click the page in question.
2. Select Undo Check Out.
✓ If the page has children, an option to undo check out for the page and all its children will be available.
Marking and Unmarking for Publish

The mark-for-publish action tells the CMS that the changes made to a checked-in page are ready to be published. Like the check-in action, this action helps ensure that pages will not be prematurely published.

The site tree reflects mark/unmark-for-publish status: If marked for publish, the page name appears as bold text; if unmarked for publish, the name appears in plain text.

✓ New pages are unmarked for publish by default.

Marking a Page for Publish

Marking a page for publish indicates to the CMS that the page is ready to be published. This, in conjunction with the appropriate check-in and publish actions, makes the page available for publishing to the web.

When marking a page for publish, you can choose to mark only the page itself, or to mark the page and all of its children. These two options (page or page and children) make it easy to configure site-wide publishing options while making exceptions for individual pages. For instance, if you mark the home page and its children for publish, you are effectively telling the CMS to send the whole site to the publishing folder on the next full publish. Having taken this site-wide action, you can then unmark individual pages that are not ready to be published.

Having chosen to publish either a page or a page and its children, you will see the Mark/Unmark pages for publish dialog.

![Figure 56: Marking a page for publish.](image)

In this dialog you can choose to publish different versions of pages to different publishing targets. This functionality is particularly useful for sites that employ test environments, because you can test new content in one environment while an older version of the content remains marked for publish to the live environment.
To Mark a Page for Publish:

1. Right-click the page in the site tree.
2. Select **Mark/Unmark for Publish | Page** or **Mark/Unmark for Publish | Page and Children**. The Mark/Unmark pages for publish dialog will appear.
3. Choose which version(s) of the page (or page and children) will be marked for publish to which publishing target(s). Click **OK**.

✓ **You can also initiate a mark-for-publish action outside of workflow by right-clicking the page in the site tree, selecting Page Properties, and configuring the action at the Mark for Publish tab.**

Unmarking a Page for Publish

The unmark-for-publish action tells the CMS that the page is not to be published. While the page is unmarked for publish, changes to it will not be published, even if the page has been checked in and a publish performed.

To Unmark a Page for Publish:

1. Right-click the page in the site tree.
2. Select **Mark/Unmark for Publish | Page** or **Mark/Unmark for Publish | Page and Children**.
3. Uncheck the **Marked for Publish** checkbox(es) for the page(s) to be unmarked for publish. Click **OK**.

Unmarking a page for publish does not necessarily remove the file from the Run-Time server. It tells the Design-Time server not to copy the file into the publishing target that PeerSync will copy to the Run-Time server. It also tells the navigations on the Run-Time server to stop displaying links to the unmarked page. A copy of the unmarked page still resides on the Run-Time server, however.

Unmarked files are removed from Run-Time when a full, site-wide publish occurs. (PeerSync will also need to be configured to delete unmatched files.)
Publishing Pages

In the Design-Time environment, publishing content entails copying all content that is checked in and marked for publish into the publishing target folder. From there, PeerSync (or some other syncing service) moves content to the Run-time web server.

In order for any page or component to be published, the page must be checked in and marked for publish.

✓ *If there is ever a discrepancy between content on the live site and previews in the Design-Time environment, check to be sure the content has been both checked in and marked for publish.*

Performing a Publish

When performing a publish, you have to determine three important variables: the scope of the publish, the publishing target, and the type of publish.

Scope of Publish

Pages may be selected for publish within three different scopes:

- **Page** – Publishes the selected page.
- **Page and Children** – Publishes the page and all its descendants in the site tree.
- **Site** – Publishes the site to one or more publishing targets.

Publishing Target

The publishing target indicates the location to which content will be published and the format in which it will be published. For many sites, there is only one publishing target.

To configure publishing targets, go to Administration | Manage Publishing System | Publishing Targets. Upon the first publish to a publishing target, a directory with the pub target name is created in the xml\pub\ directory on the Design-Time server.

Type of Publish

There are two types of publish:

**Incremental Publish** – An incremental publish selects only objects in the tree that have been modified since the last publish. An incremental publish is useful for updating small amounts of content on a day-to-day basis.
**Full Publish** – A full publish selects all items in the tree that are checked in and marked for publish, regardless of any changes that have been made to these pages. A full publish should be used for large-scale updates and should not be conducted during peak business hours.

**To Publish:**

1. In the toolbar, click **Publish Site**.
2. The Publish dialog will open. Select a publishing target, or use CTRL + CLICK to select multiple targets.
3. Click either **Incremental** or **Full** to choose the type of publish.
4. The Publish Submitted dialog will open. Click **Monitor Publishes** to view the pending publish in the Publish Monitor, or **Close** to exit the dialog.

-Or-

1. Right-click on a page in the site tree and choose **Publish** | **Page** or **Publish** | **Page and Children**.
2. The Publish dialog will open. Select a publishing target, or use CTRL + CLICK to select multiple targets.
3. Click either **Incremental** or **Full** to choose the type of publish.
   - The Publish Submitted dialog will open. Click **Monitor Publishes** to view the pending publish in the Publish Monitor, or **Close** to exit the dialog.

✓ *Publish tasks can be automated through the AutomatedTasks.xml file on the Design-Time server.*

**Viewing Results with the Publish Monitor**

In the Publish Monitor, you can view the real-time status of pending publishes, and the results of completed publishes.

When no publishing jobs are currently underway or pending, the Publish Monitor displays the message "No Ongoing Publish," and the Pending Publishes view is empty. If a job is currently underway, the Publish Monitor will display the message “Publishing to” and the name of the publishing target. If other publishing jobs are queued behind the current job, the details of the queued jobs will display in the Pending Publishes view.
To Access Pending Publish View:

1. Go to Administration | Monitor Publishes.

2. The ongoing publish will be listed in blue at the top of the page. Pending publishes will be listed below. Selecting **Show IDs of pages to be published** opens a list of xIDs of pages to be published by a given publishing action.

All users of the CMS can view ongoing and pending publishing jobs, and users can remove pending publishing jobs that they've submitted. Administrators have the additional ability to remove any pending publishes and to reorder jobs by dragging and dropping in the Pending Publishes view.

In the Publish Monitor, you can also view publishing logs, which list the pages that have been sent to a given pub target on the Design-Time server.
To Access Publishing Logs:

1. Go to Administration | Monitor Publishes | View Publishing Logs.

2. Select a publishing target from the drop-down menu and a publish date from the left pane. The publish statistics will display in the right pane.

3. Click View Log XML if you would like view the XML document used to generate the log.
Adding and Removing Pages from Workflow

As we’ve seen, a site administrator (or another user with appropriate permissions) can check pages in and out, mark and unmark them for publish, and publish them. However, in most cases it’s a good idea to automate these actions using workflow. By folding actions into workflow, you ensure that content contributors perform the correct actions at the right times just by advancing a page in workflow. In fact, with a workflow configured, authors and editors won’t even need to be aware of actions like check in and mark for publish.

Workflows are customizable and must be created before they can be used. Once a page has been added to a workflow, it can only be modified by the approved groups of users for that stage of workflow. This means that administrators are often unable to make changes to a page while it is in workflow.

However, administrators have permission to add and remove pages from workflow. If you need to make changes to a page in workflow, you can simply remove the page, modify it, and then add it back to a workflow. Also, pages created outside of page creation rules can be added to workflows for later editing; pages created in workflow can be removed from workflow to prevent future editing.

To configure workflows, go to Administration | Manage Workflows.

✓ Refer to CMS 201 for more information on creating workflows.

Adding Pages to Workflow

A page creation rule (PCR) can automatically put a new page into workflow; a page created without a PCR can only be manually entered into workflow.

To Add a Page to Workflow:

1. Right-click the page in the site tree and select Add to Workflow.
2. Choose a workflow in the Select Workflow dialog and click OK.

✓ To view a page’s workflow values (workstate, work group, etc.) expand the Page Properties area. The edit form must be refreshed to see recent changes to page properties. Refresh the edit form by clicking the refresh button in the toolbar.
Removing Pages from Workflow

When a page is removed from workflow, an administrator can intervene in the content creation process. This can be useful if you need to make immediate changes to the page or add the page to a different workflow. Page assignment doesn’t automatically change when the page is removed from workflow, so you’ll need to check the page out to yourself if you want to modify it.

To Remove a Page from Workflow:

1. Right-click the page in the site tree.
2. In the context menu, select Remove from Workflow and click OK.

✓ Pages outside of workflow cannot be modified by authors with restricted permissions. If a page is removed from workflow, ensure it is assigned to a user with permission to perform the necessary actions outside of workflow.

Viewing Workflow History

Workflow history shows all assignments and transitions for the selected page as it has moved through workflow. Workflow history is only available for pages that are in workflow.

![Workflow History](image)

**Figure 59: The workflow history display in the CMS.**

To View Workflow History:
1. Right-click a page in the site tree.

2. Choose **Workflow, Show History**. Pressing CTRL + SHIFT + H also displays workflow history.

---

**Viewing Workflow Reports**

In the Workflow Manager, you can view reports on all pages currently in workflow. The default workflow report displays the name, xID, workflow, workstate, group, and assignee for each page in workflow. You can view a report for each workflow, and you can sort the results table by column in ascending or descending order.

![Workflow Manager](image)

*Figure 60: Viewing workflow reports in the CMS.*

**To View Workflow Reports:**

1. Navigate to **Administration | Manage Workflows | Reports**. The default workflow report will open.

2. [Optional] By default, the report displays all workflows. To see results for a specific workflow, click Select and choose a workflow from the drop-down menu.

3. [Optional] Click Export and follow the instructions in the dialog to export the report as a Microsoft Excel file.

4. [Optional] Reorder results by clicking in the table headers. Results can be order in ascending or descending order.

---
Working with URL Settings

Setting up URL Redirects

Redirects automatically take site visitors from one URL to another. As a general rule, using the structured URL feature (see below) is the best way to redirect visitors to an internal URL. However, the Redirects app in the CMS can be useful for forwarding browser requests to a new domain name. In the redirects app, you can add, edit, and remove custom 301 redirects. The “301” identifier indicates that the redirect is permanent.

A redirect consists of two pieces: a From value and a To value.

![Custom 301 Redirects](Custom301Redirects.png)

*Figure 61: Setting up URL redirects in the CMS.*

In the From field, you'll enter the entry point for the redirect; in the To field, you'll enter the destination of the redirect. These values can be fully qualified URLs, xIDs, or values that would appear after the base URL.

Changes to redirect settings will take effect on the live site after a publish is performed. Redirects that are set on IIS will always take precedence over those set within the CMS.

✔ *Important: Avoid redirect conflicts with existing site folders such as Media, Images, and Documents.*

Configuring Structured URLs

In order to give site visitors a user-friendly browsing experience, the CMS provides a structured URL feature. This feature generates semantic URLs for all pages in the site tree and for all site navigations and link elements.

In CMS 7.5, structured URLs have been revamped to make them easier to implement and to give users more control over syntax/punctuation. Also, the behavior of structured URLs has been redesigned to make it more predictable and efficient.

Structured URLs can now be configured on a per target basis in the Publishing System Manager.
To Configure Structured URLs:

1. Go to Administration | Manage Publishing System and open a publishing target or create a new one.

2. In the Publishing Targets | Info tab, check Enable Structured URL for Publishing Target. The Structured URL Settings section will open.

3. Configure structured URLs to meet the needs of your site.

Several of the options available are new in CMS 7.5.

![Structured URL Settings]

For the URL Word Separator, you can now select Remove spaces between words in addition to Dash (-) and Underscore (_). All of these options are designed to turn page names with spaces into viable URL addresses. The Normalize URL Separators option prevents separators from being repeated in structured URLs. For example, in an environment where a dash is enabled as a word separator, the page name “Student - Life” would not be displayed as the structured URL “Student---Life.” Rather, the extra spaces would be removed: “Student-Life.” This option is designed to make page names with extra spaces look tidier.

**Renamed URLs**

In the CMS, pages are identified by xIDs. If two different pages are both mapped to the same structured URL, both pages will be renamed with their xIDs appended:

/structuredURLpath-xID
The page with the smaller xID will redirect to the shared structured URL. In other words, the older page will “win.”

**Reassigning a Structured URL**

To create a structured URL, the CMS associates a xID with a structured URL, and this association is recorded in a `<Page>` element in an XML file. These `<Page>` elements are never automatically removed. But if you manually delete a page, and then you associate that page's structured URL with a new xID, the mapping between the deleted page and the structured URL will be removed. In this way, the structured URL associated with one xID may be taken over by another xID.

**Configuring Custom URLs**

Structured URLs can only be created for pages that are descendants of the home page. However, custom URLs can be configured for pages in other parts of the site hierarchy. Moreover, custom URLs can be temporarily assigned to pages and later removed. This feature can be particularly useful for marketing and promotional campaigns, during which it might make sense to shorten or modify a URL.

In CMS 7.5, custom URLs are managed on a page-by-page basis in the Page Properties dialog.

**To Configure a Custom URL:**

1. If more than one publishing target has been configured, select a publishing target at the top of the Site pane. (If the site only has one publishing target, no action is required for this step.)

2. Right-click a page in the site tree and select Page Properties. The URL Settings area appears at the bottom of the Page Properties dialog.
3. Click **Add** to enter a new custom URL for the page. When you’ve entered the URL, click **Add** again.

✓ A custom URL can be set as a page’s canonical (i.e. current) URL. If a custom URL is set to canonical status, this URL value will appear in links, navigations, references, and so forth. If a custom URL is not canonical, then it will create a redirect to the canonical URL. To make the custom URL canonical, select Current.

**Custom URLs and Multi-Format Output**

A page’s custom URL can be marked for Multi-Format Output (MFO), without altering the rest of the pages designated for a given publishing target. Using this feature, you can configure a few pages for MFO (e.g. as ASP.NET or PHP files) while the rest of the site still publishes XML.

This functionality differs from that of MFO configured per publishing target. When MFO is configured for an entire publishing target, all published pages will be rendered in the non-standard format (a mobile site format, for example). For the custom-MFO feature to work, a Run-Time server has to be implemented, and each MFO page has to contain a file extension (e.g. `.aspx`, `.php`).

**To Enable MFO for a Single Page:**

1. Configure a custom URL as described above, but add the appropriate file extension as part of the URL.

2. In URL Settings, select **MFO** (this will automatically make the page canonical).

✓ For instructions for enabling MFO, see the Administrator Guide.

**Customizing In-Context Editing**

You can customize the In-Context Editing (ICE) feature to meet site-specific needs. In addition to modifying default settings, you can configure ICE to support Multi-Format Output.

**To Configure In-Context Editing:**

1. Go to **System Options | Design-Time | In-Context Editing** and make changes as needed.
2. When you're finished making changes, click **Save**.

---

![Figure 64: ICE customization options.](image)

The following settings can be configured:

- **Enable In-Context Editing** – Turns on the ICE feature. ICE is enabled by default.
- **HTML Editor to match the look and field of page Preview HTML** – Causes the XHTML editor to apply the CSS from the preview page in order to match the look of the preview field. This feature doesn’t work with HTML that employs CSS filters. If the styling in the HTML editor appears unusual, this feature should be disabled.
- **Field Marker Color** – Determines the highlight color used to indicate an editable field on mouse-over. Values must be either standard CSS color names or else conform to the “#xxxxxx” or “#xxx” hexadecimal color code.
- **Invoked Field Marker Color** – Specifies the color used to outline an editable field once it has been selected with a mouse click. Values must be either standard CSS color names or else conform to the “#xxxxxx” or “#xxx” hexadecimal color code.
- **The Base Z-Index of the Field Marker** – Can be configured to make field markers visible when an HTML template depends on Z-Index for layout.
Localizing Site Definitions

During the planning stage of a CMS implementation, administrators usually provide labels, or site definitions, for parts of the user interface (UI). For example, an administrator might work with a project manager to determine site definitions for workflows, schemas, and fields in the Edit Form.

For various reasons, you may want to change some of these site definitions after the implementation process is finished. The Localization feature makes it easy to revise custom site definitions. (For instructions on translating the standard CMS text provided by Ingeniux, see Working in Different Languages above). Using Localization, you can change labels that users find confusing; you can even translate all of your custom labels and text into another language.

Permissions determine who can localize content. To facilitate translation, it may be necessary to give certain content contributors access to the Site Definition Localization feature.

The intro screen for the Localization feature provides an overview of the localization process.

![Figure 65: Localization options in the Administration Pane.](image)

A flag icon indicates the language selected for the CMS, while the Site Definitions Localization Summary shows the percentage of localization that has been completed and the last time that localization was updated.
Page and Component Schemas

Using the Localization tool, you can localize the friendly names of page and component schemas, and you can also localize element labels and add help text.

PCRs, Workflows, and Workflow States

It’s possible to change the names and labels for Page Creation Rules (PCRs) and workflows in the PCR Manager and the Workflow manager, respectively. But the Localization tool makes it easier to complete localization updates. In the Workflow Definitions pane, you can access workflow names, descriptions, and transitions. In the Workflow States pane, you can access the various workstates that make up the workflows.

In the image below, a workstate is ready to be localized for French-Canadian users.

Figure 66: Localize element labels and add help text.

Figure 67: Example of a workstate ready to be localized.
To Localize Site Definitions:
1. Go to Administration | Site Definitions Localization.

2. Choose the type of content you want to localize: Page Schemas, Component Schemas, Page Creation Rules, Workflow Definitions, or Workflow States.

3. Pick an item to localize and enter new text in the text fields on the right.

![Figure 68: Localizing site definitions in the CMS.](image)

- When you’re finished localizing an item, navigate away and the new definition(s) will save automatically. A green check icon will appear next to each item that has been localized.

Page Language

For sites that display multilingual content, it can be useful to indicate page language within a page's XML. Developers can then use this information to display different pages in different formats.

To Set Page Language:
1. Right-click a page in the site tree and select Page Properties.

2. Open the Language tab and choose a language from the drop-down menu. The available languages have to be configured at System Options | Design-Time | Worldview.
Using Reports and Analytics

In this chapter you will learn to:

- Configure and run internal reports
- Configure and run Analytics
Running Internal Reports

The CMS features a report system that provides a number of internal analytics tools, including:

- Queries against multiple documents
- Customizable report parameters
- Report scheduling
- Excel spreadsheet generation

The basic reporting model for the Ingeniux CMS involves running an XPath query against one or more XML documents.

To Access the Report Manager go to Administration | Reports. In the Overview tab you can view general site statistics, and in the Scheduling tab you can start and stop forthcoming reports.

In the left pane, In the Reports tree structure, you'll see report folders and report nodes. The folders and reports have different context menus. Right-clicking report folders will present two options: Paste and New Report. Right-clicking an individual report will present options to Cut, Copy, or Delete the report.

To open a report, expand a report folder and select a report from the second level of the tree structure. There are three available tabs for most reports:

- View Results
- Configure
- Schedules
Viewing Results

In the View Results tab, you can view reports and export the results to an Excel spreadsheet.

![Figure 70: Viewing reports in the View Results tab.](image)

Clicking **Get Results** (the blue-and-white arrow button) will run the report and return the results. After the results are returned, the Excel icon will appear. Click the Excel icon to export results to an Excel spreadsheet.

Configuring Reports

In the **Configure** tab, you can configure a report and view the XML document against which the report query will run.

![Figure 71: Configure a new report in the Configure tab.](image)

To Create and Configure a Report:
1. Right-click the folder that describes the type of report you want to create. (The options are Site Reports, User Reports, Workflow Reports, Comprehensive Reports, and Custom Reports.)

2. In the context menu, select New Report and the report type.

3. Enter a name for the report in the Name field, or use the default name.

4. [Advanced report only] Enter a data provider URL and save the report. This is the final step for configuring an advanced report.

5. Check boxes in the Documents to Be Queried area to select the XML documents against which the report will run. (If more than one document is selected, they will be combined into a single XML document.)

6. [Parameterized report only] In the Parameters field, click + and configure parameters.

7. Enter an XPath query to execute against the combined document. To view the combined document, click View Combined Document for Query (the orange-and-white page icon in the upper-right corner of the tab).

8. To configure the results table for the report, modify values in the Setup Results Table Columns section.

9. When you’re finished, use the blue save icon to save your report configuration.

—

✓ To create a parameterized or an advanced report, follow the steps above, but configure additional values where necessary. For more on the three report types, see Simple Report, Parameterized Report, and Advanced Report below.

Scheduling Reports

Simple and parameterized reports can have multiple schedules with specific reporting times and recurrences. Also, each schedule can have its own list of recipients. You can configure report schedules in the Schedules tab. (Note: Advanced reports cannot be scheduled.)

To Schedule a Report:
1. Select a report, open the Schedules tab, and click the button. The Schedule Entry form will open.

![Image](image.png)

*Figure 72: Scheduling a report in the Schedules tab.*

2. Enter a name for the report in the Name field and use the date and time pickers to enter a **Start Date** and **Time of Execution**, respectively.

3. In the Recurrence field, set the frequency with which the report will run.

4. [Parameterized report only] Enter execution parameters for the report.

5. Select users to receive the report, using the button to the right of Users to receive exported report. You can select groups or individual users, and you can remove them using the button.

6. When you’re finished, click the **Save** button to save your scheduled report.

7. [Optional] To schedule the report to run at additional times, use the button at the bottom of the Schedules view.

---

**Understanding Report Types**

Three types of report can be run in the reports manager:

- Simple reports
- Parameterized reports
- Advanced reports

**Simple Reports**

Simple reports run via an XPath query against a single XML document that is built by combining other XML documents. Simple reports run without parameters and display in list form only. You can refresh the list by clicking the **View Results** tab.

Configuring a simple report is a three-part process. The following values need to be set:

- **Documents to Be Queried** – The XML documents against which the query will run. These documents are combined into a single meta-document before the query runs. When the number of documents involved increases, report generation slows down.
- **Query** – The XPath query to run against the combined XML document.
- **Setup Results Table Columns** – The table in which report data will be returned. Use the Attribute Name checkboxes to determine which attributes to show in the table. Use the Column Label fields to set the names of table columns. Use the Data Type drop-down menus to select the format of the data to be displayed. And use the Width field to set the width of each table column.

Clicking the orange-and-white icon in the top-right of the reports pane shows you a preview of the combined XML document.

Clicking the blue disk icon saves the report configuration.

**Parameterized Reports**

A parameterized report requires additional parameters in order to run. In the **View Results** tab, you'll need to input or select one or more values in order to run a parameterized report. For example, to run a report on the page descendants of a given page, you would need to enter the page ID as a value.

![Figure 73: Creating parameterized reports.](image)
The **Configure** tab has an additional section, Parameters, for parameterized reports. Here you can configure the parameters to be added to the query.

![Figure 74: Creating parameterized reports.](image)

To add new parameters, click the **+** button and select **Add New Text Parameter** or **Add New Drop-Down Parameter**. If you choose Add New Text Parameter, you’ll need to enter a name and label, and you’ll have the option of entering a default value as well. If you choose Add New Drop-Down Parameter, you’ll also need to add choices and input a Choice Value and Choice Label for each of them.

![Figure 75: Creating parameterized reports.](image)

There is no way to dynamically populate a drop-down parameter. The choices are always hard-coded.

To schedule a parameterized report also involves an additional step. At the Schedules tab, you’ll need to complete the Execution Parameters section.

![Figure 76: Creating parameterized reports.](image)

**Advanced Reports**

Advanced reports don’t leverage the XPath-based technology of XML meta-documents. Instead, an advanced report looks for a URL to define its parameters.
To configure an advanced report, go to the **Configure** tab and enter the appropriate URL (e.g. *asp/reports/workflowUsageReport.asp*) in the Data Provider URL field. This URL will provide parameter definitions and report results. The provider URL only receives form posts. Each advanced report has to reference a specific URL.

Because advanced reports require special authentication and remote access, they cannot be scheduled. No **Schedule** tab will be visible for an advanced report.

**XPath Queries**

The reports feature uses XPath queries to find data in the combined XML page. XPath is an XSLT syntax used to search page elements and attributes. The following table describes common XPath operators, expressions, and functions.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[]</td>
<td>Contains a filter string.</td>
</tr>
<tr>
<td>@</td>
<td>Indicates an attribute instead of an element.</td>
</tr>
<tr>
<td>*</td>
<td>Wildcard returns all values.</td>
</tr>
<tr>
<td>=</td>
<td>Equal to</td>
</tr>
<tr>
<td>//siteSchema:Page[@AssignedUser='author1']</td>
<td></td>
</tr>
<tr>
<td>!=</td>
<td>Not equal to</td>
</tr>
<tr>
<td>//siteSchema:Page[@AssignedUser!='author1']</td>
<td></td>
</tr>
<tr>
<td>and</td>
<td>Both conditions must be true</td>
</tr>
<tr>
<td>//siteSchema:Page[@AssignedUser='author1' and @MarkedForPublish='false']</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>One of multiple conditions must be true</td>
</tr>
<tr>
<td>//siteSchema:Page[@AssignedUser='author1' or @AssignedUser='editor1']</td>
<td></td>
</tr>
<tr>
<td>contains()</td>
<td>Value must contain text</td>
</tr>
<tr>
<td>//siteSchema:Page[contains(@AssignedUser,'author')]</td>
<td></td>
</tr>
<tr>
<td>not()</td>
<td>No value exists, or as a Boolean for other expressions.</td>
</tr>
<tr>
<td>//siteSchema:Page[not(@StartDate)]</td>
<td></td>
</tr>
</tbody>
</table>

✓ Refer to http://www.xml.org for more on XPath query definitions.

✓ Refer to http://www.w3schools.com to take an XPath tutorial.

The reports feature also supports the following Ingeniux-specific attributes.
### What's New in Ingeniux CMS

#### Attribute | Description and Example
--- | ---
Name | Page name found in page properties; case-sensitive. 
//siteSchema:Page[contains(@Name,'Student')]  
ID | xID found in page properties; case-sensitive.  
//siteSchema:Page[starts-with(@ID,'x1')]  
Schema | Page schema found in page properties; case-sensitive. 
//siteSchema:Page[@Schema='Image']  
CheckedOut | Page checked in or out; true=checked out, false=checked in; case-sensitive.  
//siteSchema:Page[@CheckedOut='false']  
MarkedForPublish | Page marked or unmarked for publish; true=marked, false=unmarked; case-sensitive.  
//siteSchema:Page[@MarkedForPublish='true']  
AssignedUser | Person to whom page is currently assigned; looks at user ID rather than user name.  
//siteSchema:Page[contains(@AssignedUser,'author1')]  
Changed | Date and time page was last checked in with changes.  
//siteSchema:Page[ms:string-compare(@Changed, '%today%') = 1]  
Created | Date and time page was created.  
//siteSchema:Page[ms:string-compare(@Created, '%today%') = 1]  
StartDate | Date and time page goes live.  
//siteSchema:Page[not(@StartDate)]  
EndDate | Date and time page goes dead.  
//siteSchema:Page[not(@EndDate)]  

#### Variables

The following variables are also supported in the CMS:

- %TODAY%
- %NOW%
- %THIS_WEEK%
- %THIS_MONTH%
- %THIS_YEAR%
Tracking Content with Google Analytics

The Ingeniux CMS can be configured to display data from Google Analytics, an enterprise-class application that measures web traffic and provides customizable reports. When Analytics is configured, you can access it by selecting a page in the site-tree and opening the Analytics tab in the edit pane.

Figure 77: The Analytics tab in the CMS.

Alternately, you can view a site-wide Analytics report at Apps | Analytics.

Configuring Analytics is a two step process: 1) enabling the publishing target; 2) linking the site.

Enabling the Publishing Target

To track live site traffic, the Analytics feature has to be enabled for the site’s publishing target. If no publishing targets have Analytics enabled, Analytics will display the following message in the edit pane:

Figure 78: Analytics must be enabled for the site’s publishing target.

To Enable Analytics for a Publishing Target:

1. Go to Administration | Manage Publishing System and select the publishing target that you want to monitor with Google Analytics.

2. In the Info tab, check Enable Analytics for Publishing Target and leave Google Analytics Provider as the selected data provider. (The other option, Sample Provider, is for demonstration purposes.)

3. Click Save.

4. [Optional] Repeat this process for any other publishing targets you want to link to Analytics.
In order for Analytics to use actual site data, each page must be connected to a Google Analytics (GA) account. Also, in order to view Analytics reporting, structured URLs need to be enabled and the site should be fully published.

Linking the Site

To Connect a Google Analytics Account:

1. In the Apps pane, select Analytics.
2. Click Connect Analytics Account. If necessary, log in to the Google account that has access to the Analytics profile the site is configured to use.
3. Approve access, allowing communication between the site and GA.
4. Select the profile which corresponds to the CMS content and click Save Profile. Analytics will now begin to monitor and display GA site data.

A single user of Google Analytics may have multiple profiles for different sites or sub-sites. Only one Google Analytics account is necessary; once the account is attached, anyone with access to the Analytics App has the ability to view reports.

Revoking Access to the Site

If you want to disconnect Google Analytics from the Ingeniux CMS, you’ll need to revoke GA’s access.

To Revoke Google Analytics Access to the CMS:

1. Go to Apps | Analytics and select the Profile link.
2. In Google Analytics Setup, click Revoke Access Token.

Viewing Reports

You can access reports for an individual page, or for the entire site.

To View Analytics:

1. To view analytics for the entire site, go to Apps | Analytics.
-Or-

To view analytics for a single page, select a page in the site tree and open the **Analytics** tab.

2. Configure dates in the Report Range fields and click **Apply**.

The **Site/Page Summary** report shows overlapping tracks for page views and visits through the range specified. If the total number of days in the range is less than 40, the report will track per day. If more than 40 days are selected, points will be placed on the graph at regular intervals.