



# Web Author Customizations Getting Started



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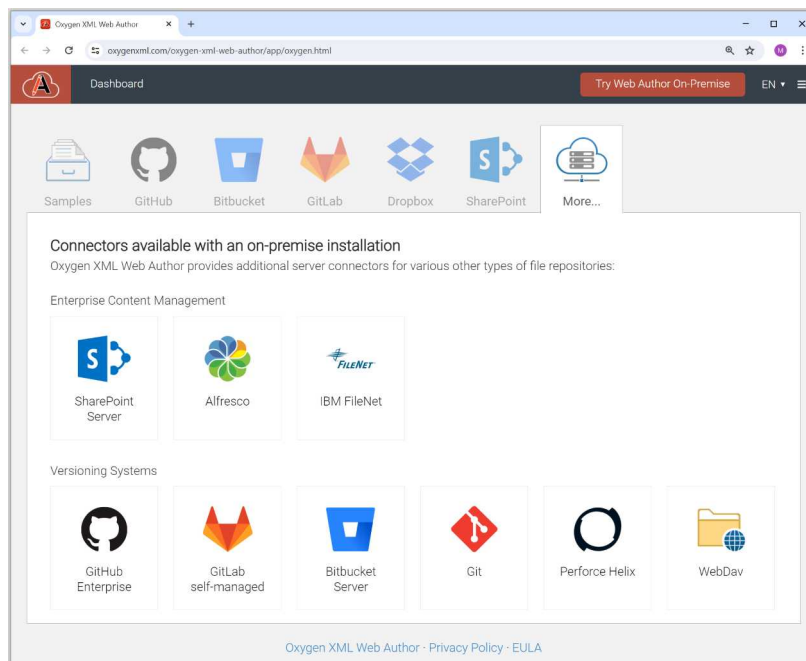


# Agenda

- Web Author built-in functionality
- What can be customized?
- How can Web Author be customized?
  - Options
  - Frameworks
  - Plugins
- Guidance & Help
  - Documentation
  - Troubleshooting deployment errors
  - Technical support

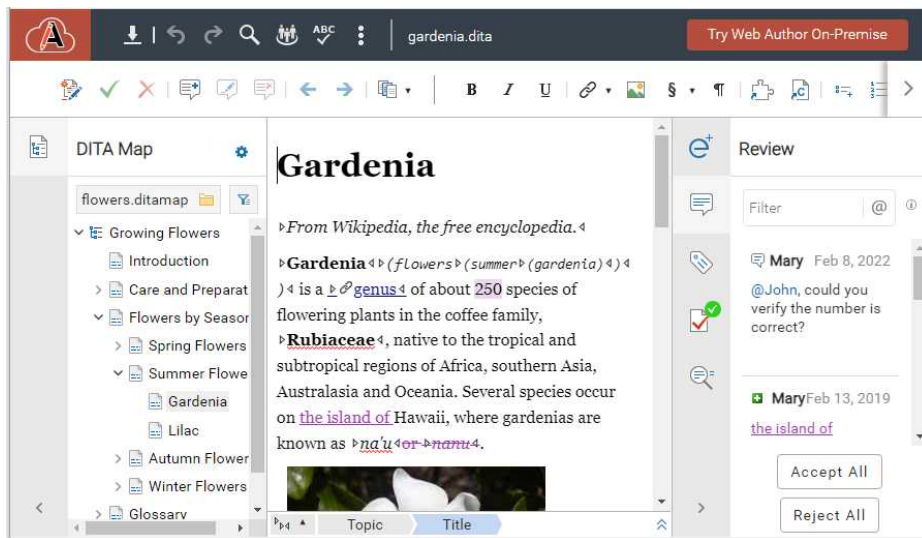
# Web Author Built-in Functionality

- Dashboard
  - Create and open documents
  - Server connectors for various types of file repositories



# Web Author Built-in Functionality

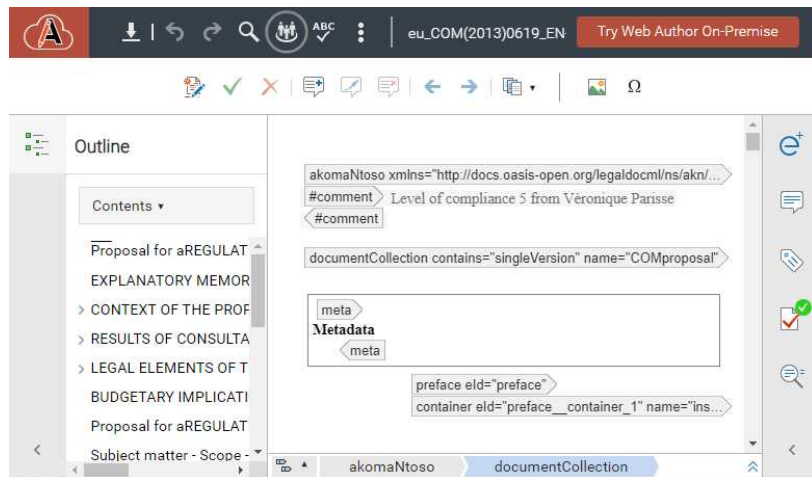
- Editor
  - Support for editing DocBook, DITA, XHTML, TEI documents **and more**
  - Support for concurrent editing and review in any XML document



# What can be Customized?

Sample customization use-cases:

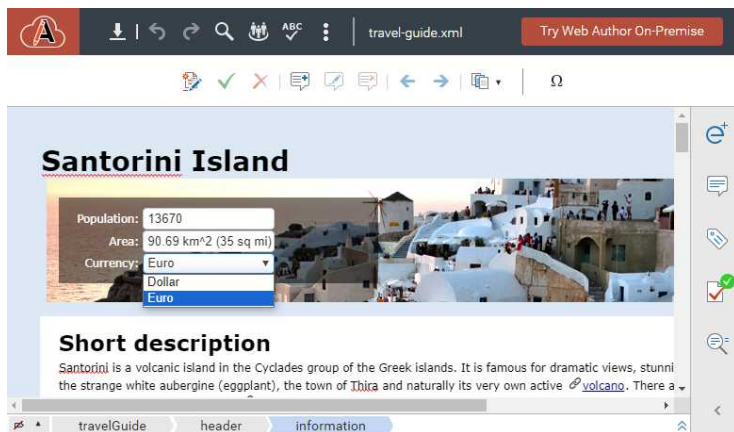
- Integrate a File Storage Service to open/create documents
- Add editing support for custom XML formats



# What can be Customized?

Sample customization use-cases:

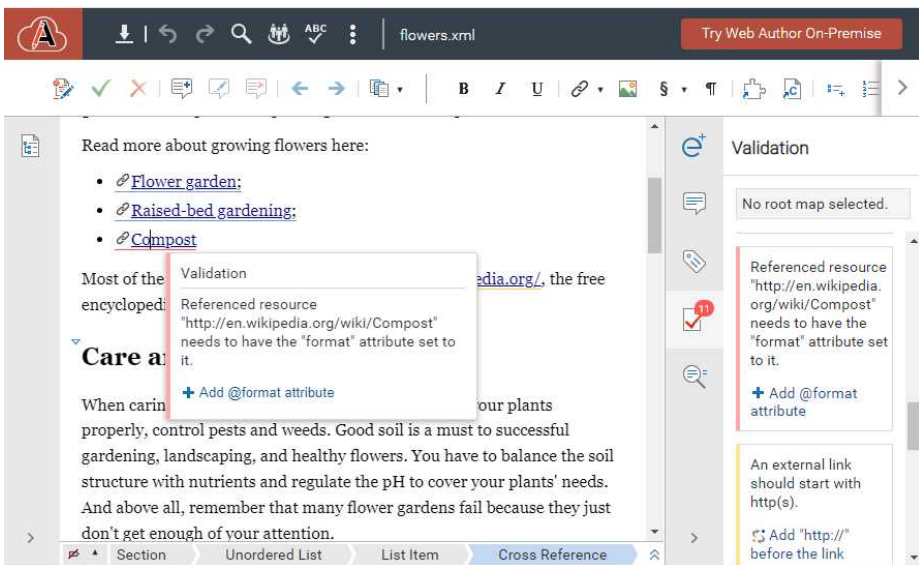
- Add custom dictionaries
- Add custom term lists for the spell checker
- Add inline form controls



# What can be Customized?

Sample customization use-cases:

- Customize the views, toolbars, menus or content completion list
- Impose validation rules and quick fixes



## What can be Customized?

Other sample customization use-cases:

- Integrating Concurrent Editing
- Controlling the Behavior of Drag/Drop Operations
- Customize the PDF Publishing Support
- Integrating Web Author with a User Management System



# How Web Author can be Customized

- **By Options**

Change settings directly in the Administration Page UI or manually add entry elements in an options XML file

- **By Frameworks**

Create a package containing document type specific configuration files and code that implement Oxygen API and upload it using the Administration Page

- **By Plugins**

Create a package containing code that implements the Oxygen API and upload the package using the Administration Page UI

## Customize With Options

- **What** options are available in Web Author?
- **Where** is the options file located on the server?
- **How** to set an option that is common with Oxygen XML Editor/Author?

## What Options are Available in Web Author?

- **Common** with the ones from Oxygen XML Editor/Author, like:
  - Expand or hide the referenced content (in Author mode)
  - Show or hide comment and processing instruction nodes (in Author mode)
  - Set the number of characters after which a hard line-wrapping action is performed (in XML)
- **Specific** Web Author options, like:
  - Security Options
  - Custom Options for the **Git**, **SharePoint** or **Outline** Plugins

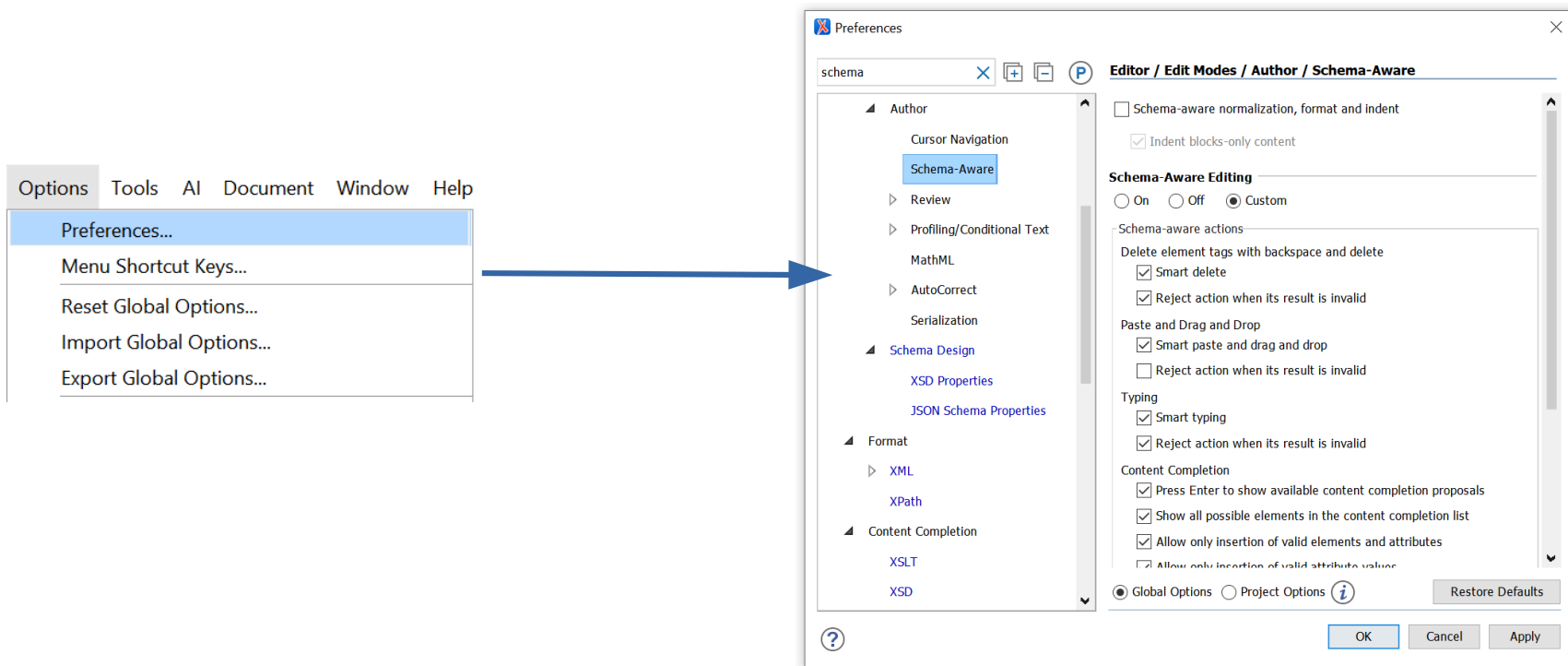
# Where is the Options File Located?

The screenshot shows the 'Administration Page' with a sidebar menu on the left containing 'Settings', 'General', 'License', 'Plugins', 'Frameworks', 'Connection', and 'Security'. The main content area is titled 'General Settings' and includes a 'Change tracking initial state:' dropdown menu set to 'Stored in document'. Below this are three checked checkboxes: 'Show content completion list when pressing Enter', 'Show all possible elements in the content completion list', and 'Change editors without page reload'. There are 'Apply' and 'Restore Defaults' buttons. The 'Logging' section shows a 'Log file:' field with the path 'plugins\org.eclipse.wst.server.core\tmp8\logs\oxygen.log' and a 'Download' button. The 'Options' section shows an 'Options file:' field with the path 'na\localhost\oxygen-xml-web-author\options\options.xml'. A blue arrow points from the 'Options file:' field to the XML code block on the right.

```
<?xml version="1.0" encoding="UTF-8"?>
<serialized version="18.1" xml:space="preserve">
  <serializableOrderedMap>
    <entry>
      <String>author.show.comments</String>
      <Boolean>true</Boolean>
    </entry>
  </serializableOrderedMap>
</serialized>
```

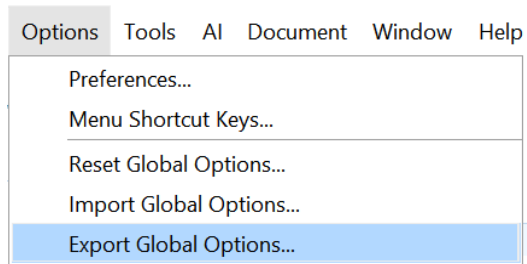
# How to Set an Option That is Common to Oxygen XML Editor?

1. Use the “Preferences” dialog from Oxygen XML Editor to set the option



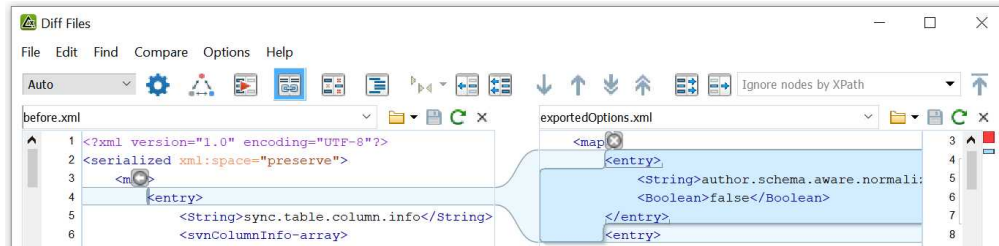
# How to Set an Option That is Common to Oxygen XML Editor?

2. Use the “Export Global Options...” action to export the options before and after



## How to Set an Option That is Common to Oxygen XML Editor?

3. Check what entry was changed, using the [Diff Files Tool](#)



4. Copy the modified `<entry/>` in Web Author's options.xml file
5. Restart the Web Author server

## Frameworks (Document Types Customizations)

- **What is** a Framework?
- **How to create** a Framework ?
- **How to test** a Framework?
- **How to upload** a Framework in Web Author?



## What is a Framework?

It provides editing support for a specific XML vocabulary (document type).

The framework can impose:

- The **association rules** (with a specific document type)
- The **validation rules**
- The **document rendering** (using CSS stylesheets)
- The **editing actions**
- The **documents templates**
- The **XML catalogs** (used for resolving references)
- Advanced functionality through JAVA and JavaScript Oxygen API

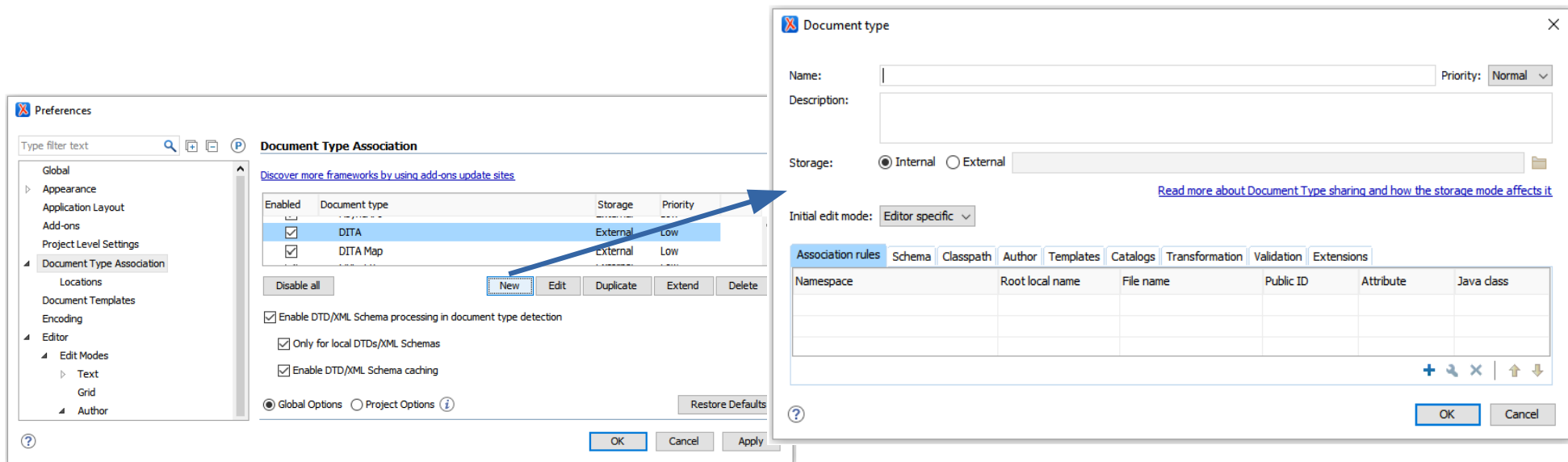
## How to Create a Framework?

Use **Oxygen XML Editor/Author** to easily create or extend frameworks

- [Download](#) a kit from the website
- Request a trial license from the installation wizard

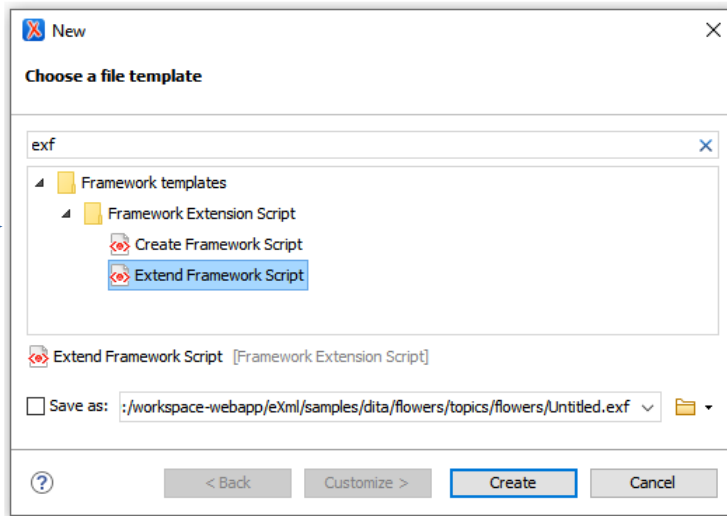
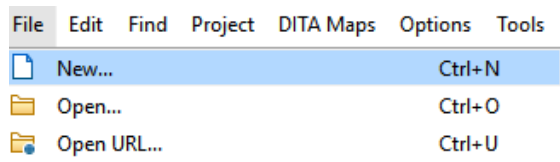
# How to Create a Framework?

- Create or Extend a framework using the “Document Type” dialog



# How to Create a Framework?

- Create or Extend a framework using an **Framework Script**



```

script
1  <?xml version="1.0" encoding="UTF-8"?
2  <!--
3
4  The file must be saved inside a frame
5
6  To generate a *.framework file out of
7  from the contextual menu.
8  -->
9  <script xmlns="http://www.oxygenxml.c
10  xmlns:xsi="http://www.w3.org/2001/X
11  xsi:schemaLocation="http://www.oxyg
12  base="DITA">
13  <name>Framework name</name>
14  <description/>
15  <priority>High</priority>
16
17  <author>
18  <!--
19  Author Actions are loaded from
20  {framework_directory}/externalA
21  {framework_directory}/{framework
22
23  https://www.oxygenxml.com/doc/v
24  -->
25  <toolbars>
26  <toolbar>
27  <separator/>
28
29
    
```

# How to Test a Framework?

## Oxygen XML Editor/Author + Web Author Test Server Add-on

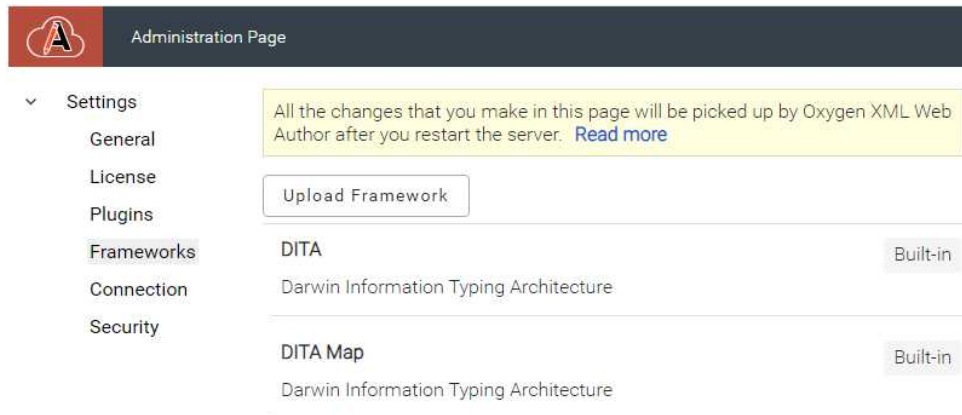
The image shows the Oxygen XML Editor interface with the Web Author Test Server Add-on. The main window displays the 'Iris' document with a DITA Map on the left and the rendered content on the right. The rendered content includes a title 'Iris', a 'Metadata' section with 'Keywords: Perennial Plant', and a paragraph starting with 'From Wikipedia, the free encyclopedia. Iris (flowers (spring (iris)) is a genus of between 200-300 species of flowering plants with showy flowers. It takes its name from the Greek word for a...'

A dialog box titled 'Editing current document in Web Author' is overlaid on the editor. It contains the text: 'The oxygen XML Web Author server is now started in testing mode. [Read more](#). To open iris.dita, use one of the URLs below. There is one for each network interface.' Below this text are three 'Open in Browser' buttons, each with a URL: '%2Fflowers.ditamap&showSave=true&stylesheet=titles'.

A browser window titled 'iris.dita - Oxygen XML Web Aut...' is shown in the top right. The address bar contains the URL: 'rs%2Fflowers.ditamap&showSave=true&stylesheet=titles=Basic'. The browser displays the rendered content of the 'Iris' document, including the title, metadata, and the Wikipedia-style paragraph.

# How to Upload a Framework in Web Author?

- Go to “Administration Page”
- Select “Frameworks”
- Use “Upload Framework” action
- Restart the Web Author server



The screenshot shows the 'Administration Page' for Oxygen XML Web Author. The 'Frameworks' section is selected in the left-hand navigation menu. A yellow warning box at the top states: 'All the changes that you make in this page will be picked up by Oxygen XML Web Author after you restart the server. [Read more](#)'. Below this, there is an 'Upload Framework' button. The main content area lists two frameworks: 'DITA' and 'DITA Map', both with a 'Built-in' status indicator.

Framework Name	Status
DITA	Built-in
Darwin Information Typing Architecture	
DITA Map	Built-in
Darwin Information Typing Architecture	

The uploaded framework should be a ZIP or JAR archive that contains exactly one folder (with a .framework or .exf file inside and other supporting files)

# Oxygen API for Frameworks

- **JavaScript API**
  - Used to create **client-side customization**
  - Some possible use-cases include:
    - Create **custom actions** and add them to the toolbar or contextual menu
    - Create **custom form controls**
    - Add **custom views**
- **Java API**
  - Used to create **server-side customization**
  - Can be used to:
    - Create operations to be executed when the user invoke specific actions
    - Control advanced functionality like: filter document styles or resolve references, using JAVA Framework Extensions (see the Extensions tab of the Document type configuration dialog)

## Using Frameworks created for Oxygen XML Editor

- High degree of compatibility
- CSS limitations, like:
  - The `-oxy-style` CSS property is not supported.
  - The `:hover` pseudo-class is only available for mouse-enabled platforms.
  - The `focus` and `focus-within` pseudo-classes are not supported.

- Actions compatibility limitations

If the *framework* contains custom **Author** mode operations (Java implementations of the `ro.sync.ecss.extensions.api.AuthorOperation` interface), they can be enabled to be used by the Oxygen XML Web Author using the `ro.sync.ecss.extensions.api.WebappCompatible` annotation.

Sometimes this is just a matter of annotating your custom Java class. In other cases (for example, when the `AuthorOperation` is used to show a custom Java Swing dialog box), it has to be re-implemented in JavaScript.



# Write Java Unit Tests for a Framework

## Sample Java Unit Test For a Framework:

<https://github.com/oxygenxml-incubator/oxygen-sample-frameworks/tree/main/sample-java-unit-test>

```
46     @Test
47     public void testRootElementStyles() throws Exception {
48         File testFile = new File("src/test/resources/sample-doc.xml");
49         AuthorDocumentModel authorDocumentModel = createAuthorDocumentModel(testFile);
50
51         AuthorElement rootElement =
52             authorDocumentModel.getAuthorDocumentController().getAuthorDocumentNode().getRootElement();
53         Styles rootElementStyles =
54             authorDocumentModel.getAuthorAccess().getEditorAccess().getStyles(rootElement);
55         Color rootColor = rootElementStyles.getColor();
56
57         Color redColor = new Color(255, 0, 0);
58         boolean isRedColorOnRoot = rootColor.equals(redColor);
59         assertTrue(isRedColorOnRoot);
60     }
```

# Sample Frameworks Customizations

<https://github.com/oxygenxml-incubator/oxygen-sample-frameworks>

## Using the frameworks

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To use the frameworks in Oxygen XML Web Author, you should:

1. Make sure you have Oxygen XML Web Author version 24 or later.
2. Download the entire repository
3. Create an archive with just the folder that contains the desired framework
4. Go to the Web Author Administration Page
5. In the Frameworks section, click *Upload Framework* and choose the archive made at step 2.

## Customize With Plugins

- **What is a Plugin?**
- **JavaScript Plugins**
- **JAVA Extension Types** for Plugins
- **How to upload** a Plugin
- **Sample** Plugins

## What is a Plugin

- A package containing files that adds extra functionality to Web Author using a series of application-provided extension points
- Can contain client-side customization code that uses the JavaScript API
- Provides multiple JAVA extensions types that can be used for specific customizations

# JavaScript Plugins

<https://www.oxygenxml.com/maven/com/oxygenxml/oxygen-webapp/26.1.0.0/jsdoc>

Tutorials ▾

Implementing a Custom Action

Customizing the Side Views

Presenting a Dialog to the User

Implementing a Custom Form Control

Customising the Editor using Loading Options

Modifying the Document

Retrieving Information About the Current Document by Invoking Java Operations from JavaScript Code

How to Remove a Toolbar Button

Show Table Properties action for custom table

Using a Custom URL Chooser

# JAVA Extension Types for Plugins

Samples of JAVA Extension Types:

- **URLStreamHandler** (integrate Web Author with an XML database or CMS)
- **WorkspaceAccess** (execute code when the application is started)
- **WebappServlet** (provide an implementation of a servlet-like interface)
- **WebappServletFilter** (provide an implementation of a javax.servlet.Filter)
- **AuthorStylesheet** (add a stylesheet to be used for rendering all XML documents)
- **WebappCSSResource** (specify a CSS stylesheet to be used for styling the interface)

# How to Upload a Plugin in Web Author

- Go to “Administration Page” and select “Plugins”
- Use “Upload Plugin” action and the Web Author server



The screenshot shows the Administration Page interface. At the top, there is a dark header with the Oxygen logo and the text "Administration Page". Below the header, a sidebar on the left contains a list of settings categories: Settings (expanded), General, License, Plugins (highlighted), Frameworks, Connection, and Security. The main content area features a yellow warning box stating: "All the changes that you make in this page will be picked up by Oxygen XML Web Author after you restart the server. [Read more](#)". Below this, there is a button labeled "Upload Plugin" and a link "Discover More Plugins...". A list of installed plugins is shown, with "WebDAV Connector v26.0" being the first entry. It is marked as "Enabled" with a checked checkbox and a trash icon. The description for this plugin reads: "Plugin that enables oXygen XML Web Author to connect to a server with WebDAV support." Below the description are two links: "Configure..." and "View License".

## Sample Plugins

<https://github.com/oxygenxml/web-author-sample-plugins>

<https://github.com/oxygenxml/web-author-webdav-plugin>

<https://github.com/oxygenxml/web-author-rest-plugin>



## Documentation

- Customization Guide:

<https://www.oxygenxml.com/doc/ug-waCustom/>

- JavaScript API Documentation:

<https://www.oxygenxml.com/maven/com/oxygenxml/oxygen-webapp/26.1.0.0/jsdoc>

- Java API Documentation:

<https://www.oxygenxml.com/InstData/Editor/SDK/javadoc/>

# Troubleshooting Deployment Errors

- **Browser logs**
  - Check the Developer Tools in your browser, Console tab
- **Server logs**
  - Check the Administration Page → General Settings → Options → Logging
  - Locate **the log file** and check it for errors
  - Locate **log configuration file** (Administration Page → General Settings → Options) and set the debug level to JAVA packages logging, like:

```
log4j.category.org.apache.http.impl.conn=debug
log4j.category.org.apache.http.impl.client=debug
log4j.category.org.apache.http.client=debug
log4j.category.org.apache.http.headers=debug
```

## Technical Support

- Forum

<https://www.oxygenxml.com/forum/oxygen-xml-web-author/>

- Contact the Support Team using the form on our website

<https://www.oxygenxml.com/techSupport.html>

here you can add up to 200MB attachments

- Email

[support@oxygenxml.com](mailto:support@oxygenxml.com)