

Develop a custom Web client using the IBM Content Integrator APIs

Create a custom Web client to work with the repositories supported by IBM Content Integrator

Skill Level: Introductory

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05 Jun 2009

Get up and running with the IBM Content Integrator APIs. Download an IBM Content Integrator sample Web client application, and then follow the steps in this article to create your own custom Web client that will be capable of integrating content across multiple heterogeneous content sources.

Overview

IBM Content Integrator is an industry leading product in the field of enterprise content integration. Content Integrator enables multiple content repositories to exist in an enterprise infrastructure simultaneously, so that companies can leverage their existing investment and avoid expenditures for consolidation. Content Integrator provides a unified, bi-directional view of existing unstructured information sources, enabling users to avoid the time and expense of content migration during mergers and acquisitions.

IBM Content Integrator provides enterprise content integration functionality to allow working with multiple content sources, integrating content such as documents and

images from various content repositories. Furthermore, it provides a common set of APIs to perform operations on content items without having to access repository-specific APIs and without the overhead of compensating for differences in functionality at the content sources. This common set of APIs allows you to create applications and solutions to display and modify content from multiple sources. Content Integrator APIs can be used to create custom Web clients that can perform the following operations:

- Explore content by browsing repository folders
- Preview content in browser-ready formats
- Maintain credentials for multiple back-end repositories in a password vault
- Execute and save different types of searches: form-based, free-form, and context-sensitive keyword searches
- Create private or shared workspaces where you can link content from multiple repositories. These can be used to create arbitrary, nested groupings of content.

The sample client provided here represents the code base that shows a console for working with content from multiple back-end repositories for viewing and arranging that content in various ways. Note, You must have IBM Content Integrator Version 8.5.1 installed in order to run the sample code

Getting started with the sample client code

The sample client can be deployed on an application server to demonstrate the operations listed above. The code can be deployed in an integrated development environment as a dynamic Web project and an EAR project and run in a server test environment, for example Rational Application Developer 7 and WebSphere Application Server v6.1.

Follow these steps to get set up:

1. Download the Content Integrator sample Web client:
 - Click [Downloads](#) and select **Sample Web client for IBM Content Integrator 8.5.1**.
 - Save the downloaded file. Unzip the file. This file is used in the following steps.
3. Import the project into Eclipse:
 - Click **File>** and **Import**.

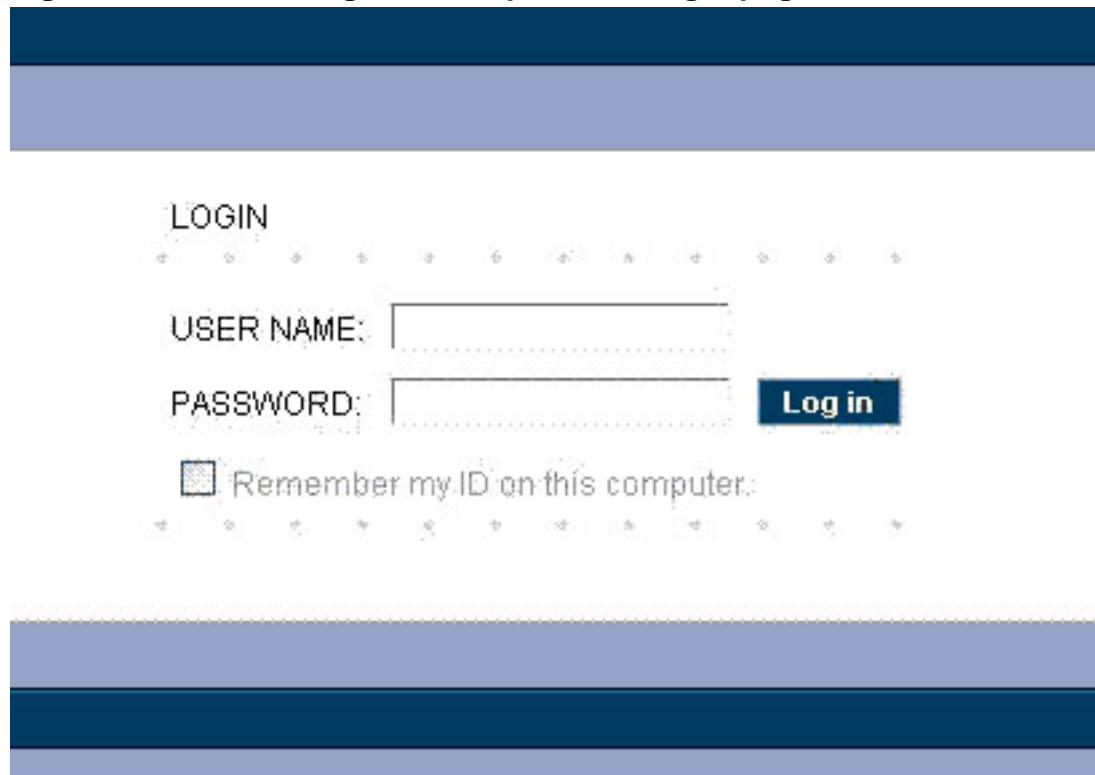
- Select **Project Interchange**.
 - Click **Next** and navigate to the appropriate zip file.
 - Select both projects to be imported into the workspace.
5. Perform a clean build:
- Click **Project** in the main menu.
 - Ensure **Start a build immediately** is checked.
 - Click **Clean**.
 - Click **OK**.
7. Gather the necessary JAR files to run the sample code:
- Download the Java Standard Templates Library, Apache Struts, Commons, and Log4j Libraries. See the [Downloads](#) section for more details.
9. Gather the necessary Common Viewer Applet files to run the sample code:
- Use the Common Viewer Applet sample provided as part of IBM Content Integrator.
 - Check the IBM Content Integrator installation directory (ICI_HOME) and the ICI_HOME/samples folder for the necessary files.
11. Run the application server test environment:
- On the **Servers** tab, right-click **WebSphere Application Server V6.1** and select **Start**.
13. Open the administrative console:
- On the **Servers** tab, right-click **WebSphere Application Server V6.1** and select **Run administrative console**.
15. Add the home directory for Content Integrator to the property set of the application server Java Virtual Machine (JVM):
- Select **Servers -> Application Servers -> server1 -> Server Infrastructure -> Java and Process Management -> Process Definition -> Additional Properties -> Java Virtual Machine -> Additional Properties -> Custom Properties**.
 - Click **New**.

- Enter the following properties:
 - Name: vbr.home
 - Value: ICI_HOME
 - Description: content integrator server installation root directory
 - Click **OK** and **Save**.
17. Add the EAR Project to the server test environment:
- On the **Servers** tab, right-click **WebSphere Application Server v6.1** and select **Add and Remove projects**.
 - Select the appropriate EAR project and click **Finish**.
19. Stop and restart the server test environment if needed.

Exploring content

Navigate to <http://localhost:port/WebClient> to view the Web client login page.

Figure 1: Content Integrator sample client login page



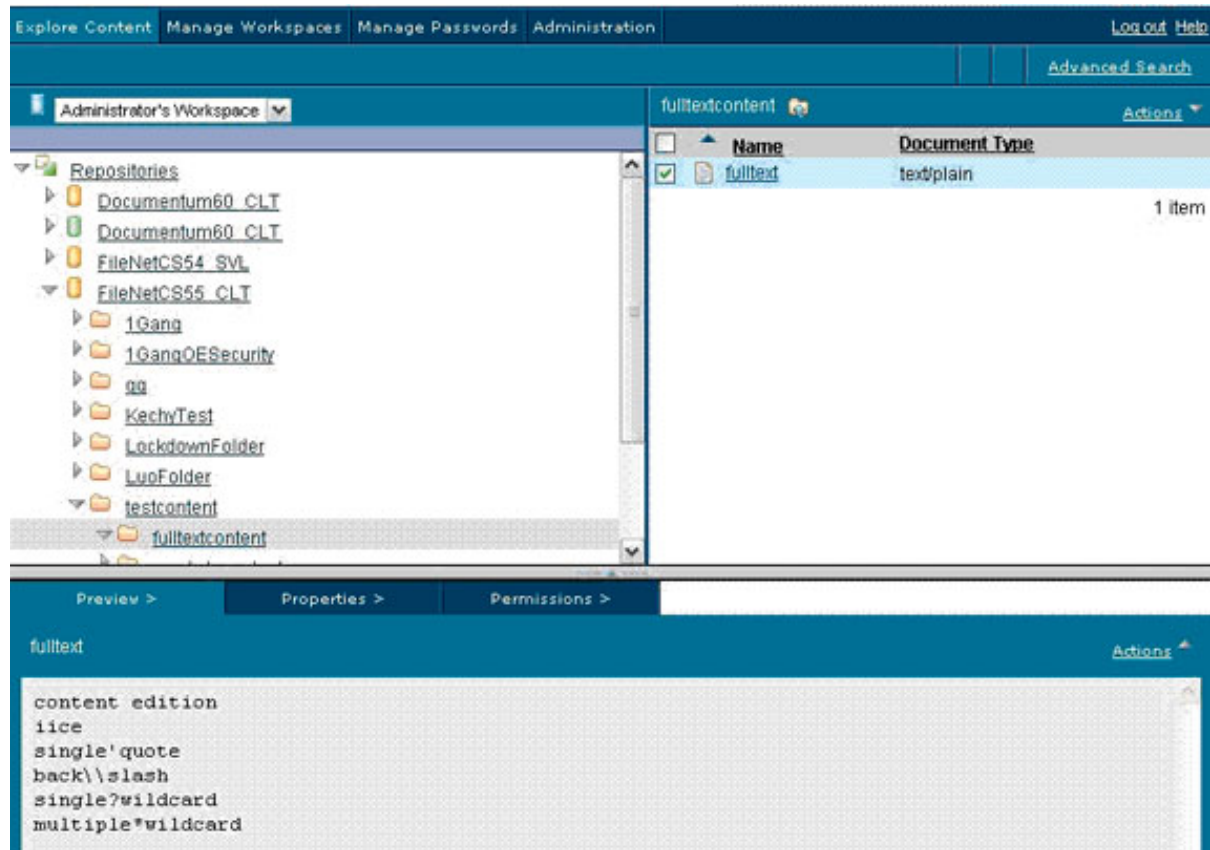
Type **Administrator** in the **USERNAME** field and leave the **PASSWORD** field blank.

Click **Log in**. When you are logged in, select **Administrator's Workspace** from the dropdown list. You might be directed there automatically.

Locate, view, and update content by navigating to the repository and content item. The first time a repository is selected, you need a username and password for that specific repository. The username and password can be saved by the client for later use.

Note: *The repositories shown in the sample client are the repositories configured in your IBM Content Integrator administration tool.*

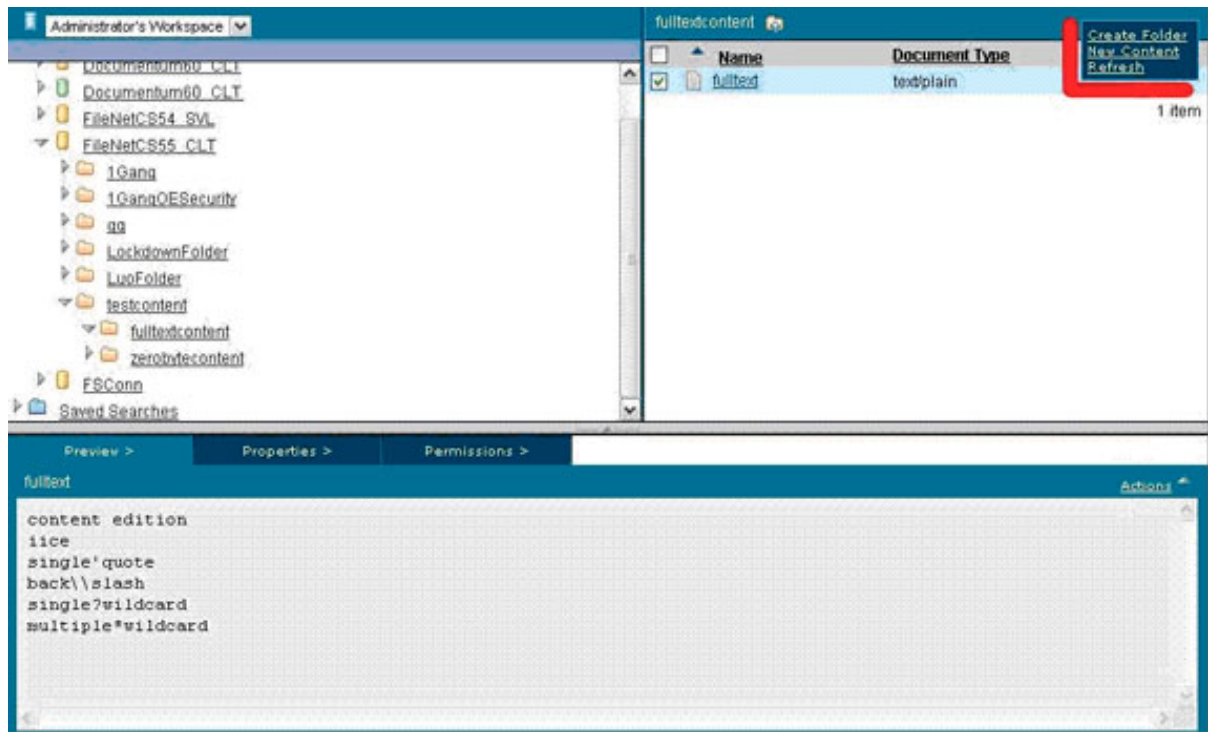
Figure 2: Repositories view of Web client



Repository actions available are shown in the top right of the Content List view.

Note: *The list of available actions can be different based on the supported repository functionality.*

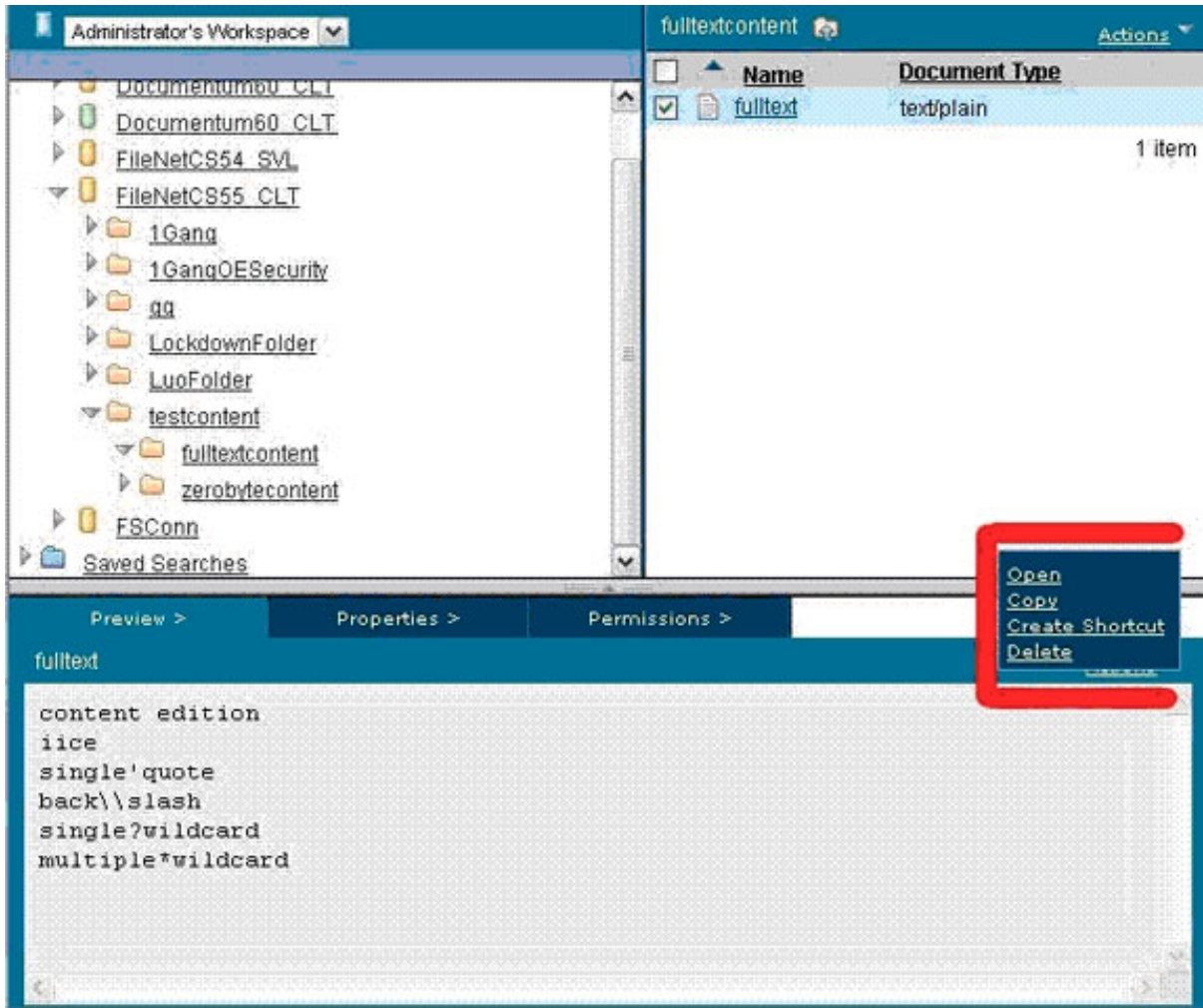
Figure 3: Repository specific operations view of Web client



The selected content item can be previewed in the **Preview** tab depending on your Content Integrator configuration. The content item can be deleted or copied to another location in the present repository, or the item can be copied to another repository.

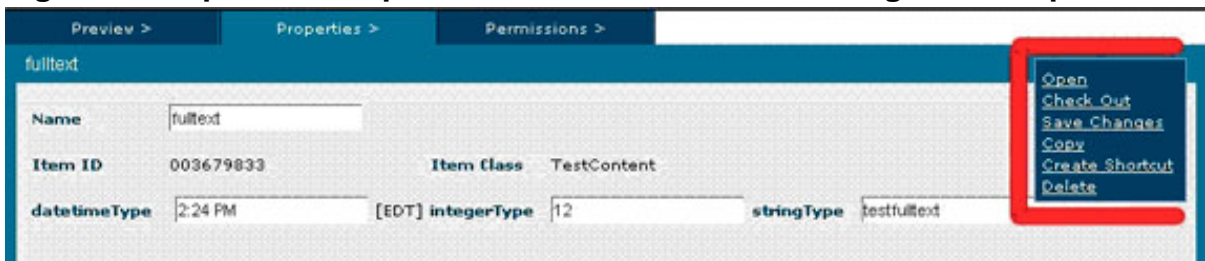
Note: *Multiple items can be selected. The chosen action is performed on all selected items.*

Figure 4: Content Integrator sample client preview page



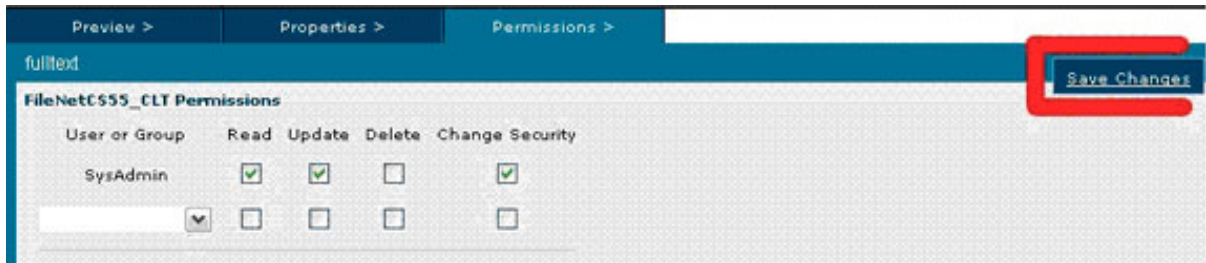
The content item can be updated. Any changes made in the client are immediately reflected in the external repository. Properties and permissions can be changed by using the **Properties** tab and the **Permissions** tab available actions menus.

Figure 5: Properties and permissions view of Content Integrator sample client



Click **Save Changes** to propagate new settings to the external repository.

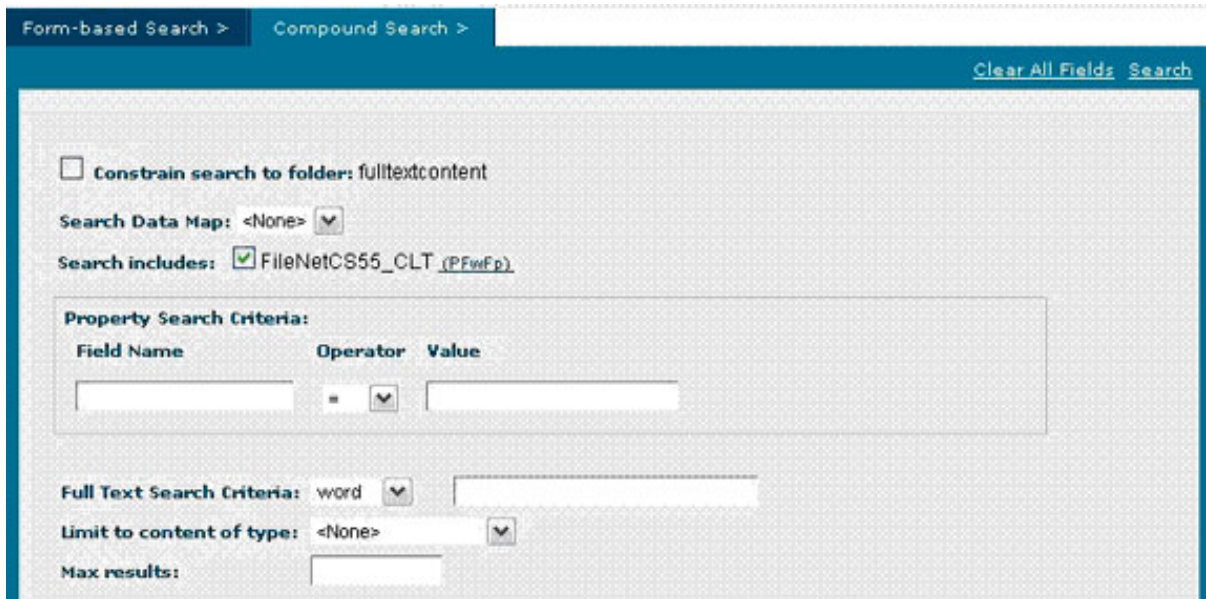
Figure 6: Save changes view of Content Integrator sample Web client



Performing searches

The **Advanced Search** option allows you to perform flexible searches options and provides two search components: a form-based search and a compound search. These components appear as individual tabs in a tabbed dialog when **Advanced Search** is clicked in the upper right of the **Explore Content** page:

Figure 7: Compound search view of Content Integrator sample client



The **Form-based Search** requires an existing data map for the repository or repositories to be searched. The **Compound Search** tab allows more options to be specified, including full text and property search criteria. However, the same data maps available on the form-based search can be applied to the compound search option. Form-based search allows only equality searches on a set of properties. Compound search allows various operators and allows criteria and operators such as and, or, like, greater than, and so on. The results returned by the search can be limited by specifying an higher limit in the Max results field.

Note: *Each repository has different search capabilities. Searches will perform as defined by the repository or repositories included in the search.*

Click the **Search** link to run the search.

The search results are displayed in the **Content List** view and can be browsed like

other content items from repositories.

Other client functionality

The functionality discussed above is only a subset of what the IBM Content Integrator APIs support. The sample client documentation available with the code discusses all the functionality available in more detail. A Web client developed with these APIs cannot only perform the content and search operations mentioned above, but all functionality mentioned in the **Overview** section.

Conclusion

This article presents a high-level overview of what the IBM Content Integrator APIs can accomplish as part of a custom Web client and the steps required to deploy the sample Web client in an integrated development environment. In addition to the steps shown here, a custom Web client can be developed to include anything from a subset of the functionality shown above, to the entire functionality supported by the APIs. A custom client can be tailored to include even the look and feel of your user interface. You can design your own IBM Content Integrator custom client to integrate with current applications portfolios or as a standalone application. Your client can be customized to use any or all of the IBM Content Integrator APIs functionality.

Downloads

Description	Name	Size	Download method
Sample webclient for IBM Content Integrator 8.5.1	ICIWebClientProject.zip	4.3MB	HTTP

[Information about download methods](#)

More downloads

- Product: [Download Apache Commons library](#)
- Product: [Download Apache Struts library](#)
- Product: [Download Apache Log4j library](#)
- Product: [Download the Java Standard Tag Library](#)

Resources

Learn

- [IBM Content Integrator V8.5.1 information center](#)
- In the [ECM Zone on developerWorks](#), get the resources you need to advance your skills in IBM Enterprise Content Management products.
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About the authors

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Georgiana Avram has been with IBM since 2005. After joining IBM as an Extreme Blue Technical Intern, she became a technical consultant for IBM Global Business Services. Her experience includes content management, data analysis, reporting, and enterprise search integration, Service-Oriented Architecture, business process and workflow development. Currently, she is a Software Engineer for IBM Software Group, focusing on Enterprise Content Management and IBM Content Integrator. She holds a BS in Computer Science and a BA in Mathematics.