

# IBM Cloud Pak for Business Automation Demos and Labs 2024

## Lab Guide – Business Automation Navigator on Cloud Pak for Business Automation

V 1.7 (for CP4BA 24.0.0)

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# 1 Introduction

## 1.1 Business Automation Navigator

IBM Business Automation Navigator<sup>1</sup> (BAN) is a feature-rich, browser-based interface where you can work with the business applications you need, to complete your tasks.

BAN is originally targeting users who work with the IBM Content Service capabilities. It integrates searching, browsing, working with documents like viewing, or checking documents in and out of content repositories, and provides integration with Microsoft Office applications.

In addition to the extensive content management related capabilities, access to the Case client, business applications, dashboards, custom plug-ins, and more can be configured.

BAN uses the concept of desktops. These desktops can be configured very flexibly, any number of them may be created. Thus, BAN can easily be configured to support different use cases and user groups.

## 1.2 Lab Overview

This lab demonstrates how to use BAN as part of Cloud Pak for Business Automation. It focuses mostly on the Content Services-centric capabilities including the MS Office integration. The use cases shown are generic. Most applications will utilize one or more of the concepts demonstrated in the exercises.

**Exercise “Creating Entry Templates for Managing Documents and Folders”** demonstrates how to define Entry Templates, and how users can streamline their work and control how documents are managed in the repository by defining the location, document class, property values, etc.

**Exercise “Adding Documents using Entry Templates”** shows how to add documents into a repository using the entry template created in the previous exercise.

**Exercise “External Data Services (EDS)”**. EDS help to access external data whenever the business user invokes a service through the web client. This exercise demonstrates one of the many use cases for EDS: how to validate properties while adding a document.

**Exercise “Search Content and Simple Search”** illustrates two ways of how to search for content that is stored in repositories. It demonstrates how the searches can be adapted to user needs and that those searches can be saved into FileNet P8 repositories for later reuse.

**Exercise “Creating Favorites”** describes how to create favorites. Favorites allow users to quickly find items that they work with frequently.

**Exercise “Content Redaction using IBM Daeja Viewer”** explains how business users can hide parts of a document, e.g., to hide sensitive information for users without a need to know. The exercise also demonstrates how users can save a document with redactions and how to use the merge & split feature.

**Exercise “Edit Service client feature with local Microsoft Office Apps”** demonstrates how to download, install, and configure the Edit Service client feature, and use it with the user’s Navigator desktop and their locally installed Microsoft Office apps.

## 1.3 General Lab Instructions

1. If you are performing this lab as a part of an IBM event, access the document that lists the available systems and URLs along with login instructions. For this lab, you will need to access the **ICN desktop**. It is recommended to store the URL as a bookmark, so you can refer to it easily.

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<sup>1</sup> Business Automation Navigator (BAN) in Cloud Pak for Business Automation (CP4BA) or IBM Content Navigator (ICN) in traditional deployments both refer to the same product with slightly different configurations. Throughout the lab guide, mostly the general term IBM Navigator is used.

\_2. Please download all the sample documents from the **Lab Data** folder. They will be used for the Adding, Searching, and the Merge & Split documents exercises.

\_3. Obtain a username and the password for the lab. Note the password, you will require it multiple times.

Throughout the lab document various screenshots show the name of the object store being used as “content” (all lowercase). Depending on the environment you are using, the object store might have a slightly different name such as “CONTENT” (all upper-case), or “CONTENTrepo”. This has no implications on any of the steps in the lab document.

In the lab instructions there are sections marked with a grey bar on the left side, like this one. In these sections, additional explanations are given. For example, about concepts and additional features.

## **2 Exercise: Creating Entry Templates for Managing Documents and Folders**

### **2.1 Introduction**

Entry Templates are created in an IBM Navigator desktop, typically by a relatively small set of users such as managers, supervisors etc. and are used by a much larger number of users, typically clerks etc. Some of the key capabilities of entry templates and advantages of using them are as follow:

- Documents, folders, form data, and custom objects can be created with entry templates.
- Users who are not administrators can create entry templates. For example, a project manager can create the entry templates used by the project team.
- Entry templates support records management by providing a simplified and customizable method of declaring a document as a record.
- Entry templates can specify the folder in which the object will be filed, can either prevent or allow the user to change the folder, and can restrict the user to select a particular folder or its subfolders.
- The layout and order of the properties, including default property values, can be specified in an entry template, and the template designer can select to show or hide each property to users of the template.
- Entry templates can specify whether a document can be added as a major or minor version and can specify whether a user can change this setting.
- Entry templates predefine the document or folder class of a document uploaded, or folder created, thereby making sure users select the right one for a specific task.
- Entry templates can specify the access rights for the object, and the designer can elect to hide or show the access rights for the user to modify.
- Entry templates can serve as placeholders for documents that a user provides while processing a FileNet P8 workflow step. When the user clicks the entry template in a workflow step processor, the entry template wizard prompts the user to add a document and the new document replaces the entry template attachment.
- Folders can be configured with an allowed set of entry templates to further assist a user to select the correct entry template for a specific folder.
- Dependent properties can be specified too using Entry templates and EDS. For example, user can set up Region and Branch Office choice lists properties to the entry templates. When the user selects a different region, the Branch Office list is cleared and populated by a different list of branch offices using EDS.

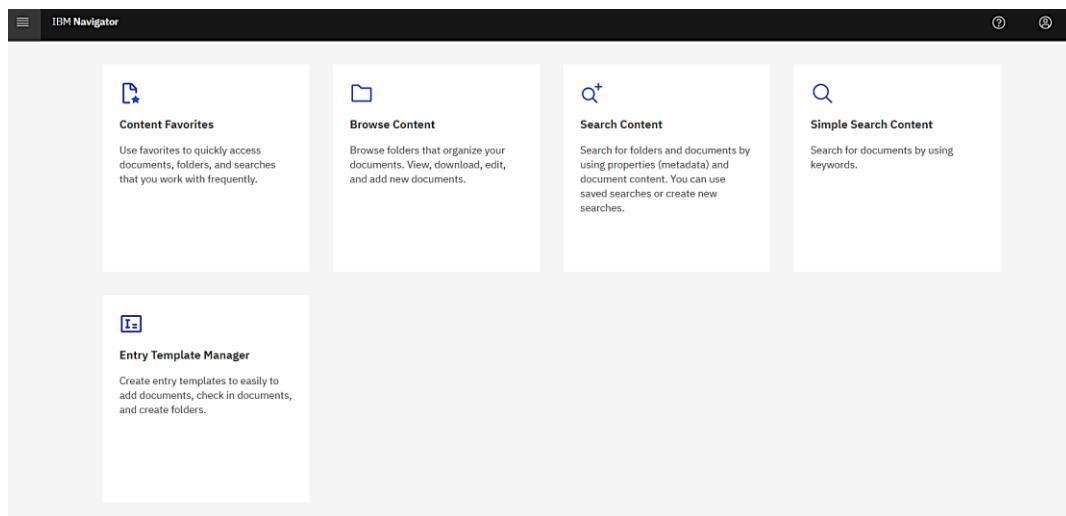
## 2.2 Exercise Instructions

This exercise is designed based on the “Client Document” document class and its properties “Document Title”, “Client Name” and “Reference ID” which are part of the Client Onboarding solution. For instructions on how to create custom document classes and their properties in the FileNet Content Engine Administrative Console (ACCE) to use when creating entry templates, please refer the Content lab 1 “Setting up FileNet Content Platform Engine for Automation Projects on Cloud Pak for Business Automation”.

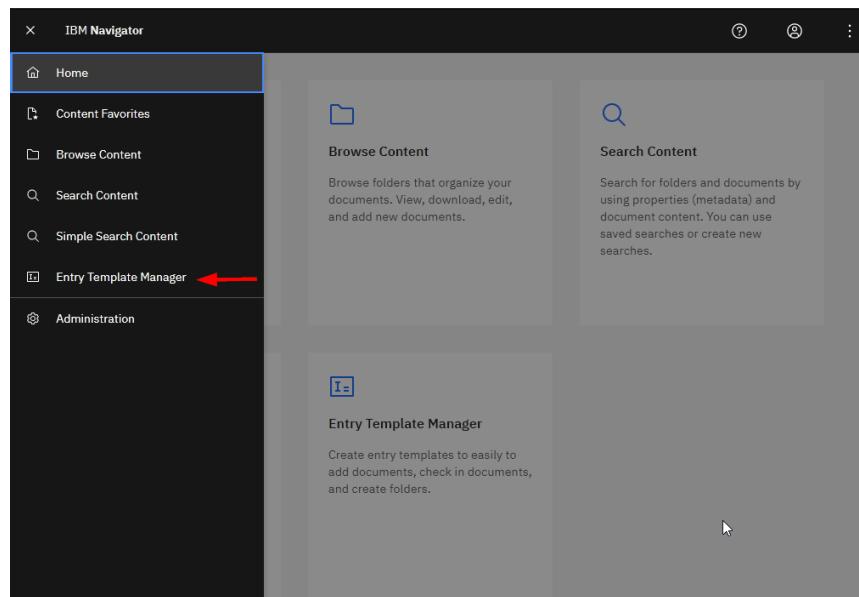
### 2.2.1 Creating Entry Templates to Manage Folders

- \_1. Open the browser and navigate to the IBM Navigator desktop by using the **ICN Lab URL** provided to you. Log in using the username and the password which you obtained before.

Once logged in to the desktop, your home page/desktop should be shown like below.

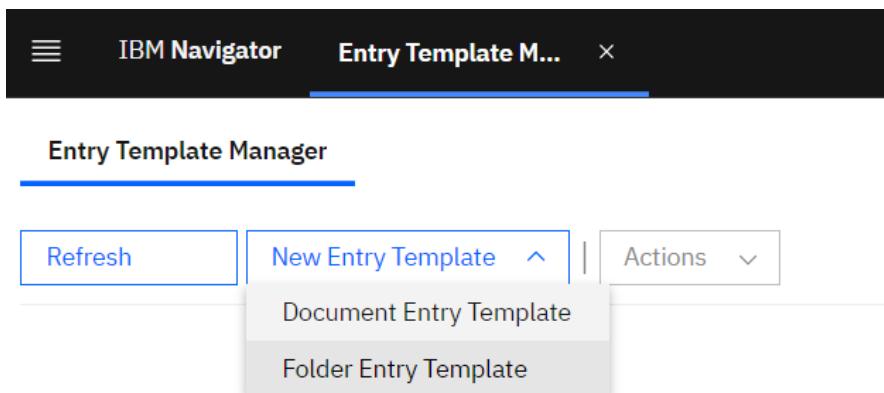


- \_2. Click on the Home menu/hamburger icon in the top left corner next to IBM Navigator. The navigation pane displays the features available in the desktop as shown below. Click on either the last entry **Entry Template Manager<sup>2</sup>** of the navigation pane or the **Entry Template Manager** tile on the desktop itself.



<sup>2</sup> You will only see the “Administration” item at the bottom of the list if the user you are using has administrator access.

\_3. Select **Folder Entry Template** from the **New Entry Template** dropdown menu as show below.



\_4. In the section **Define the Entry Template**, provide a **Name** and **Description** of the folder entry template. For example, enter "Entry Template for folder creation" as name or you can also include your lab user id in the name field like "userxx Entry Template for folder creation" to identify your template from another user in the multi-user environment. And make sure to keep "**Shared with**" set to "Only me" to not interfere with other participants in a multi-user environment.<sup>3</sup>

The screenshot shows the 'Define the Entry Template' configuration page. On the left, there's a sidebar with links: 'Define the Entry Template' (selected), 'Set the Item Storage Location' (highlighted in blue), 'Set the Item Properties', 'Set the Item Security', and 'Configure a Workflow for the Item'. The main panel is titled 'Define the Entry Template'. It contains fields for 'Name' (set to 'Entry Template for folder creation'), 'Description' (set to 'This template being used to create the folders in the repository for managing documents'), and 'Type' (set to 'Folder'). There are dropdowns for 'Save in:' (set to 'content') and 'Share with:' (set to 'Only me'). Below these, there are sections for 'Use this entry template when users:' (with 'Create folders (required)' checked) and 'View or edit properties:' (with 'In the Properties window' and 'In the document information pane' checked). A small '^' icon is in the top right corner of the main panel.

\_5. In the section **Set the Item Storage Location**, select the **Hide the Save in field** radio button and keep the remaining two options unchanged.

The screenshot shows the 'Set the Item Storage Location' configuration page. On the left, there's a sidebar with links: 'Define the Entry Template' (selected), 'Set the Item Storage Location' (highlighted in blue), 'Set the Item Properties', 'Set the Item Security', and 'Configure a Workflow for the Item'. The main panel is titled 'Set the Item Storage Location'. It contains a radio button group for 'Show the Save in field' (unchecked) and 'Hide the Save in field' (checked). Below this is a dropdown for 'Default Save in location:' (set to 'content'). At the bottom, there's a checkbox for 'Require users to add items to the default location or a child folder of the default location' (unchecked).

<sup>3</sup> The value shown in the screenshots for the "Save in"-dropdown and for the "Default Save in location" may differ as pointed out before in section "1.3 General Lab Instructions" from the value you see. The value is the name of the object store which depends on the setup of the environment you are using.

\_6. No changes are required in the **Set the Item Properties** section. Note that in this section, different folder classes and properties can be configured.

The screenshot shows the 'Entry Template Manager' interface with the 'New Entry Template' tab selected. At the top, there are buttons for 'Save and Close', 'Copy', and 'Cancel'. Below the tabs, there are sections for 'Define the Entry Template', 'Set the Item Storage Location', 'Set the Item Properties' (which is highlighted), 'Set the Item Security', and 'Configure a Workflow for the Item'. Under 'Set the Item Properties', there is a 'Class' dropdown set to 'Folder', an 'Edit Layout...' button, and a 'Clear' button. A checkbox for 'Hide the class' is also present. The 'Set the Item Security' section is collapsed. The 'Configure a Workflow for the Item' section has a note: 'Folder Name: \*Folder Name: (i)'.

\_7. In the section **Set the Item Security**, you need to modify both the members of the **Owner** and **Reader** section. Depending on the environment you are working with, that may require a different set of changes:

- For the **Owner** section the goal is to have only **#CREATOR-OWNER** and the **administrative user** (this will either be **cp4admin** or **cp4badmin**) listed and remove all other entries like the group **GeneralUsers** by clicking the small x at the right of the name.

Ensure you have removed **GeneralUsers** group, and your access list looks like the one in the screenshot below.

- For the **Reader** section the goal is to have only the groups **CE\_EnvironmentOwners** and **P8Administrators** listed.  
Remove the **Authenticated users** entry by clicking the small x again. In case **Authenticated users** is the only entry listed as **Reader** click on the **Select...** button, search for the groups **CE\_EnvironmentOwners** and **P8Administrators** and move each of them to the list of selected items, select **Reader** in the **Permissions** dropdown list in the lower right corner of the dialog, before clicking the **Add** button.

This way, folders created with this entry template will only be visible for members of the administrator groups and the user creating it plus the named administrative user are owners.

Select the **Hide the Security section** radio button to configure to hide the security section from the entry template while creating folders.

The screenshot shows the 'Entry Template Manager' interface with the 'Client Documents' tab selected. At the top, there are buttons for 'Save and Close', 'Copy', and 'Cancel'. Below the tabs, there are sections for 'Define the Entry Template', 'Set the Item Storage Location', 'Set the Item Properties', 'Set the Item Security' (which is highlighted), and 'Configure a Workflow for the Item'. Under 'Set the Item Security', there is a checkbox for 'Override the security defined by the selected class' (which is checked). The 'Share with:' dropdown is set to 'Specific users and groups' with a 'Select...' button. The 'Owner' field contains the entries '#CREATOR-OWNER' and 'cp4admin'. The 'Reader' field contains the entries 'CE\_EnvironmentOwners' and 'P8Administrators'. The 'Author' field is empty. The 'No access:' field is empty.

\_8. Click the **Save and Close** button.

The entry template is now shown in the Entry Template Manager list and is ready for creating folders in the repository **content**. When you right-click on the entry template, some of the key options are Copy, Open, and Edit.

A screenshot of the 'Entry Template Manager' interface. At the top, there are buttons for 'Refresh', 'New Entry Template' (which is highlighted), and 'Actions'. Below this, a list item is selected, indicated by a blue dashed border. The list item shows a folder icon, the name 'Entry Template for folder creation', and a description: 'Description: | Class Name: Folder | Template Type: folder | Workflow Name:'. The 'New Entry Template' button is also highlighted in blue.

\_9. Click on the entry template. In the popup window, enter **userxx Client Documents** (replacing userxx with your username) as **Folder Name** and click **Add**. Your new folder will be created in the root of the repository content.

#### New Folder by Using Entry Template

When you create a folder by using an entry template, the values that you enter for the folder are consistent.

A screenshot of a 'New Entry Template' dialog. It has a 'Properties' section at the top. Under 'Class:', 'Folder' is selected. Below it, under 'Folder Name:', 'userxx Client Documents' is entered. At the bottom, there are 'Add' and 'Cancel' buttons, with 'Add' being highlighted in blue.

## 2.2.2 Creating Entry Templates to Manage Documents

The **Document Entry Template** is created in the same way as you created the Folder Entry Template in the previous section.

\_1. Click on **New Entry Template** and then select **Document Entry Template** as shown below.

A screenshot of a 'New Entry Template' dialog. At the top, there are buttons for 'Refresh', 'New Entry Template' (which is highlighted), and 'Actions'. A dropdown menu is open under 'New Entry Template', showing two options: 'Document Entry Template' (which is highlighted) and 'Folder Entry Template'.

Below screenshot shows different sections in blue color on the left side menu in the new Document Entry Template dialog. Each section has mandatory fields which need to be completed for the entry template creation.

\_2. In the section **Define the Entry Template**, provide a **Name** and **Description** for the document entry template. For example, enter **Entry Template for Client Documents** or you can also include your lab user id in the name field like "**userxx Entry Template for Client Documents**" to identify your template from another

user in the multi-user environment. And make sure to keep "Shared with" set to "Only me" to not interfere with other participants in a multi-user environment.

The screenshot shows the 'Define the Entry Template' page. The 'Name' field is set to 'Entry Template for Client Documents'. The 'Save in' field is set to 'content'. The 'Share with' dropdown shows 'Only me'. Under 'Use this entry template when users:', both 'Add documents (required)' and 'Check in' are checked. Under 'View or edit properties:', all three options ('In the viewer', 'In the Properties window', and 'In the document information pane') are checked.

**Note:** The entry template security is set up to share the entry template only with the user defining it.

\_3. In the section **Set the Item Storage Location**, from the dropdown menu select the **userxx Client Documents** folder you previously created to store the documents. To hide the save in field from the users who want to use this entry template for adding documents, check the **Hide the Save in field** radio button as shown below.

The screenshot shows the 'Set the Item Storage Location' dialog. The 'Default Save in location' dropdown is set to 'userxx Client Documents'. The 'Save in' dropdown is expanded, showing 'Teams' and 'Repository'. The 'Repository' tab is selected, displaying the 'userxx Client Documents' folder under 'Saved Searches'. At the bottom right are 'OK' and 'Cancel' buttons.

\_4. In the section **Set the Item Properties**, select the document class **Client Document** from the dropdown menu. This Client Document class and its properties are created as part of Client Onboarding solution. For more information on how to create a new document class and properties, please refer the Content lab 1 "Setting up FileNet Content Platform Engine for Automation Projects on Cloud Pak for Business Automation". Check the **Hide the class** checkbox as shown below to hide the class name from the user.

The screenshot shows the 'Set the Item Properties' dialog. The 'Class' dropdown is set to 'Client Document'. The 'Hide the class' checkbox is checked. Below the dropdown are fields for 'Document Title', 'Client Name', and 'Reference ID', each with a placeholder text area.

By clicking the **Edit Layout...** button, the layout of the property fields, and their labels can be configured according to the needs. Optionally, the layout of the entry template can be adapted here. If this is done, please note that each entry field has a set of properties, which influence the layout and the behavior, when modified.

For the fields to show up nicely, its recommended to set their width to 80% of the window width.

\_5. In the section **Set the Item Security**, the security settings for the created documents can be specified. The default settings shown for the new entry template come from the document class's default instance security, which were configured in the section *Updating the default Instance Security* in the Content lab 1 “Setting up FileNet Content Platform Engine for Automation Projects on Cloud Pak for Business Automation”.

You need to again modify both the members of the **Owner** and **Reader** section. Depending on the environment you are working with, that may require a different set of changes:

- For the **Owner** section the goal is to have only **#CREATOR-OWNER** and the **administrative user** (this will either be **cp4admin** or **cp4badmin**) listed and remove all other entries like the group **GeneralUsers** by clicking the small **x** at the right of the name.

ensure you have removed **GeneralUsers** group, and your access list looks like the one in the screenshot below.

- For the **Reader** section the goal is to have only the groups **CE\_EnvironmentOwners** and **P8Administrators** listed.  
Remove the **Authenticated users** entry by clicking the small **x** again. In case **Authenticated users** is the only entry listed as Reader click on the **Select...** button, search for the groups **CE\_EnvironmentOwners** and **P8Administrators** and move each of them to the list of selected items, select **Reader** in the **Permissions** dropdown list in the lower right corner of the dialog, before clicking the **Add** button.

As the Owner field includes **#CREATOR-OWNER**, the user who adds the documents will automatically get owner access to the created documents.

Select the **Hide the Security section** radio button to configure to hide the security section from the entry template while adding documents.

Set the Item Security ⓘ

Show the Security section ⓘ  Hide the Security section ⓘ

Override the security defined by the selected class ⓘ

Share with: ⓘ **Specific users and groups**

Owner: **#CREATOR-OWNER**  cp4admin

Author:

Reader: **CE\_EnvironmentOwners**  **P8Administrators**

No access:

Inherit the security settings from the parent folder ⓘ

Security policy: ⓘ No security policy selected

Note that also Security Templates and Security Inheritance can be configured. Security Templates can assign different security settings on different lifecycle stages of the document. With it, a user checking out a document can for example get elevated security on the document. Interested readers are referred to <https://www.ibm.com/docs/en/filenet-p8-platform/5.6.0?topic=policies-about-templates> for details.

\_6. Leave all other settings as is and click the **Save and Close** button. The new document entry template is now listed in the list of templates for the Entry Template Manager.

## Entry Template Manager

Refresh

New Entry Template ▾

Actions ▾

Documents

X



### Entry Template for Client Documents

Description:

This Template being used to create the documents in the repository by defining the location, class, property values and security

| Class Name: **Client Document** | Template Type: **document** | Workflow Name:

## 2.2.3 Associate Entry Templates with Folders

Associating entry templates with a folder allows to preconfigure how documents and folders can be added to this folder. Valid options are preconfigured in the entry templates for document and folder classes, security settings, property values, etc., and can even be hidden to avoid misconfiguration. With entry templates specified, the user interface of IBM Navigator can even be configured to disallow any other way to create documents and folders.

- \_1. Click on **Browse Content** in the home menu or the **Browse Content** desktop tile. Select the folder which **userxx Client Documents** you created using your folder entry template in the previous exercise. Right-click and open the **Properties** dialog for the folder.

The screenshot shows the 'IBM Navigator' application window with the 'Browse Content' tab selected. In the left sidebar, there is a tree view with nodes like 'content', 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', and 'Saved Searches'. A right-click context menu is open over a folder named 'userxx Client Documents'. The menu items include 'Open', 'Refresh', 'Properties' (which is highlighted), 'Add to Favorites', and 'Export'. On the right, there is a main content area titled 'content / userxx Client Documents'. It features a toolbar with 'Refresh', 'Add Document', and 'New Folder' buttons. Below the toolbar is a dropdown labeled 'Actions'. A table header row is visible with columns 'Name', 'Comments', 'Downloads', 'Likes', and 'Tags'. A message 'The folder is empty.' is displayed. At the bottom of the main area, there is a three-dot ellipsis icon.

On the **Associate Entry Templates** tab, you can select from the available entry templates which you created in the previous section.

The screenshot shows the 'Properties' dialog with the 'Associate Entry Templates' tab selected. At the top, there are tabs for 'Properties', 'Security', and 'Associate Entry Templates'. Below the tabs, there is a section for 'Selected Entry Templates' with buttons for 'Modify', 'Remove', and 'Make Default'. A message 'There are no entry templates' is displayed. At the bottom, there is a table with columns 'Name', 'Description', 'Class Name', 'Template Type', 'Workflow Na...', and 'File Types'. The table has one row showing 'Entry Template for Client Documents' with a detailed description: 'This Template being used to create the documents in the repository by defining the location, class, property values and security'. The 'Class Name' is 'Client Document' and the 'Template Type' is 'document'. Another row for 'Entry Template for folder creation' is partially visible. There is also an 'Add' button and a 'Available Entry Templates' section with a 'Filter' input field.

\_2. Press the **Shift-key** on the keyboard, then click once on both entry templates to select both. Then click the **Add** button to add them to the list of entry templates associated with the folder. Click **Save**.

The screenshot shows a dialog box titled 'Associate Entry Templates'. At the top, there are tabs for 'Properties', 'Security', and 'Associate Entry Templates', with 'Associate Entry Templates' being the active tab. Below the tabs, there's a section for 'Selected Entry Templates' containing two entries:

Name	Description	Class Name	Template...	Workflow...	File Types
<input checked="" type="checkbox"/> <b>Entry Template for Client Documents</b>	This Template being used to create the documents in the repository by defining the location, class, property values and security	Client Document	document		Any type of file
<input checked="" type="checkbox"/> <b>Entry Template for folder creation</b>		Folder	folder		

Below this is a section for 'Available Entry Templates' with a 'Filter' input field. It displays the message: 'There are no entry templates'.

On the right side of the dialog box, there's a 'Properties' panel with the following text:

You can view or edit the properties of this item. If you have the appropriate permissions, you can also modify the security of the item. However, you cannot change the system properties.

At the bottom right of the dialog box are 'Save' and 'Cancel' buttons.

## 3 Exercise: Adding Documents using Entry Templates

### 3.1 Introduction

Using entry templates for adding documents to a repository has several advantages. By preconfiguring configuration information such as property values, security information or the document class, users don't need to provide this data again and again for every document, thereby saving time, and avoiding errors. Hiding sections of the entry template furthermore makes sure that the intended configuration is not changed accidentally. Finally, property values of added documents or folders can be arranged nicely making it easier to add the data in some useful order.

### 3.2 Exercise Instructions

This section shows how to add the documents for the Client Document class. Two possibilities are shown, the first one will directly invoke the entry template to add a document, the second one uses it implicitly by adding a document to the *userxx Client Documents* folder, utilizing the fact that an entry template was associated with this folder.

- \_1. In your browser, download the Redbook **Customizing and Extending IBM Content Navigator** and from this URL: <https://www.redbooks.ibm.com/redbooks/pdfs/sg248055.pdf> and rename the downloaded file to **Customizing and Extending IBM Content Navigator.pdf**. Note that this file and filename is used in below exercises. Also make sure you have downloaded the documents from the **Lab Data** folder.
- \_2. From the Home menu, choose the **Entry Template Manager**. Click on the entry template **Entry Template for Client Documents** which you created in an earlier exercise of this lab, to start adding a document using that entry template.

The screenshot shows the 'Entry Template Manager' interface. At the top, there's a navigation bar with 'IBM Navigator' and 'Entry Template M...'. Below it is a toolbar with 'Refresh', 'New Entry Template', 'Actions', 'Filter', and other icons. The main area displays the 'Entry Template for Client Documents' entry template. It includes a thumbnail icon, the title 'Entry Template for Client Documents', a description stating 'This Template being used to create the documents in the repository by defining the location, class, property values and security', and a status bar indicating 'Class Name: Client Document | Template Type: document | Workflow Name:'. There are also tabs for 'General' and 'Properties'.

- \_3. Choose the file downloaded in step 1. In case you saved the downloaded file as **Customizing and Extending IBM Content Navigator.pdf** keep the **Document Title** as the derived value, otherwise set the document title to that value. The title is used later in the search-related exercises. Specify a **Client Name** and **Reference ID** and click the **Add** button.

Note that the Reference ID property allows alphanumerical values. How to implement property validations and load the property data with external data services (EDS) is discussed in the EDS exercise.

The screenshot shows the 'Add Document by Using Entry Template' dialog. It has tabs for 'General' and 'Properties'. Under 'General', there are fields for 'What do you want to save?' (set to 'Local document'), 'File name:' (containing 'Customizing and Extending IBM Content Navigator.pdf'), and a checked checkbox for 'Major version'. Under 'Properties', there are fields for 'Document Title:' (containing 'Customizing and Extending IBM Content Navigator.pdf'), 'Client Name:' (containing 'Automation Elite Inc'), and 'Reference ID:' (containing '8CU4LTT4'). At the bottom, there are 'Add' and 'Cancel' buttons.

\_4. Open the Home menu and choose **Browse Content** again. Navigate to the **usrxx Client Documents** folder. Note that the folder content now contains the newly added document.

The screenshot shows the IBM Navigator interface with the 'Browse Content' tab selected. The left sidebar shows a tree view with 'content' expanded, containing 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', 'Saved Searches', and 'userxx Client Documents'. The main area displays a table with one row. The table has columns for Name, Size, Modified On, Major..., and Corr. The row shows 'Customizing and Extending IBM Content Navigator.pdf' with a size of 7.9 MB, modified on 8/17/2023, 6:27 PM, major version 1, and a correlation ID of 1. Top navigation includes 'Refresh', 'Add Document', 'New Folder', and 'Actions' dropdown. Action buttons include 'List View', 'Table View', and 'Icon View'.

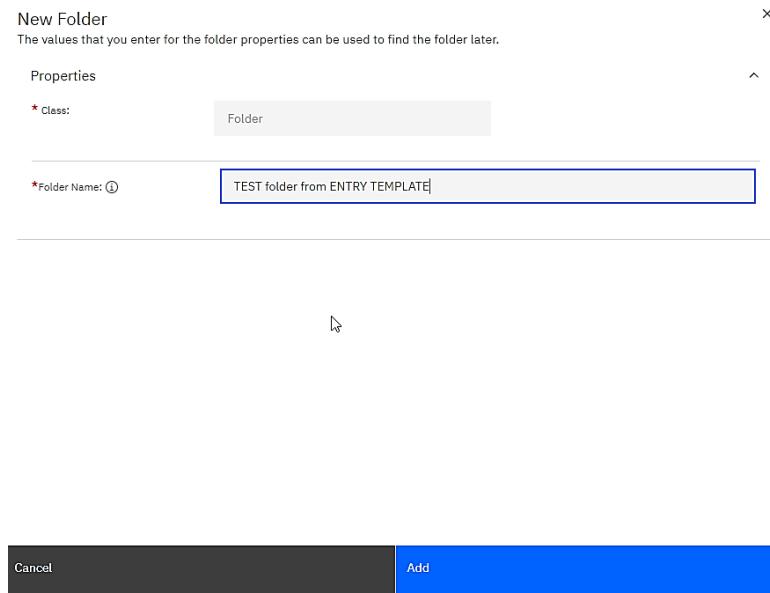
\_5. From a folder on your local computer containing the files from the **Lab Data** folder, select the file **DL for Redaction.pdf**, and the **Document for Edit service feature.docx** file. With both files selected use **drag & drop** to move them into the IBM Navigator browser window.

The pre-configured document entry template is automatically used to add both documents in one interaction. The document class and the security settings have been preselected, and the security settings are hidden. Supply the property values as in below screenshot, and leave **Apply the same properties to all documents** selected. Click on **Add** and observe that the documents are uploaded in the background while you can continue working.

The screenshot shows the 'Add Documents by Using Entry Template' dialog. In the 'General' section, there is a 'File name:' field with 'Choose Files' button, showing '2 files' selected, and a checked 'Major version' checkbox. In the 'Properties' section, under 'Options', the radio button for 'Apply the same properties to all documents' is selected. Below this, 'Document Title:' is set to 'The file name will be used for this property', 'Client Name:' is 'Legacy Consulting Inc', and 'Reference ID:' is 'BAWxvnQ'. At the bottom, there are 'Cancel' and 'Add' buttons.

The order of the properties might be different for you. You can also try with other property options by selecting the **Apply different properties to each document** option when adding multiple documents with different property values.

\_6. In the same way, folders can be created by clicking the **New Folder** button. As only one Folder entry template was associated with the **userxx Client Documents** folder, it is automatically invoked when the **New Folder** button is clicked. Provide a sample folder name and click **Add** to add the folder.



You can also add sample documents to the **userxx Client Documents** folder from the **Browser Content** pane either by using the context menu that appears when you right-click in the left-hand tree view or by clicking the Add Document button in the center pane. Notice that IBM Navigator will also use the entry template which you associated to the folder in the previous exercise.

The screenshot shows the IBM Navigator 'Browse Content' interface. The left sidebar displays a tree view with 'content' expanded, showing 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', and 'Saved Searches'. A context menu is open over a document named 'Customizing and Extending IBM Content Navigator.pdf'. The menu options include 'Add to Favorites', 'Export', 'Delete', 'New Folder', and 'Add Document'. The right pane shows a list of files under 'content / userxx Client Documents'. The list includes:

Name	Size	Modi...	Modified On
Customizing and Extending IBM Content Navigator.pdf	7.9 MB	user5	8/17/2023, 6:27 PM
DL for Redaction.pdf	37 KB	user5	8/17/2023, 6:42 PM
Document for Edit service feature.docx	12 KB	user5	8/17/2023, 6:42 PM

### 3.3 Changing the Entry Template during a document check-in

This section shows how to select a different entry template to assign to document during “check-in” of the document, which also updates the document class. In the below steps, you are changing the entry template for email documents added by an entry template during the checking in a document.

- \_1. From the Home menu, choose the Entry Template Manager. Click on the entry template “Entry Template for Folder creation” which you created in an earlier exercise of this lab. In the popup window, enter **userxx Email Documents** (replacing userxx with your username) as **Folder Name** and click **Add**. Your new folder will be created in the root of the repository content.

New Folder by Using Entry Template  
When you create a folder by using an entry template, the values that you enter for the folder are consistent. [Learn more](#)

Properties

\* Class:

\*Folder Name:

- \_2. Create another Entry template as “**Entry Template for Email Documents**” in the same way as you created the “**Entry Template for Client Documents**” in the previous section. Enter Name and Description as shown in below screenshot. Make sure to select Storage location as “**userxx Email documents**” folder which you created in the above step and check **Hide the Save in field**.

[Define the Entry Template](#)

[Set the Item Storage Location](#)

[Set the Item Properties](#)

[Set the Item Security](#)

[Configure a Workflow for the Item](#)

[Set Options for the Item](#)

---

Define the Entry Template

\* Name: [①](#)

Description: [①](#)

Entry Template for Email Documents

This Entry Template being used to create the Email documents in the repository.

Type: Document

Use this entry template when users:

- Add documents (required)
- Check in

View or edit properties:

- In the viewer
- In the Properties window
- In the document information pane

---

Set the Item Storage Location [①](#)

Show the Save in field [①](#)     Hide the Save in field [①](#)

Default Save in location: [①](#)    userxx Email Documents [▼](#)

Require users to add new items to a folder [①](#)

Require users to add items to the default location or a child folder of the default location

\_3. Select the “Email” Document class and checkmark “**hide the class**” in the **Item properties tab**.

Set the Item Properties [①](#)

Show the Properties section [①](#)     Hide the Properties section [①](#)

Class: Email [▼](#) [Edit Layout...](#) [Clear](#)  Hide the class

Document Title: [①](#)

From: [①](#)

To: [①](#)

Cc: [①](#)

Subject: [①](#)

Sent On: [①](#) M/d/yyyy, h:mm a [▼](#)

Received On: [①](#) M/d/yyyy, h:mm a [▼](#)

\_4. Set the **item security** like “**Entry template for client documents**” entry template and click on **save & Close**.

Set the Item Security [①](#)

Show the Security section [①](#)     Hide the Security section [①](#)

Override the security defined by the selected class [①](#)

Share with: <a href="#">①</a>	Specific users and groups <a href="#">Select...</a>
Owner:	#CREATOR-OWNER <a href="#">x</a> cp4admin <a href="#">x</a>
Author:	
Reader:	CE_EnvironmentOwners <a href="#">x</a> P8Administrators <a href="#">x</a>
No access:	
<input type="checkbox"/> Inherit the security settings from the parent folder <a href="#">①</a>	
Security policy: <a href="#">①</a> No security policy selected <a href="#">▼</a> <a href="#">Clear</a>	

\_5. You can see the newly created Entry Template for Email Documents in the Entry Template manager menu as shown below.

The screenshot shows the 'Entry Template Manager' interface. At the top, there are buttons for 'Refresh', 'New Entry Template', and 'Actions'. Below this, a list item is displayed: 'Entry Template for Email Documents'. A tooltip for this item states: 'Description: This Entry Template being used to create the Email documents in the repository. | Class Name: Email | Template Type: document | Workflow Name:'. A right-click context menu is open over this list item, with the 'Open' option highlighted by a red box.

\_6. Select **Open** from the right Click menu on the “**Entry Template for Email Documents**”.

The screenshot shows the 'Entry Template Manager' interface with a right-click context menu open over the 'Entry Template for Email Documents' entry. The menu items are: Add to Favorites, Properties, Delete, Edit, Copy, Check Out Only, Cancel Check Out, Link, Send Email, and Folders. The 'Open' option in the menu is highlighted by a red box.

\_7. Create one word document on your local desktop as “**Change Entry Template.docx**” and choose that word document from your local desktop and click **Add** button as shown below.

Add Document by Using Entry Template

When you add a document by using an entry template, the values that you enter for the document are consistent. [Learn more](#)

**General**

What do you want to save? Local document

\* File name:    Major version

**Properties**

Document Title:	Change entry Template.docx
From:	
To:	
Cc:	
Subject:	
Sent On:	M/d/yyyy, h:mm a
Received On:	M/d/yyyy, h:mm a

**Buttons**

\_8. Go to “**Brower Content**” from the **hamburger menu** and click on userxx Email Documents folder. You can see the “**Change entry Template docx**” which you added by an “**Entry Template for Email documents**”.

**IBM Navigator**    Entry Template M...    **Browse Content**

**CONTENTrepo**

- ▶ CLIENTDOCUMENT
- ▶ Case Folders
- ▶ SOLUTION Client Ont
- ▶ Saved Searches
- ▶ TESTFOLDER@13
- ▶ user001Kefeng Client
- ▶ userxx Client Document
- ▶ userxx Email Document

**Actions**

**CONTENTrepo / userxx Email Documents**

Name	↑	Size	Modified By
Change entry Template.docx		12 KB	usr001

\_9. Select **Check Out** -> “**Check Out only**” from the **right click menu** of the “**Change entry Template.docx**” document as shown in below screenshot.

The screenshot shows the IBM Navigator interface with the 'Browse Content' tab selected. The left sidebar lists various repository items under 'CONTENTrepo'. In the main content area, a document named 'Check Out Template.docx' is selected. A context menu is open over this document, showing options like Open, Preview, Properties, Edit, Create New, View Child Documents, Download, Add to Favorites, Export, Delete, Check Out (with sub-options Check Out and Download, Check Out Only, and Cancel Check Out), Link, and Send Email. The 'Check Out Only' option is highlighted with a red box.

\_10. You can see the lock icon once you **check out** the document, Select the “**Check In**” from the right click menu.

The screenshot shows the IBM Navigator interface with the 'Browse Content' tab selected. The left sidebar lists various repository items under 'CONTENTrepo'. In the main content area, a document named 'Check Out Template.docx' is selected. A context menu is open over this document, showing options like Open, Preview, Properties, Edit, Create New, View Child Documents, Download, Add to Favorites, Export, Delete, Check Out (with sub-options Check Out and Download, Check Out Only, and Cancel Check Out), Link, and Send Email. The 'Check In' option is highlighted with a red box.

\_11. You can see the **drop-down menu** for changing the **Entry Template** from “**Entry Template for Email documents**” to “**Entry Template for Client Documents**” as shown below.

Check In

General

Entry template:    

What do you want to save?

\* File name: TEST01  
TEST@13

---

Properties

Document Title:

From:

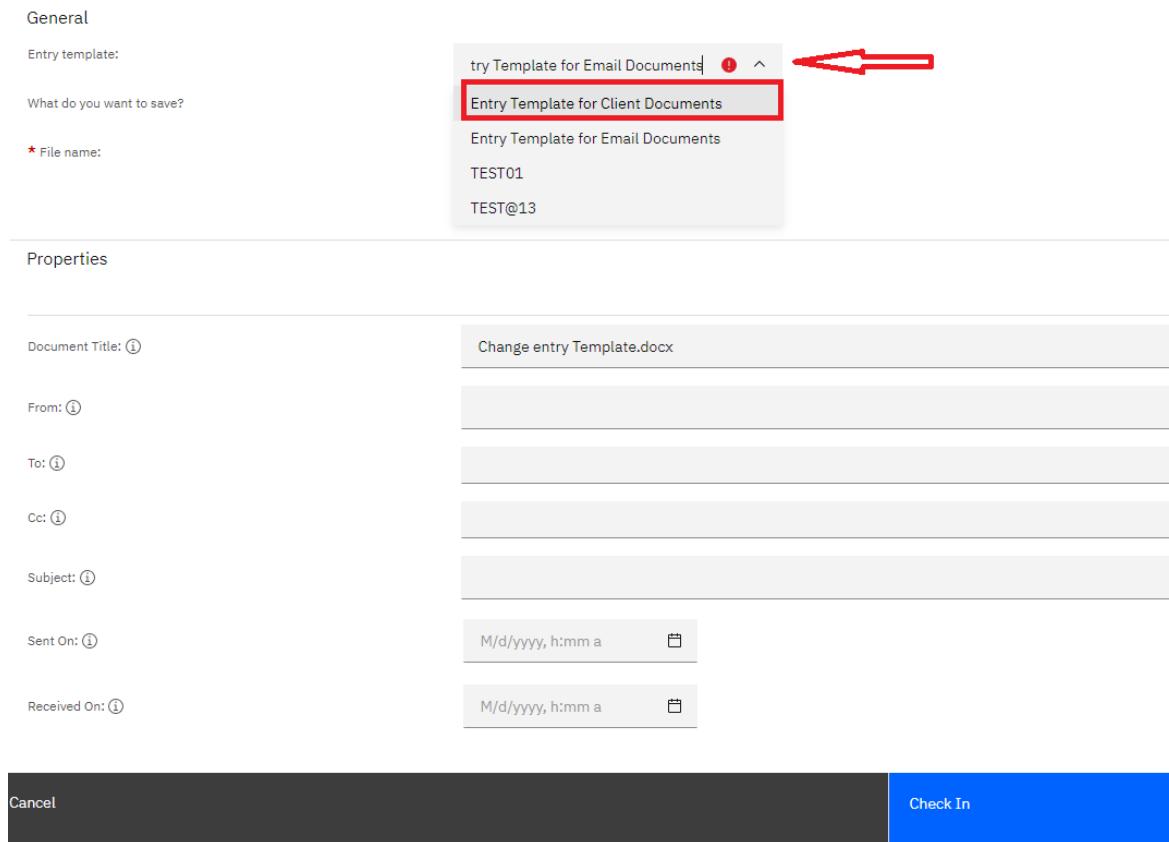
To:

Cc:

Subject:

Sent On:

Received On:



For the lab

\_12. Choose the “**Change entry Template.docx**” document from your local desktop and Enter the **Document Title**, **Client Name** and **Reference ID** properties and click “**Check In**” as shown below.

Check In

General

Entry template: Entry Template for Client Documents

What do you want to save? Local document

\* File name: Choose Files No file chosen  
 Major version

Properties

Document Title: Change entry Template.docx

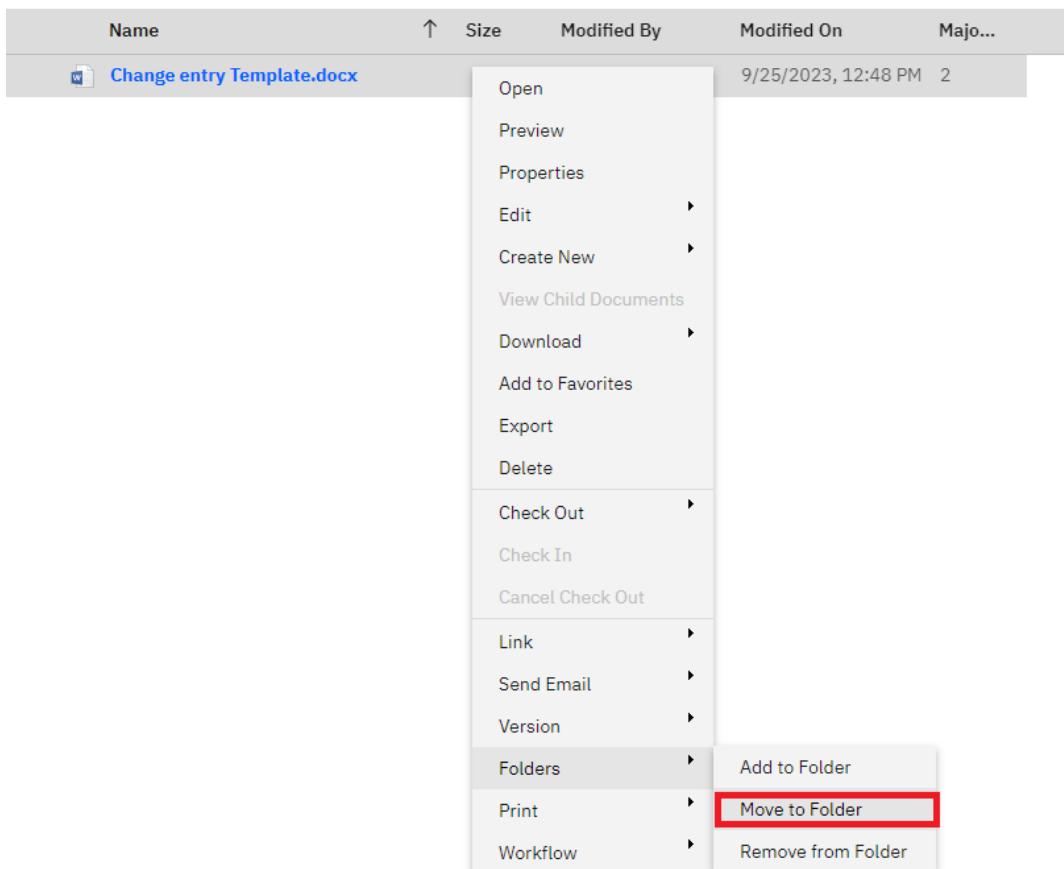
Client Name: Elite Automation Inc

\*Reference ID: Cccderv

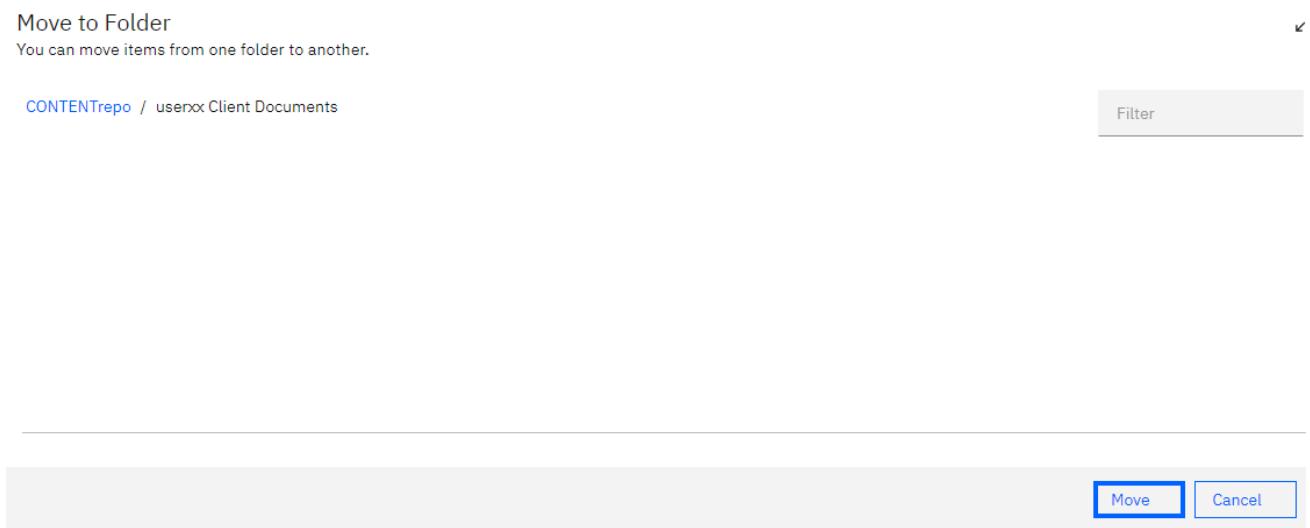
[Cancel](#) [Check In](#)

\_13. Move the document to the “**userxx Client Documents**” folder which is relevant to hold Client documents by right menu **Folders-> Move to Folder** menu option as shown in below screenshot.

CONTENTrepo / userxx Email Documents



\_14. Click on “Move” button.



\_15. You can see the document moved to **userxx client Document** folder from the **Browse Content** menu.

The screenshot shows the "Browse Content" interface. At the top, there are buttons for "Refresh", "Add Document", "New Folder", "New", and "Actions". Below this is a breadcrumb navigation bar with "CONTENTRepo / userxx Client Documents". The main area is a table listing documents:

Name	Size	Modified By	Modified On	Major...
Change entry Template.docx	12 KB	usr001	9/25/2023, 12:48 PM	2
Customizing and Extending IBM Content Navigator.pdf	7.9 MB	usr001	9/25/2023, 11:49 AM	1
DL for Redaction.pdf	64 KB	usr001	9/25/2023, 11:49 AM	1
Document for Edit service feature.docx	12 KB	usr001	9/25/2023, 12:24 PM	1

### 3.4 View and export modified properties in the Audit History

This Section shows how to view and export the modified properties for an updated events of a document in the audit history. In the below steps, you are viewing and exporting the Audit history event list for the previously added document “**Change Entry Template.docx**”

**Audit History** is a class level configuration. For this lab, Administrator added below audit definitions to a Client Document class, enables auditing, and configures Audit history in the ICN Desktop as part of deployment script. Users with audit permissions, can view the event history.

The screenshot shows the "Audit Definitions" tab of the "Client Document" class definition. The tab bar includes "Change Preprocessor Definitions", "Text Indexing Preprocessor Definitions", "Subscriptions", "Audit Definitions" (highlighted with a blue border), "Replication Class Mappings", "Audit History", and "Advanced". Below the tab bar are buttons for "New", "Delete", and "Show Inherited". The main area is a table listing audit events:

Display Name	Event	Is Enabled	Apply To Subclasses	Success Audit Type	Failure Audit Type	Object State Recording Level
Update Event	Update Event	True	True	True	False	Original and modified objects
Checkin history	Checkin Event	True	True	True	True	Original and modified objects
Change Class Event	Change Class Event	True	True	True	False	Original and modified objects
CheckOut Event	Checkout Event	True	True	True	False	Original and modified objects
Get Content Event	Get Content Event	True	True	True	False	Original and modified objects
Move Content	Move Content Event	True	True	True	False	Original and modified objects

- \_1. Select **Properties** option from the **Right click menu** on “Change Entry Template.docx” document as shown below.

The screenshot shows a file list interface. A context menu is open over the file 'Change entry Template.docx'. The menu items include: Open, Preview, Properties (highlighted with a red box), Edit, Create New, View Child Documents, Download, Add to Favorites, Export, Delete, Check Out, Check In, Cancel Check Out, Link, Send Email, Version, Folders, and Print. The file 'Change entry Template.docx' is selected in the list.

- \_2. Click on the **History** tab from the **Properties** pop-up page. You can see the list of events which you performed on previous sections. The event counts are displayed for **Get Content 1**, **Update 2**, and **Checkin 1**.

The screenshot shows the 'Properties' pop-up page with the 'History' tab selected. At the top, it shows event counts: Get Content: 1, Update: 2, Checkin: 1. Below this, there are buttons for 'Show All Events' and 'Export'. The main area displays a table of events:

Event Name	Event Status	Initiated By	Event Date
Get Content	Succeeded	usr001	9/25/2023, 12:48 PM
Checkin	Succeeded	usr001	9/25/2023, 12:48 PM
Update	Succeeded	usr001	9/25/2023, 12:48 PM
Update	Succeeded	usr001	9/25/2023, 12:48 PM

At the bottom, there are buttons for 'Open', 'Save', and 'Cancel'.

3. Click on the **Show All events** to see more action events performed on previous sections.

Properties

You can view or edit the properties of this item. If you have the appropriate permissions, you can also modify the security of the item. However, you cannot change the system properties.

Properties Security Versions Parent Documents Content Elements Folders Filed In History

Get Content: 1 Update: 2 Checkin: 1

Show Basic Events Export  Include All Versions Filter option: None

Event Name	Event Status	Initiated By	Event Date
Get Content	Succeeded	usr001	9/25/2023, 12:54 PM
Checkin	Succeeded	usr001	9/25/2023, 12:48 PM
Update	Succeeded	usr001	9/25/2023, 12:48 PM
Update	Succeeded	usr001	9/25/2023, 12:48 PM
Change Class	Succeeded	usr001	9/25/2023, 12:48 PM

Versions: 2.0 Open Save Cancel

4. Click on **Export** and select **Export all items** option.

Properties

You can view or edit the properties of this item. If you have the appropriate permissions, you can also modify the security of the item. However, you cannot change the system properties.

Properties Security Versions Parent Documents Content Elements Folders Filed In History

Get Content: 1 Update: 2

Show Basic Events Export  Include All Versions Filter option: None

Event Name	Event Status	Initiated By
Get Content	Succeeded	usr001
Checkin	Succeeded	usr001
Update	Succeeded	usr001
Update	Succeeded	usr001
Change Class	Succeeded	

Export All

Export all items  
 Maximum number of items to export: 200

Export raw values Export Cancel

5. You can see the event list of the document from the downloaded CSV file.

A	B	C	D	E	F
Event Name	Event Status	Initiated By	Event Date		
Get Content	Succeeded	usr001	9/25/2023, 12:54 PM		
Checkin	Succeeded	usr001	9/25/2023, 12:48 PM		
Update	Succeeded	usr001	9/25/2023, 12:48 PM		
Update	Succeeded	usr001	9/25/2023, 12:48 PM		
Change Class	Succeeded	usr001	9/25/2023, 12:48 PM		

## 4 Exercise: External Data Services (EDS)

### 4.1 Introduction

External Data Services (EDS) is a feature available for IBM Navigator applications and integrates with Business Automation Workflow (BAW) workflow properties. The idea is to allow using an external data source such as a database to provide allowed values for properties. It can also be used for a number of additional use cases, like dependent property values or custom validation of property values.



### 4.2 Exercise Instructions

This exercise introduces you to one aspect of using custom EDS data source plug-ins, which is how to validate properties while adding a document with an entry template for managing documents. For the property called **Reference ID** of the **Client Document** class, two types of validations need to be done. First to ensure a value is provided (it is a required field) and second, no special characters are entered.

An external data service can validate user input on a property and enforce property formatting when adding a document. The sample EDS plug-in uses a regular expression in the custom extension code to limit the allowed values to be alphanumeric. If the EDS plug-in is used, the property is marked as required and a validation error will be shown in case it is left empty or in case the value is containing special characters that are not allowed. See below screenshots for examples of these behaviors.

#### Samples EDS in action

For this exercise, a sample data source plugin “edsDataSourceSamplePlugin.jar” was created following the technical steps described further down. This custom EDS plug-in has been uploaded to the environment and registered both in IBM Navigator and the Navigator desktop that you are using throughout the lab. Therefore, it has already been active when you uploaded one or multiple documents through the document entry template.

#### Exercise Steps

1. Click on the **Entry Template Manager** from the Home menu. Click on the **Entry Template for Client Documents** entry template to launch it.

Entry Template Manager

Refresh New Entry Template Actions Filter

Entry Template for Client Documents

Description:  
This Template being used to create the documents in the repository by defining the location, class, property values and security

| Class Name: Client Document | Template Type: document | Workflow Name:

2. Choose any sample document from your local desktop, add a **Document Title**, **Client Name** and leave the **Reference ID** field blank. Click **Add** to try to add the document to the repository. The dialog will let you

know that you need to provide a value for the Reference ID field as shown below. The little red asterisk in front of the Reference ID label also indicates that this is a mandatory field.

Add Document by Using Entry Template

When you add a document by using an entry template, the values that you enter for the document are consistent. [Learn more](#)

General

What do you want to save? Local document

\* File name: Choose Files Document for Edit service feature.docx

Major version ⓘ

Properties

\* Class: Client Document

Document Title: ⓘ Document for Edit service feature.docx

Client Name: ⓘ This value is required.

\*Reference ID: ⓘ

Add Cancel

\_3. Add a **Reference ID** that **contains special characters (e.g., include \$)**. When trying to add the document, you will get notified that this string property cannot contain any special characters as shown below. IBM Navigator will not allow you to add the document until you adhere to the constraints imposed on the properties' value by the custom EDS plug-in.

Add Document by Using Entry Template

When you add a document by using an entry template, the values that you enter for the document are consistent. [Learn more](#)

General

What do you want to save? Local document

\* File name: Choose Files Document for Edit service feature.docx

Major version ⓘ

Properties

\* Class: Client Document

Document Title: ⓘ Document for Edit service feature.docx

Client Name: ⓘ This string property cannot contain any special characters

\*Reference ID: ⓘ XFVVSX\$

Add Cancel

\_4. Click **Cancel** as you don't want to add the document.

## Developing the Samples EDS

Note that below section describes the technical sequence of steps to create and configure a Custom EDS data source plug-in. It is meant for you to read through it but not do any practical development work. Depending on your interest you may skip this section and continue with the next exercise.

Sample code for an EDS data source plug-in is provided in the <https://github.com/ibm-ecm/ibm-content-navigator-samples> GitHub repository. The sample code includes two plug-in-API classes, GetObjectTypesAPI and UpdateObjectTypeAPI.

Below sample EDS plug-in code uses two java classes (GetObjectTypesAPI and UpdateObjectTypeAPI), two json files (ObjectTypes.json and Documentclass\_PropertyData.json), and the build.xml file to compile and build the EDS plug-in for above Reference ID property validation example.

The sequence in which an EDS is executed is simple and has just two steps:

1. Get the list of objects to validate.
2. Call the validation routine when one of the listed objects is accessed.

### **\_1. Get the list of objects:** GetObjectTypesAPI.java

The first step is to let IBM Navigator know which object types to validate. Navigator will call the GetObjectTypesAPI java class and expects a JSON array with the set of objects to validate using a json data file (ObjectTypes.json). For this sample, just the class name of the Object Class, as defined in ACCE, is used. In the general case, this might depend on the object store name, which is passed as a parameter (repositoryId).

*Below example shows how to enable EDS for objects of the class object type “Client Document”. Code snippet for step 1:*

```
@WebServlet(name = "GetObjectTypesServlet", urlPatterns = { "/types" })
public class GetObjectTypesServlet extends HttpServlet {

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        String repositoryId = request.getParameter("repositoryId");
        //Return a JSON response with the Object Class
        String fullResourceName = "com/ibm/ecm/sample/edsds/data/ObjectTypes.json";
        logger.logDebug(this, methodName, request, "Attempting to load resource: " +
            fullResourceName);

        InputStream objectTypesStream =
            this.getClass().getClassLoader().getResourceAsStream(fullResourceName);
        if (objectTypesStream == null) {
            throw new RuntimeException("Unable to load the data file.");
        }

        JSONArray jsonResponse = JSONArray.parse(objectTypesStream);
        logger.logExit(this, methodName, request, "Returning: " +
            (jsonResponse != null ? jsonResponse.toString() : "null"));
        return jsonResponse;
    } // of doGet
} // of class GetObjectTypesServlet
```

ObjectTypes.json file:

```
[{"symbolicName": "Client Document"}]
```

### **\_2. Implement custom validation:** UpdateObjectTypeAPI.java

The IBM Navigator plug-in will call the validation routine when the user interacts with an object of the specified object type and will provide the current property values as a JSON object.

The JSON object has 3 main sections:

1. Information about the Request
2. Information about the Object
3. Information about the User

Code snippet for step 2:

```
@WebServlet(name = "UpdateObjectTypeServlet", urlPatterns = { "/type/*" })
public class UpdateObjectTypeServlet extends HttpServlet {

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        String objectType = request.getPathInfo().substring(1);

        // Get the request json
        InputStream requestInputStream = request.getInputStream();
        JSONObject jsonRequest = JSONObject.parse(requestInputStream);
        String requestMode = jsonRequest.get("requestMode").toString();
        String objectId = jsonRequest.get("objectId").toString();
        String repositoryId = jsonRequest.get("repositoryId").toString();

        JSONArray requestProperties = (JSONArray)jsonRequest.get("properties");
        JSONObject clientContext = (JSONObject)jsonRequest.get("clientContext");
        String userid = (String)clientContext.get("userid");
        String locale = (String)clientContext.get("locale");
        String desktop = (String)clientContext.get("desktop");
```

*(to be continued)*

Each request will have a **requestMode** specified to identify the context in which the validation routine was called:

1. **initialNewObject** and **initialExistingObject**: Indicates the first step in the sequence and is called when an item – for example a document or folder– is opened or created.
2. **inProgressChanges**: Is called when a user updates a value in the user interface, if there are dependent properties.
3. **finalNewObject** and **finalExistingObject**: Indicates the final step in the sequence and is called prior to committing the changes to the server. To deny the commit request, the plug-in can return an error.

### Forcing the formatting of a specific property

To ensure all data is entered into the system correctly, the code enforces a specific format using a regular expression – this is done by using the request modes **initialNewObject** and **initialExistingObject** and returning the properly formatted JSON.

In the following example, the format of the ReferenceID property is checked:

```
// Create an Empty JSON response and write your results here
JSONObject jsonResponse = new JSONObject();
responseProperties = new JSONArray();

if (requestMode.equals("initialNewObject") || requestMode.equals("initialExistingObject"))
{
    //ensure the Reference ID is in the proper format eg, US123
    // the reg-ex for this format ([A-Z]{2})(\d{3})
    JSONObject temp = new JSONObject();
    temp.put("symbolicName", "ReferenceID");
    temp.put("format", "^[a-zA-Z0-9]+$");
    temp.put("formatDescription", "<br><ul><li> alphabetic value allowed </li></ul>");
    responseProperties.add(temp);
    jsonResponse.put("properties", responseProperties);
}
```

```

PrintWriter writer = response.getWriter();
jsonResponse.serialize(writer);

```

### Validate values prior to saving

Above example shows how to validate that the data is in the right format. A different kind of validation check is to check that the value of the ReferenceID property already exists in an external system. This can best be achieved by adding a check for the **finalNewObject** and/or **finalExistingObject** request modes. As an example, we assume here that all reference IDs except the ReferenceID US123 are valid, instead of looking them up from an external system.

The input JSON object contains all property values in the requestProperties JSONArray. It was obtained by extracting the property “properties” from the request passed to the method doPost(), see above. To find the ReferenceID property the code has to loop through that array, as follows.

The following example expands on the previous formatting check:

```

if (requestMode.equals("finalExistingObject") || requestMode.equals("finalNewObject")) {
    //The Incoming JSON will have the properties and their values in the requestProperties
    array

    // Loop through the properties and use simple name matching to find a property
    for( int i = 0 ; i < requestProperties.size(); i++) {
        JSONObject requestProperty = (JSONObject) requestProperties.get(i);

        String propName = requestProperty.get("symbolicName").toString();
        String propValue = String.valueOf(requestProperty.get("value"));
        if (propName.equals("ReferenceID")) {
            if (!propValue.equals("US 123")) {
                // the value does not match our simple rule, add an error message to the
                return JSON
                    JSONObject temp = new JSONObject();
                    temp.put("symbolicName", "ReferenceID");
                    temp.put("customValidationMessage", "has not been found in the
issue tracking system. Please ensure to enter a valid Reference ID.");
                    responseProperties.add(temp);
            }
        }
    }
}

PrintWriter writer = response.getWriter();
jsonResponse.serialize(writer);

```

With these modifications, the sample EDS data source plug-in is ready to be compiled, using e.g., an Ant build from the Eclipse IDE. The final step is to let IBM Navigator know that it needs to call this custom plug-in. An administrator needs to perform the following steps for that:

1. Open the **admin desktop** in IBM Navigator and navigate to the **Plug-ins** section.
2. Click the **New Plug-in** button to register a new plug-in.
3. Select **JAR file path** and enter the path to the local **edsDataSourceSamplePlugin.jar** file, which is the result of the build process above. In a container environment, the plug-in can be copied into a persistent storage volume which is mounted by IBM Navigator in path **/opt/ibm/plugins**. Then the plug-in needs to be loaded by clicking **Load** followed by **Save and Close**.
4. Click the **New Plug-in** button again to register another plug-in. For the **JAR file path** configure the **edsPlugin.jar** file, which is located in the subdirectory “samples” of the IBM Navigator installation directory. In a container environment, the file is already present in the IBM Navigator container image with the name **/opt/ibm/intPlugins/eDS/edsPlugin.jar**, such as:

<input checked="" type="radio"/> JAR file path: <a href="#">①</a>	/opt/ibm/intPlugins/eDS/edsPlugin.jar	<b>Load</b>
---	---------------------------------------	-------------

5. Click the **Load** button. In the **External Data Service** section towards the bottom of the page, select **Data Source Plugin** and select the plug-in which got registered in step 3. Click **Verify** to verify the configuration. Then click **Save and Close**.
6. Modify the desktop definition and configure it to load the plug-in newly registered in step 5.

For more information on how to create an EDS plug-in refer to [EDSDataSourceSamplePlugin Code](#). External Data Services are further discussed in the documentation on these pages:

<https://www.ibm.com/docs/en/content-navigator/3.1.0?topic=navigator-external-data-services>  
<https://www.ibm.com/docs/en/content-navigator/3.1.0?topic=services-sample-external-data-service>  
<https://github.com/ibm-ecl/ibm-content-navigator-samples/tree/master/edsDataSourceSamplePlugin>  
[Registering and configuring an EDS plug-in to reference a custom EDS data source plug-in - IBM Documentation](#)

## 5 Exercise: Search Content and Simple Search Content

### 5.1 Introduction

With the “Search Content” feature, content such as documents and folders can be searched within one or multiple repositories. The search is done by specifying the root document or folder class, and conditions for the properties of the resulting content using search clauses. These search clauses can be combined with logical expressions. Multiple search clauses are needed, for example to find documents with a specific document title, created within the last month.

Furthermore, in each search clause different search operators such as equal, contains, starts with, etc. can be used, and a full-text search can be combined with the search clauses.

Note that search performance depends on the properties being searched, the search clauses and the order. If you search for example for the “Document Title” property, the search will be faster if an index has been defined in ACCE for the “Document Title” property, and if the search clause specifies at least the first few characters of the result value. This means, that a “starts with” condition for a search clause will be executed much faster than the “contains” clause, even if an index is defined.

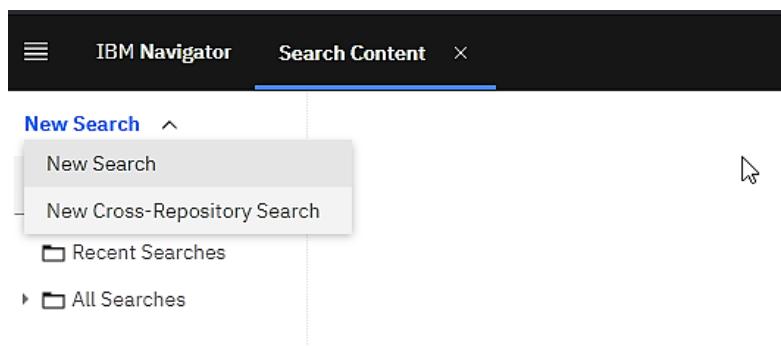
Search Content furthermore supports searching for content across multiple repositories. This is useful if the items are spread across multiple repositories. For example, a user might use a cross-repository search to look for client document records in one repository and billing records in another repository and display the result in a single result page.

### 5.2 Exercise Instructions

In the first part of this exercise, searching for content will be demonstrated using the **Search Content** capability. The second part of the exercise is dedicated to a second flavor of content search, the **Simple Search Content**. The latter allows to enter a search string and customize the result set by defining additional filter conditions.

#### 5.2.1 Search Content

1. In the Home menu, select **Search Content**. Alternatively use the Search Content tile on the desktop. The Search Content tab opens. From the **New Search** pulldown menu, select **New Search**.



2. In the New Search tab, select the **Client Document** document class as **Class**, and select the search options (the property values and their values to use) according to the screenshot below. If you have specified different values when uploading documents in previous exercises, you will need to specify these property values instead. Click **Search** to search for matching documents. When selecting the class, note that it is also possible to search for documents of multiple document classes and only search for a specific document class or also its subclasses.

Note: Property values are Case Sensitive because the environment is not configured for case insensitive searches.

New Search X

Search Criteria

Search in: \CONTENTRepo (Including subfolders) Search options: Documents, Released version

Class: Client Document (Including subclass... ▼

Find items with the following terms: ①  
Use a combination of terms and operators: \* ? or "exact match phrases"

Text options: Any of the terms

Property options: Match all

Document Title <span style="float: right;">①</span>	Starts With <span style="float: right;">▼</span>	Custom
Client Name <span style="float: right;">①</span>	Starts With <span style="float: right;">▼</span>	Automation <span style="float: right;">+ ↑ ⌂ ×</span>

Add Property Add Group Show All Properties

Search Reset Save Save As... Cancel Results Display

Display all properties  Keep search criteria open

\_3. If you added the document in the previous exercise with Client Name **Automation Elite Inc** and Document Title **Customizing and Extending IBM Content Navigator.pdf**, then there should be one result document found. Right-click on the result document and select **Properties**. In the properties window for the result document, select the **Folders Filed In** tab.

Properties

You can view or edit the properties of this item. If you have the appropriate permissions, you can also modify the security of the item. However, you cannot change the system properties.

Properties Comments Security Versions Parent Documents Content Elements **Folders Filed In**

Folder Name	Path Name	Containment Name	Added On	Added By
<input checked="" type="checkbox"/> userxx Client Documents	/userxx Client Documents	Customizing and Extending IBM Content Navigator.pdf	5/18/2023, 3:00 PM	user1

Versions: 1.0 ▼

Cancel Save Open ↳ No one has liked this yet

\_4. Click on the **userxx Client Documents** folder and observe that using this shortcut you can open the Browse Content feature with that folder's content. Close the Browse Content feature and get back to the Search Content feature. On the Search Content page, collapse the **Search Results** by clicking on that section, open the **Search Criteria** again.

\_5. Observe that there is a section where you can configure full text search options. Using the blue **Text options** below the entry field, full text search options can be configured.

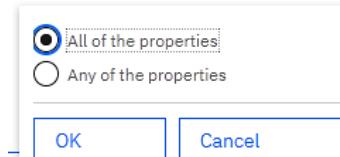
Find items with the following terms: ⓘ

Use a combination of terms and operators: \* ? or "exact match phrases"

**Text options:** Any of the terms

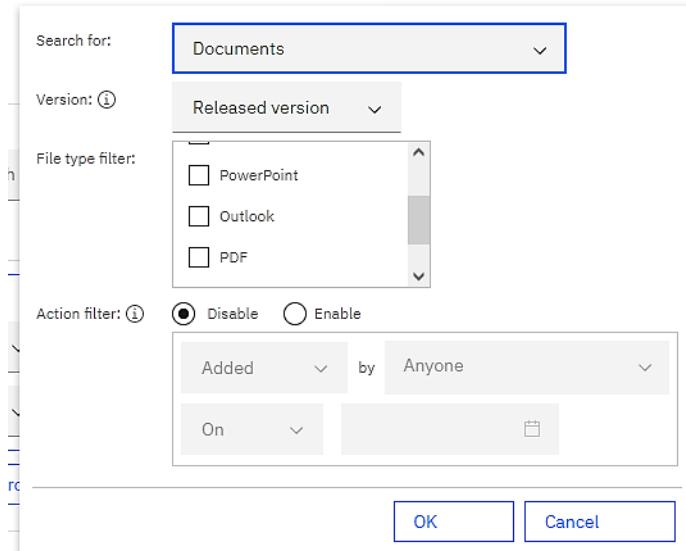
\_6. Observe that you can switch the default setting for searching from **Match all** to **Match any** criteria, by clicking on the title **Property options** and selecting the appropriate option.

**Property options:** Match all

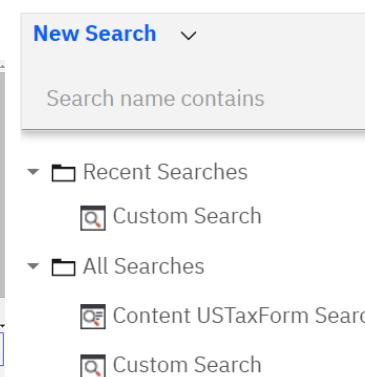
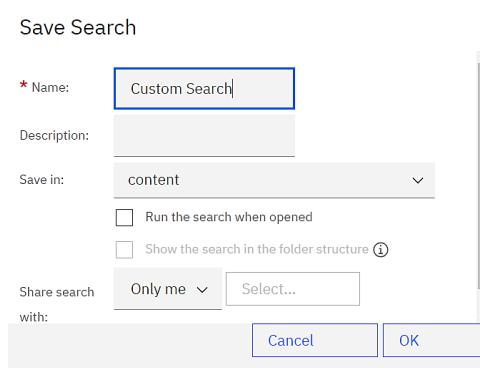


\_7. Click on **Search options** next to the **Search in** field at the top of the dialog. Notice that it is possible to specify if also older versions of the documents should be searched, and what types of documents to search.

**Search options:** Documents, Released version



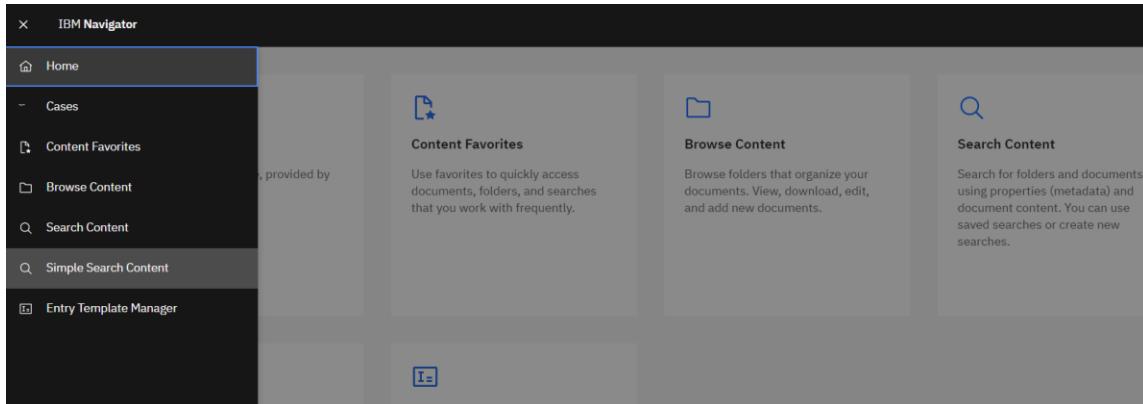
\_8. Click on **Save**. Give the search a name like **Custom Search** or you can also include your user id in the name field like “**userxx Custom Search**” to identify your saved search from another user in the multi-user environment. Leave all other fields as is. Finally click **OK** to save the search for later re-use. By default, a search is saved for the user who created it. By changing **Share save with** it can also be shared with other users for who it might be relevant.



The new search will be listed on the navigation area on the left side.

## 5.2.2 Simple Search Content

\_1. In the Home menu click on **Simple Search Content** as shown in below. Alternatively use the Simple Search Content tile on the desktop.



\_2. Type the word **Customizing** into the search entry field and hit **Enter**<sup>4</sup>. Note that you need to specify a search phrase that is part of the Document Title of one or multiple of the documents you uploaded in previous exercises. In case you used different document titles, adjust your search text accordingly.

A screenshot of the 'Simple Search Content' results page. The top navigation bar shows 'IBM Navigator' and 'Simple Search Co...'. The search bar contains 'Customizing'. Below the search bar, there are two search results: 1. 'Customizing and Extending IBM Content Navigator.pdf' - A PDF file by Brett Morris, Rainer Mueller-Maechler, Ron Rathgeber, Jana Saalfeld, Jian Xin Zhang, Jie Zhang, Understand extension points and customization options, Create an action, service, feature, and custom step processor, Use widgets in apps, mobile development, and more, Front cover Wei-Dong Zhu, Tomas Barina, Yi Duan, Nicole Hughes, Marcel Kostal, Ched Lou, Customizing and Extending IBM Content Navigator May 2014 International Technical Support Organization SG24-8. 2. 'sg248078.pdf' - A PDF file by ibm.com/redbooks Creating Value-Based Archiving Solutions with IBM Content Collector, Wel-Dong Zhu, Brent Benton, Ming Qun Chi, Yigal Dayan, Mark Martin, Daniel Pittner, Harry Yessayan, Content archiving and retention management with use cases Integration with IBM Content Classification Integration with IBM Enterprise Records, Front cover Creating Value-Based Archiving Solutions with IBM Content Collector January 2013 International Technical Support Organization SG24-8078-00 © Copyright International Business Machines. 2.6 MB | Modified By: usr001 | Modified On: 9/16/2022, 8:45 PM | Class: Document

The last five queries are automatically saved and can be viewed by clicking the search box or pressing the down-arrow key while the focus is on the search box. A list will only show up if prior searches were done by the user.

When the search box is empty, a hint is displayed in grey in the search entry field. The hint “Search content” is displayed if full text search is available. Otherwise “Search documents” is displayed.

Administrators can update the repository configuration to set the maximum number of results that are returned by the search. This is done on the “Search” tab of the repository configuration, via the field “Number of Simple Search results”. Also, a timeout to limit long-running searches can be set. In the desktop definition on the “General” tab, the file type filters can also be configured. The file type filters define the filter options available in the Simple Search Content.

When documents in the search results are updated or deleted, the filters are scanned. The modified documents are assessed for not matching the filter options that they did match when the search was first run. If any document gets out of sync with the filters, **users are notified and given the option to reset the filters**. The user can select to continue to use the stale filters until they are reset, or a new search is run. Any filters which were selected at the time the filters became out of sync, are not reapplied to not

<sup>4</sup> In case the expected document is not showing up and you have recently added it, it may be the case that the indexer has still to complete indexing the document. Try again after some time.

interrupt the user's workflow. For example, the user can continue changing the filtered documents even if they no longer match the filter criteria.

\_3. To access faceted search filters, click **Show filters**. In general, you can filter by Class, Modified By, Modified On, Added By, Added On, File Type, and Size. File Type filter options are driven by IBM Navigator's configurable file types, which allow users to add options that reflect the type of documents they work with as shown below. If all matching documents share a single value for any specific search filter, the filter option is still displayed but disabled. In your case only one document was found, therefore all filters are disabled.

The screenshot shows the IBM Content Navigator search interface. On the left, there is a sidebar with various filtering options:

- Reset filters**
- Class**:  xxx Client Identification (2),  xxx Bank Information (1),  xxx Client Document (1)
- Modified By**:  cp4badmin (4)
- Modified On**:  Any date,  Last 30 days (4)
- Added By**:  cp4badmin (4)
- Added On**:  Any date,  Last 30 days (4)
- File Type**:  PDF (4)
- Size**:  1 - 50 MB (4)

On the right, the main area displays search results:

Search documents

Actions Hide filters

**Customizing and Extending Content Navigator.pdf**  
ibm.com/redbooks Customizing and Extending IBM Content Navigator Brett Morris Rainer Mueller-Maechler Ron Rathgeber Jana Saalfeld Jian Xin Zhang Jie Zhang Understand extension points and customization options Create an action, service, feature, and custom step processor Use widgets in apps, mobile development, and more Front cover Wei-Dong Zhu Tomas Barina Yi Duan Nicole Hughes Marcel Kostal Chad Lou Customizing and Extending IBM Content Navigator May 2014 International Technical Support Organization SG24-8  
Size: 7.9 MB | Modified By: cp4badmin | Modified On: 10/6/2022, 3:58 PM | Class: xxx Client Identification

**sg248055.pdf**  
ibm.com/redbooks Customizing and Extending IBM Content Navigator Brett Morris Rainer Mueller-Maechler Ron Rathgeber Jana Saalfeld Jian Xin Zhang Jie Zhang Understand extension points and customization options Create an action, service, feature, and custom step processor Use widgets in apps, mobile development, and more Front cover Wei-Dong Zhu Tomas Barina Yi Duan Nicole Hughes Marcel Kostal Chad Lou Customizing and Extending IBM Content Navigator May 2014 International Technical Support Organization SG24-8  
Size: 7.9 MB | Modified By: cp4badmin | Modified On: 10/6/2022, 5:52 PM | Class: xxx Client Identification

**IBM FileNet P8 Platform and Architecture**  
ibm.com/redbooks IBM FileNet P8 Platform and Architecture Wei-Dong (Jackie) Zhu Nicholas Buchanan Michael Oland Thorsten Poggensee Pablo E Romero Chuck Snow Margaret Worel Architecture and expansion products Security, infrastructure, and scalability information Front cover Solution design, creation, and implementation IBM FileNet P8 Platform and Architecture April 2011 International Technical Support Organization SG24-7667-01 © Copyright International Business Machines Corporation 2009, 2011. All rights reserved.  
Size: 5.4 MB | Modified By: cp4badmin | Modified On: 9/29/2022, 11:44 AM | Class: xxx Client Document

Total: 4 Items 1 - 4

\_4. Search for documents using the keywords **edit service**. This should result in two documents being found. Use a **File Type** filter for **Word** documents to find the respective document you uploaded previously from the lab data folder.

The screenshot shows a search interface with the following details:

- Search Bar:** edit service
- Actions:** Actions dropdown menu, Hide filters button (1).
- Document Preview:** Document for Edit service feature.docx  
This Document used for Content Lab exercise for edit service client feature which will help users to edit the document, checkin and checkout easily.  
Size: 12 KB | Modified By: cp4badmin | Modified On: 10/10/2022, 1:35 PM | Class: xxx Client Identification
- Filters (Left Panel):**
  - Class:**  xxx Client Identification (1),  xxx Bank Information (0),  xxx Client Document (0)
  - Modified By:**  cp4badmin (5)
  - Modified On:**  Any date,  Today (1),  Last 30 days (1)
  - Added By:**  cp4badmin (5)
  - Added On:**  Any date,  Today (1),  Last 30 days (1)
  - File Type:**  PDF (4),  Word (1)
  - Size:**  0 - 1 MB (1),  1 - 50 MB (0)
- Pagination:** Total: 1 | Items 1 - 1 | Page: 1

Note: This document will be used in the Edit Services client feature exercise.

\_5. Close the Simple Search Content tab.

# 6 Exercise: Creating Favorites

## 6.1 Introduction

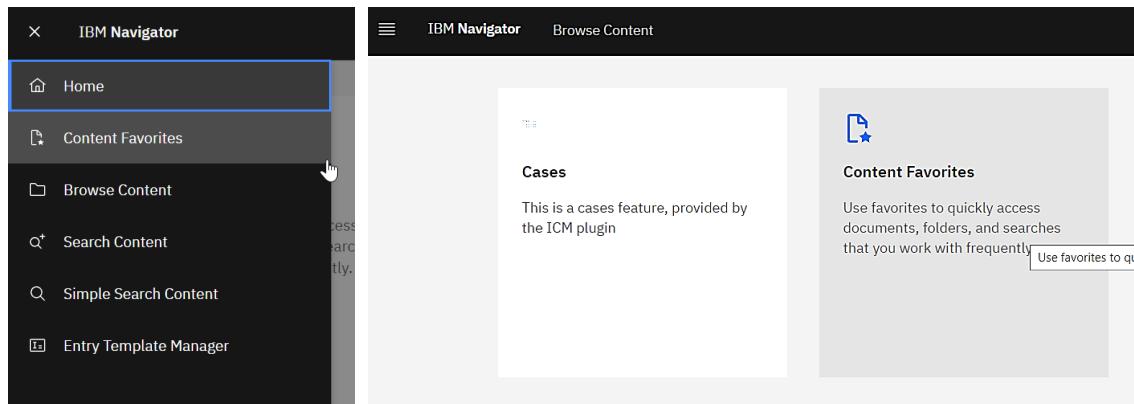
Users can create Favorites to quickly find the items that they work with frequently. Favorite items are added to the Favorites view in the IBM Navigator and in IBM Content Navigator for Microsoft Office. Adding a favorite is as easy as selecting an item in the repository and clicking “Add to Favorites”.

## 6.2 Exercise Instructions

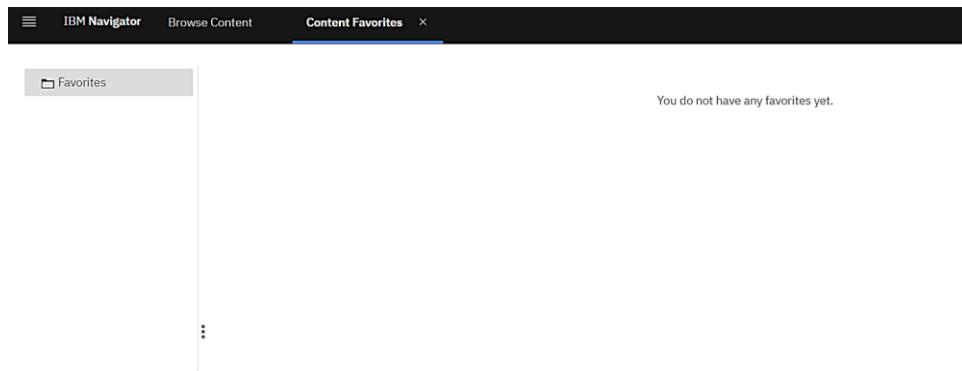
In this exercise you will learn how to add favorites to the **Content Favorites** screen and how it will help you to navigate to frequently used items faster.

### Content Favorites

- \_1. From the Home menu in top left corner, select **Content Favorites**. Alternatively use the **Content Favorites** tile on the desktop.



- \_2. Initially your favorites are empty as shown below.



\_3. Open the **Browse Content** feature by either selecting it from the Home menu or by clicking the **Browse Content** tile on the desktop.

\_4. Add a document or folder to your favorites by right-clicking on the document or folder and then selecting **Add to Favorites** as shown below.

The screenshot shows the IBM Navigator interface with the 'Browse Content' tab selected. On the left, there's a sidebar with navigation links like 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', 'Saved Searches', and 'userxx Client Documents'. The main area displays a list of files with columns for Name, Size, Modified By, Modified On, Major Rev., Commits, Downloads, and Likes. Three files are listed: 'Customizing and Extending IBM Content Navigator.pdf', 'DL for Redaction.pdf', and 'Document for Edit service feature.docx'. A context menu is open over the 'userxx Client Documents' folder, with 'Add to Favorites' highlighted.

\_5. A dialog opens to save the folder or document as a favorite, allowing customization of the name.

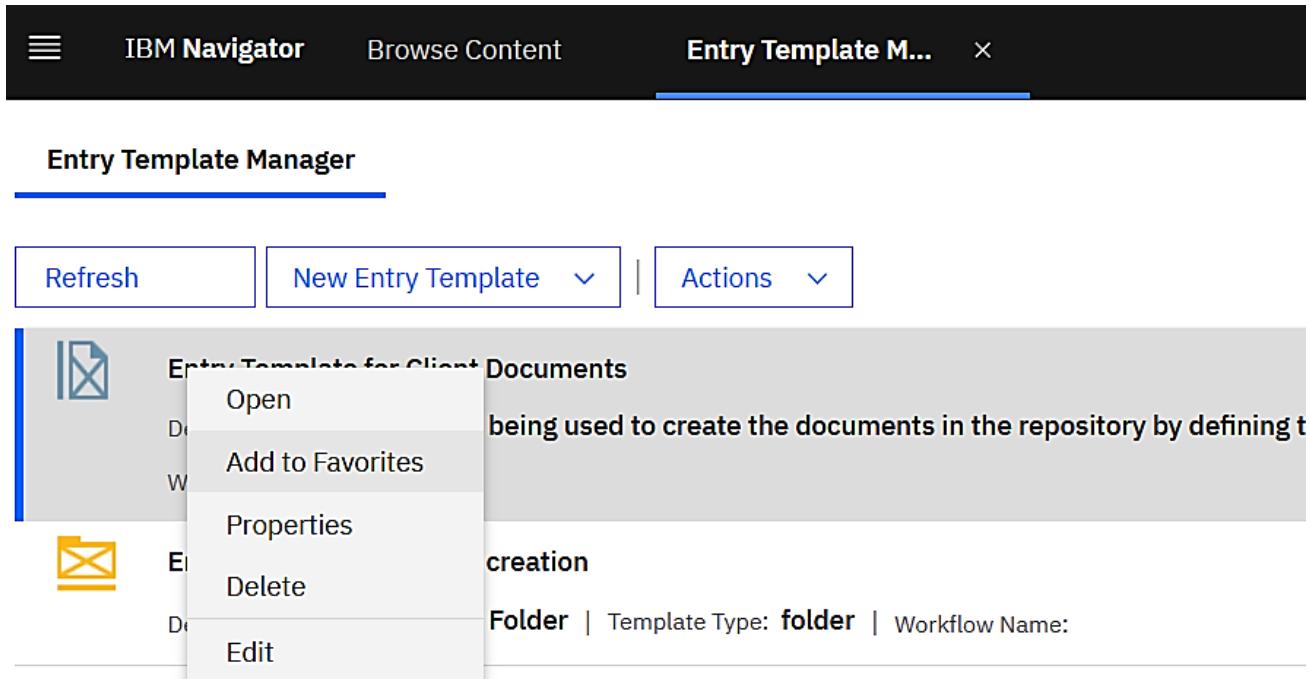
### Add to Favorites

A dialog box titled 'Add to Favorites' is shown. It contains a single input field labeled 'Name:' with the value 'userxx Client Documents'. Below the input field are two buttons: 'Cancel' and 'Add'.

\_6. Notice the yellow star in front of the folder name, after adding the folder to your favorites. If yellow star doesn't show up like below screenshot, then close and reopen "Browser Content"

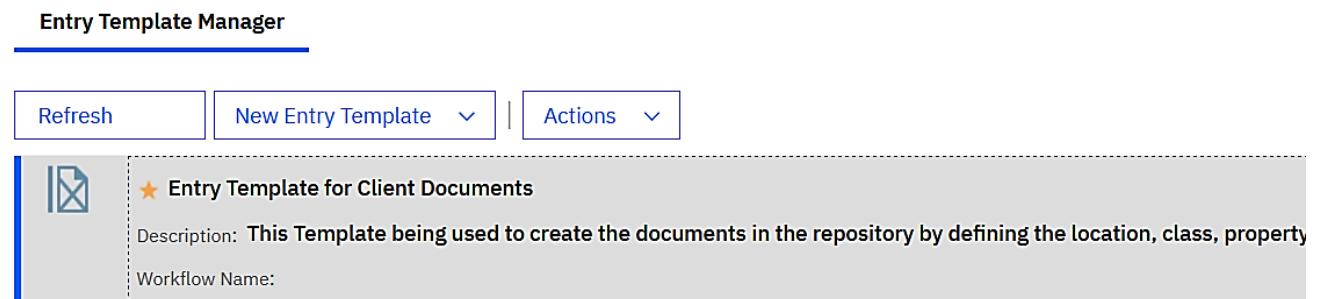
The screenshot shows the 'Browse Content' interface again. The 'userxx Client Documents' folder in the sidebar is now marked with a yellow star in its icon, indicating it is a favorite. The main area shows a list of folders with columns for Name, Modified By, Modified On, and a C column. The 'userxx Client Documents' folder is listed at the bottom of the list.

\_7. You can also add an entry template from the Entry Template Manager to the favorites list as shown below. Navigate to the **Entry Template Manager**, select an entry template and select **Add to Favorites** from the context menu.



The screenshot shows the 'Entry Template Manager' interface. At the top, there are buttons for 'Refresh', 'New Entry Template', and 'Actions'. A context menu is open over a template named 'Entry Template for Client Documents'. The menu items are: Open, Add to Favorites (which is highlighted with a yellow star), Properties, Delete, and Edit. To the right of the menu, a tooltip provides a description: 'being used to create the documents in the repository by defining t'. Below the menu, the template details are shown: 'creation', 'Folder | Template Type: folder | Workflow Name:'.

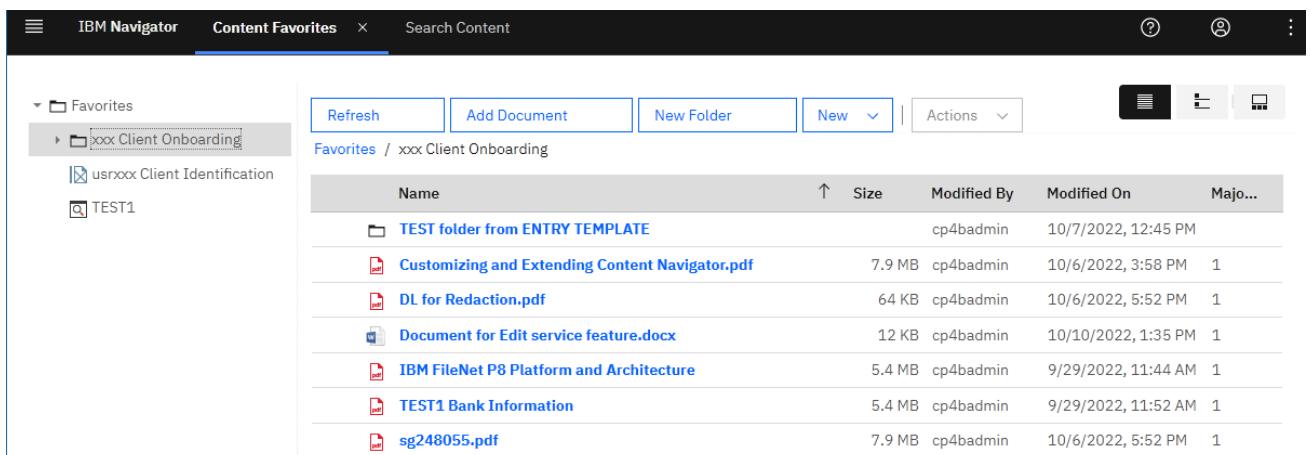
Note again the yellow star in front of the name which indicates a favorite item.



The screenshot shows the 'Content Favorites' feature. It displays a saved search for 'Entry Template for Client Documents'. The template name is preceded by a yellow star icon. The description is: 'This Template being used to create the documents in the repository by defining the location, class, property'. Below the description, there is a field for 'Workflow Name:'.

\_8. Try it out with the saved search too.

\_9. Go back to the **Content Favorites** feature selecting it from the Home menu or clicking on the tab if you did not close it. Observe the newly added favorites. Use these favorites to quickly access often used items without having to find them on the other tabs in your IBM Navigator desktop.



The screenshot shows the 'Content Favorites' feature. On the left, a sidebar lists 'Favorites' and 'xxx Client Onboarding'. Under 'xxx Client Onboarding', there are entries for 'usrxxx Client Identification' and 'TEST1'. The main area shows a list of saved searches with details like name, size, modified by, and modified on. The first few entries are: 'TEST folder from ENTRY TEMPLATE', 'Customizing and Extending Content Navigator.pdf', 'DL for Redaction.pdf', 'Document for Edit service feature.docx', 'IBM FileNet P8 Platform and Architecture', 'TEST1 Bank Information', and 'sg248055.pdf'.

# 7 Exercise: Content Redaction using IBM Daeja Viewer

## 7.1 Introduction

In this exercise you are going to learn about the special flavor of annotation used for role-based redaction, permanent redaction, and the merge & split feature from the IBM Daeja Viewer. The redaction feature allows to protect content like Personal Sensitive Information data (like Names, SSN, Email, and IP address, Biometrics, Genetic information) from viewers without a need to know. It is available in two modes. Both, the Permanent Redaction feature, and the Role-based Redaction feature are available within the Daeja Viewer. The Permanent Redaction feature achieves the redaction by creating a new redacted version of the document. The Role-based Redaction feature keeps the document unchanged and displays the document content either as-is if the user accessing it has the permission to see its content without redaction or shows it with redactions for other users. Desktop administrators have the ability to define and configure different roles & policies and redactions reasons as per business requirements.

## 7.2 Exercise Instructions

Note that below section describes the role-based redaction configuration steps that an administrator would need to perform. Depending on the context in which you perform the lab you might not have admin privileges to access the administration capability.

- *If you are an administrator, please continue to perform all section.*
- *If you are not an administrator, your environment will have been setup by your administrator based on these steps and the required redaction reason configurations should already exist. Check with your administrator to see if you should a) follow along with 7.2.1 within the Administrator UI with access, b) skip to 7.2.2 to continue with the user steps.*

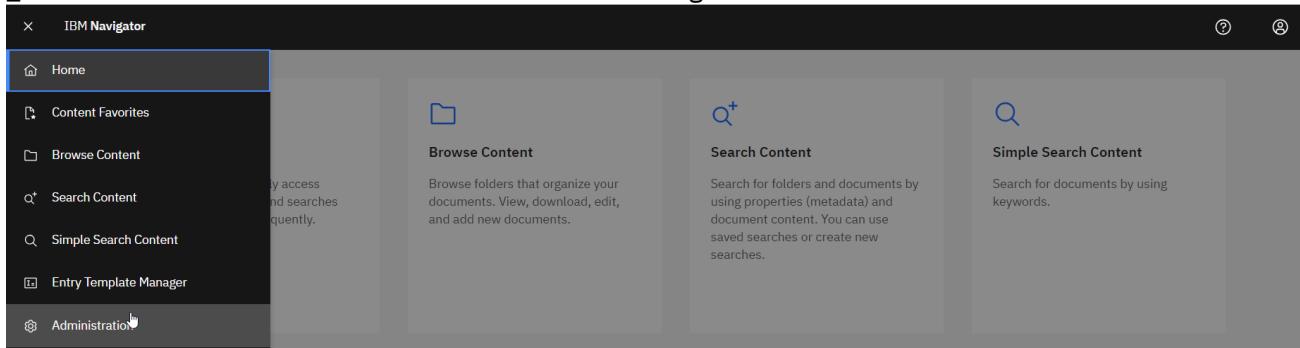
In any case the required redaction reason etc. should already exist in your environment. There are shown for information purposes, and nothing is to be performed.

### 7.2.1 Role-based Redactions

Role-based redaction allows to create redactions which display different redactions of the same document depending on the role of the user looking at the document. They are created by placing a black rectangle annotation on the sensitive data and selecting a redaction reason. The redaction reason, and the role specification which indicates, which users can place redactions, and which users are able to see the sensitive data in spite of the redaction being placed, are made on the IBM Navigator administration desktop. See <https://www.ibm.com/docs/en/content-navigator/3.1.0?topic=components-configuring-role-based-redactions-filenet-p8-repositories> for details.

#### Role-based Redaction configuration steps (REFERENCE ONLY, Administrator already performed - Role-based Redaction configuration steps):

1. Click on Administration at the bottom of the IBM Navigator home menu.



2. Click on **Role-based Redactions** in the menu on the left.

The screenshot shows the left-hand navigation menu of the IBM Navigator interface. The 'Role-based Redactions' option is highlighted with a mouse cursor. Other options visible include Desktops, Connections, Sync Services, Content Manager OnDemand, Viewer Maps, Plug-ins, Menus, Labels, Themes, Icon Mapping, Settings, and Role-based Redactions.

3. Click on the **New Redaction Reason** button as shown below.

The screenshot shows the 'Role-based Redactions' page with the 'Reasons' tab selected. At the top, there is a toolbar with buttons for New Redaction Reason, Edit, Copy, Delete, Refresh, Export, and Import. Below the toolbar, a table header is visible with columns for Name, Description, Dataca..., Repositories, and ID. A message indicates 'No items to display'.

4. Enter the **Name** and **Description** of the redaction reason and then click on **Save and Close**.

The screenshot shows the 'New Redaction Reason' dialog box. It has tabs for Reasons, Policies and Roles, and \*New Redaction Reason. The \*New Redaction Reason tab is active. Below the tabs are four buttons: Save and Close, Save, Reset, and Close. The 'Redaction reason: New Redaction Reason' section contains a note about creating a redaction reason for sensitive data. The 'Name' field is set to 'Driver License Number' and the 'Description' field is set to 'Hide the DL number'.

\_5. Navigate to the **Policies and Roles** tab and click the **New Redaction Policy** button as shown below.

The screenshot shows a navigation bar with tabs: Desktops (with an 'x'), Role-based Redactions (highlighted with a blue border), Reasons, Policies and Roles (highlighted with a blue border), and Driver License Number (with an 'x'). Below the navigation bar is a section titled "Redaction Policy Configuration". A sub-section header "Redaction Policy Configuration" is visible. A descriptive text states: "You can create and manage redaction policies, which associate redaction reasons with users and groups who can read sensitive data and can edit annotations that protect that sensitive data from view." At the bottom of this section are several buttons: "New Redaction Policy" (highlighted with a blue background), "Edit", "Copy", "Delete", and "Refresh". To the right of these buttons is a search input field with the placeholder "Name contains".

\_6. Enter a **Name** and add the **Driver License Number** reason to the list of **Selected Reasons** as shown below.

The screenshot shows the "Redaction role: New Redaction Policy" and "Repository: content" sections. Below these are buttons: "Save and Close", "Save", "Reset", and "Close". A note says: "You can create a redaction policy to associate the selected redaction reasons with both redaction editors and redaction viewers." The main configuration area has fields for "Name" (containing "Driver License Policy"), "Description" (containing "Hide the DL sensitive information"), and "Redaction reasons" (containing "Name contains"). On the right, there are two lists: "Available Reasons" (containing "Credit Card Number" and "Social Security Number") and "Selected Reasons" (containing "Driver License Number"). Between them are "→" and "←" arrows for moving items between lists. At the bottom right is a "New Editor Role..." button.

\_7. Scroll down and click on **New Editor Role...**

You can create a redaction policy to associate the selected redaction reasons with both redaction editors and redaction viewers.

The screenshot shows the "Available Editor Roles" and "Selected Editor Roles" lists. The "Available Editor Roles" list contains "Credit Card Number" and "Social Security Number". The "Selected Editor Roles" list contains "Driver License Number". Between the lists are "→" and "←" arrows for moving items. At the bottom right is a "New Editor Role..." button.

\_8. Enter the **Name** and add the group **GeneralUsers** to the **Selected Redaction Editors**. These are those users who you want to give the ability to annotate the sensitive information. Click the **Save and Close** button.

Reasons Policies and Roles Driver License Number x \*New Redaction Policy x \*New Redaction Role x

Redaction role: New Redaction Role

Repository: content

Save and Close Save Reset Close

You can create a redaction role to associate the specified users and groups with either the ability to read sensitive data or the ability to edit annotations that protect sensitive data from view. The redaction role must be associated with a redaction reason in a redaction policy before those users and groups can read the data or edit the annotations.

\* Name: ⓘ

Type ⓘ  Editor  Viewer

Description: ⓘ this user group helps to redact the sensitive

\* Membership ⓘ

Name contains

Available Redaction Editors ↑ cp4admin

Selected Redaction Editors ↑ GeneralUsers

\_9. Scroll down and click on the **New Viewer Role...** button.

Redaction viewers: ⓘ

Name contains

Available Viewer Roles ↑ cp4admin

Selected Viewer Roles ↑ GeneralUsers

→ ←

New Viewer Role...

\_10. Enter the **Name** and add the user **cp4admin** or **cp4badmin** depending on your environment to the **Selected Users and Groups**. Click the **Save and Close** button.

\* Name: ⓘ

Type ⓘ  Editor  Viewer

Description: ⓘ this viewer group cannot see the sensitive

\* Membership ⓘ

Users Groups Editors

cp4

Available Users ↑ cp4admin

Selected Users and Groups ↑ cp4admin

\_11. **Save and Close** the new redaction policy after you selected the editor and viewer roles.

Desktops Connections Sync Services Content Manager OnDemand Viewer Maps Plug-ins Menus Labels Themes Icon Mapping Settings Role-based Redactions

Desktops x Role-based Redactions x Reasons Policies and Roles \*New Redaction Policy x

Redaction role: New Redaction Policy

Repository: CONTENTRepo

Save and Close Save Reset Close

You can create a redaction policy to associate the selected redaction reasons with both redaction editors and redaction viewers.

Available Editor Roles ↑ Selected Editor Roles ↑ Editor user group roles

→ ←

Redaction viewers: ⓘ

Name contains

Available Viewer Roles ↑ Selected Viewer Roles ↑ viewer group

→ ←

New Editor Role... New Viewer Role...

## 7.2.2 Utilizing Role-based Redaction:

\_1. From the IBM Navigator desktop, navigate to the **Content Favorites** or **Browse Content** feature. Find the document named **DL for Redaction.pdf** in the folder you previously created.

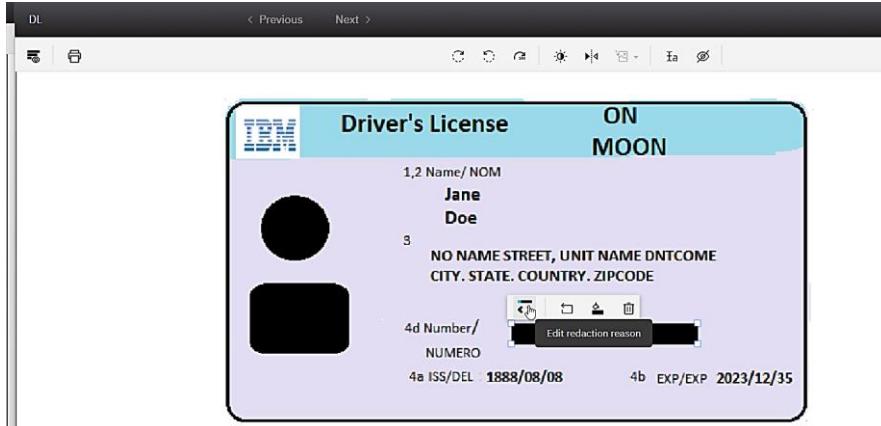
\_2. Right-click on the document and select **Open** or click on the name in the name column.

The screenshot shows the 'IBM Navigator' application window with the 'Browse Content' tab selected. On the left, there's a sidebar with a tree view of content, including 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', 'Saved Searches', and 'userxx Client Documents'. The 'userxx Client Documents' folder is currently selected. At the top right, there are buttons for 'Refresh', 'Add Document', 'New Folder', and 'Actions'. Below these is a breadcrumb path: 'content / userxx Client Documents'. A table lists files with columns for Name, Size, Modified On, and Major... (partially visible). Two files are listed: 'Customizing and Extending IBM Content Navigator.pdf' (7.9 MB, modified 8/17/2023) and 'DL for Redaction.pdf' (37 KB, modified 8/17/2023). A context menu is open over the 'DL for Redaction.pdf' row, with options: Open, Preview, Merge and Split, and Properties. The 'Open' option is highlighted.

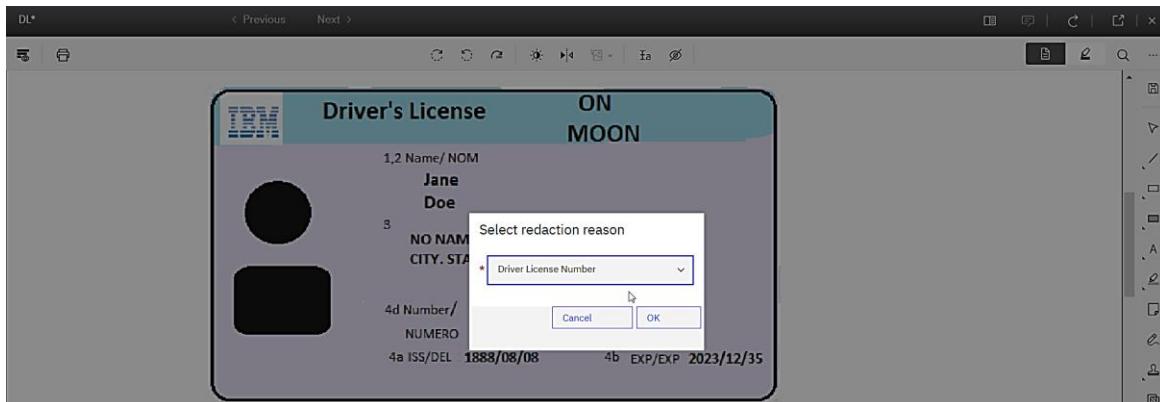
\_3. The document will open in the Daeja Viewer as shown below. Note that by default the document opens in standard annotation mode. On the right-hand side menu, you can find the **Filled rectangle** button to black out sensitive data as indicated in the screenshot.

The screenshot shows the Daeja Viewer application window displaying a driver's license card. The card has a blue header with 'Driver's License' and 'ON MOON'. It contains several fields: '1,2 Name/ NOM' with 'Jane Doe', '3 NO NAME STREET, UNIT NAME DNTCOME CITY. STATE. COUNTRY. ZIPCODE', '4d Number/ NUMERO' with '12345-12345-12345', '4a ISS/DEL 1888/08/08', and '4b EXP/EXP 2023/12/35'. The entire card is surrounded by a thick black border. On the right side of the viewer, there is a vertical toolbar with various icons. The icon for 'Filled rectangle' is highlighted, indicating it is selected for redacting sensitive information.

\_4. Select the **Filled rectangle** tool from the vertical toolbar on the right and **draw a redaction** to hide the sensitive data as shown below. Right-click the redaction annotation and click the **Edit redaction reason** icon.

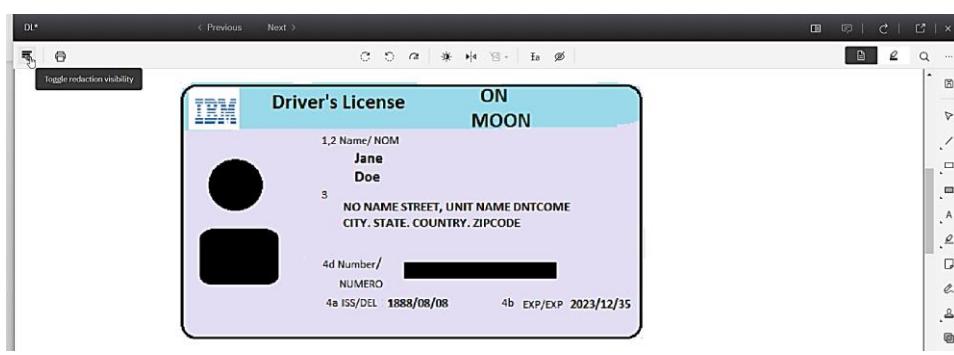


\_5. In the **Select redaction reason** dialog select the only available redaction reason **Driver License Number**<sup>5</sup> and click the **OK** button.



Note: Users possessing the editor role can toggle redaction visibility using the leftmost icon from the top toolbar. By that they can temporarily show the sensitive data using the toggle. Editors can also decide to remove the role-based redaction at a later stage.

In your environment the role-based redaction for the Driver License is set up so that members of the GeneralUsers group possess the editor role whereas the administrator user only possesses the viewer role for this redaction reason. This allows normal users to create role-based redactions on documents. In case you have access to the admin credentials in your environment, you can login with the user who have possesses the viewer role, open the same document which you redacted and observe that you have no ability to neither make the sensitive data visible nor remove the redaction permanently.



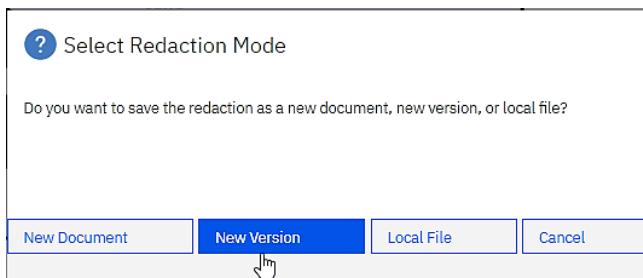
<sup>5</sup> In case you are performing the lab using an admin user the name of the Redaction Reason has a trailing "admin".

### 7.2.3 Permanent Redaction

- \_1. In case you no longer have it open, navigate to the **Content Favorites** or **Browse Content** feature and open the **DL for Redaction.pdf** document in the folder you previously created.
- \_2. The document will open in the Daeja Viewer as shown below. Find the Redaction Mode options as indicated in the screenshot. The **Redaction Mode options** allows to toggle between **Permanent Redaction** mode and **Normal Annotation** mode. While the black rectangle annotation can be deleted again, the black rectangle redaction is permanent and cannot be deleted.



- \_3. Switch to the **permanent redaction mode** by clicking the indicated icon above. A popup window asks how to save the new permanently redacted document version. Reply Yes to save unsaved annotation and in next Popup select the **New Version** to store it in the same FileNet Content repository as a new version of the existing document.



- \_4. If you have already hidden the sensitive data of the Driver's License Number in the previous role-based redaction exercise, then you may not need to do anything in this step. Otherwise, redact the DL license number by selecting and dragging the filled rectangle from right-hand side menu.



- \_5. Click on the **Redact** button (as shown above) to permanently store the redacted document as a new version. Then select normal annotation mode again. The redaction has been made permanent and can no longer be removed or temporarily switched off.

- \_6. Close the IBM Daeja Viewer.

## 7.2.4 Merge and Split

For documents in FileNet Content Manager, users can rotate, cut, and copy or paste one or multiple pages from existing documents into a new document or an existing document. When merging and splitting documents has been completed, the new or updated document can be saved back into the repository.

All the documents that are being used on a Merge & Split operation must be from the same repository.

For example, if you cut a page from document A, copy a page from document B, and paste them both into a new document C, document A and B must be from the same repository and document C will be saved into that same repository too.

### Merge and Split exercise steps:

1. Open the multi-pages document **Customizing and Extending IBM Content Navigator.pdf** from the **Browse Content** or **Content Favorites** feature as shown below.

Name	Size	Modi...	Modified On	Majo...	Com...	I
Open	7.9 MB	user5	8/17/2023, 6:27 PM	1		1
Preview	37 KB	user5	8/17/2023, 6:42 PM	1		2
Merge and Split	12 KB	user5	8/17/2023, 6:42 PM	1		
Properties						

2. The **Merge and Split** button is only available if Daeja Viewer is displayed in its own browser window, which is not the case in the default configuration. In the opened document, click on the **Open in new window** button in the top right corner.

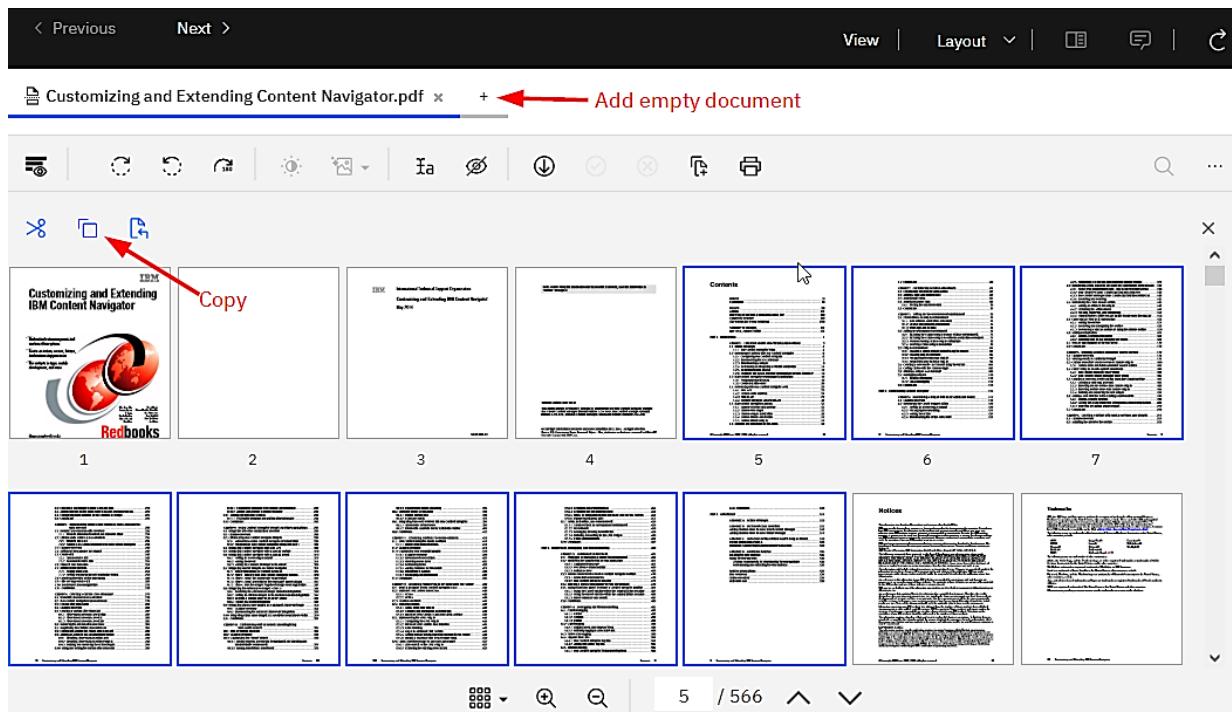


3. Click on the **Merge and Split** button in the top toolbar as shown below.

4. The **Thumbnail view** opens showing multiple pages on one screen. The size of the thumbnails can be adjusted by using the buttons in the toolbar at the bottom of the page. **Select** all the table of content pages by clicking on the first page, then press the Shift button on the keyboard and click on the last page.

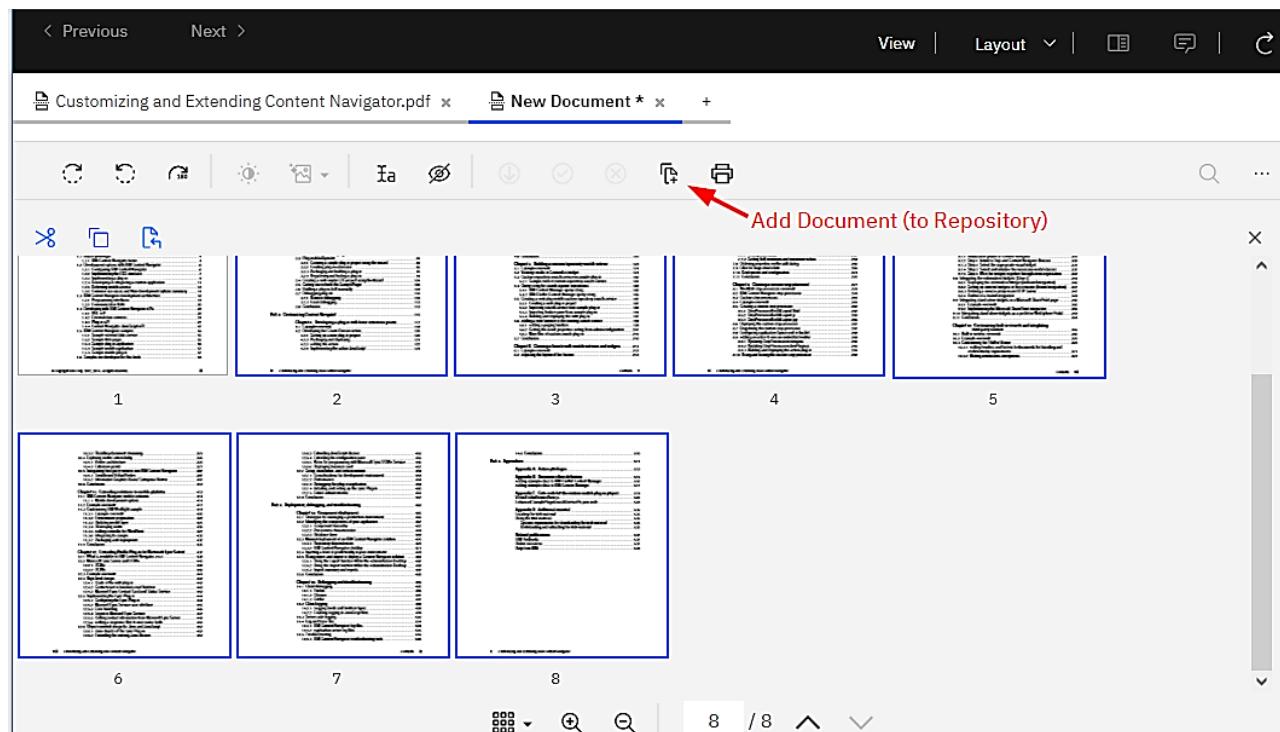
\_5. Click the **Copy** icon to copy the selected pages.

\_6. Click the small + sign next to the tab for the open document to add a new and empty document.



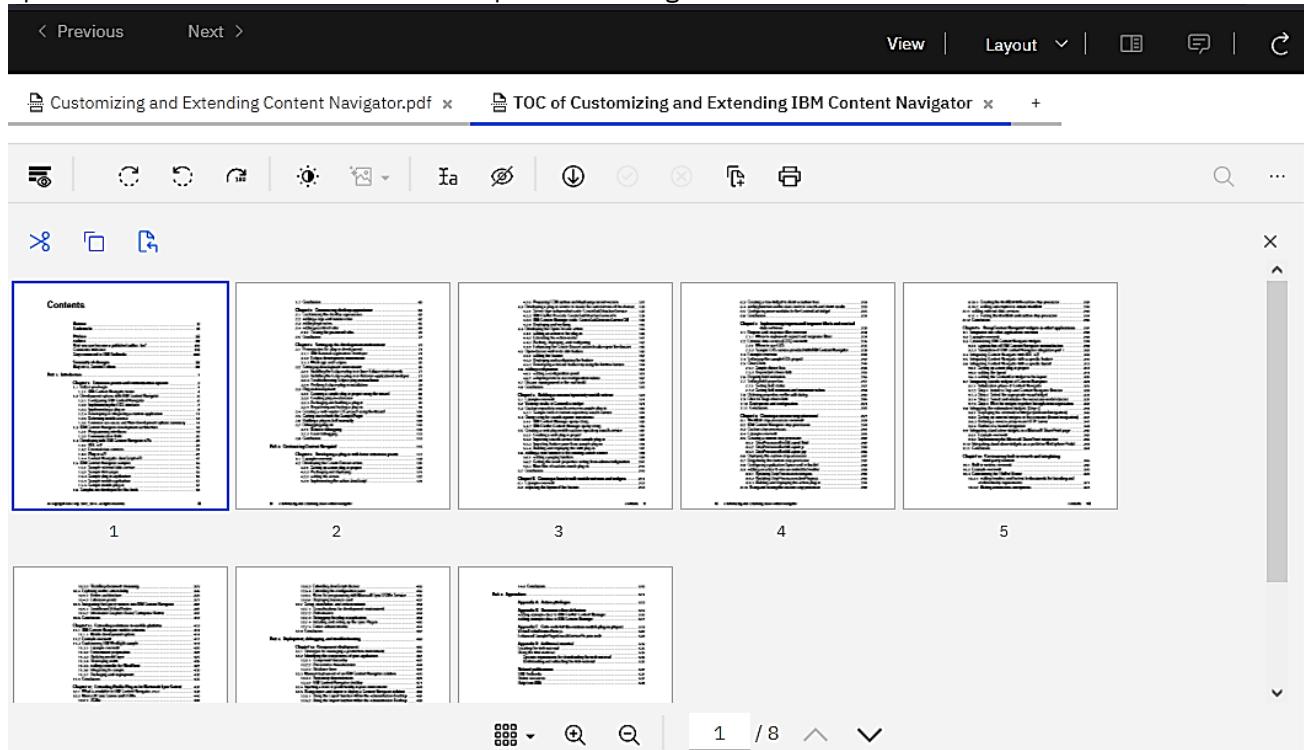
\_7. In the newly created document, click the **Paste** icon (to the right of the Copy icon), to insert the copied pages from the original document.

\_8. Click the **Add Document** icon in the top right corner to save the newly created document to the repository.



\_9. The Add Document dialog opens. Enter a **Document Title** and **Reference ID** (e.g., TEST1). Click the **Add** button to save the document into the repository.

\_10. After that, all users with access rights to the document can see the new document that was created using one of the features of “merge and split”. Note that Daeja viewer has lots of other features like a print option. You can discover more of these options in the right-hand side menu toolbar.



## 8 Exercise: Edit Service client feature with local Microsoft Office Apps

### 8.1 Introduction

This exercise covers the Edit Service client feature which will help users to add or edit a document (using check-in and check-out) easily in Microsoft apps like Microsoft Word, PowerPoint, and Excel that are locally installed on a user's workstation.

If the Edit Service client is enabled in the IBM Navigator desktop configuration and the user clicks **Edit -> Edit with Desktop apps**, the file is checked out and opened in the appropriate application on their workstation. Additionally, if the user is creating or adding new documents to the repository and saving their changes, the changes are checked-in into the repository.

You need to enable the Edit Service for one or more repositories that are associated with the desktop before you can use the Edit Service client feature.

*If you don't have the Microsoft Office apps installed or don't want to setup (download, install, and configure) the Edit Service client on your local workstation due to whatever reason, then you can still read through this exercises for awareness of the capability.*

### 8.2 Edit Service client Setup

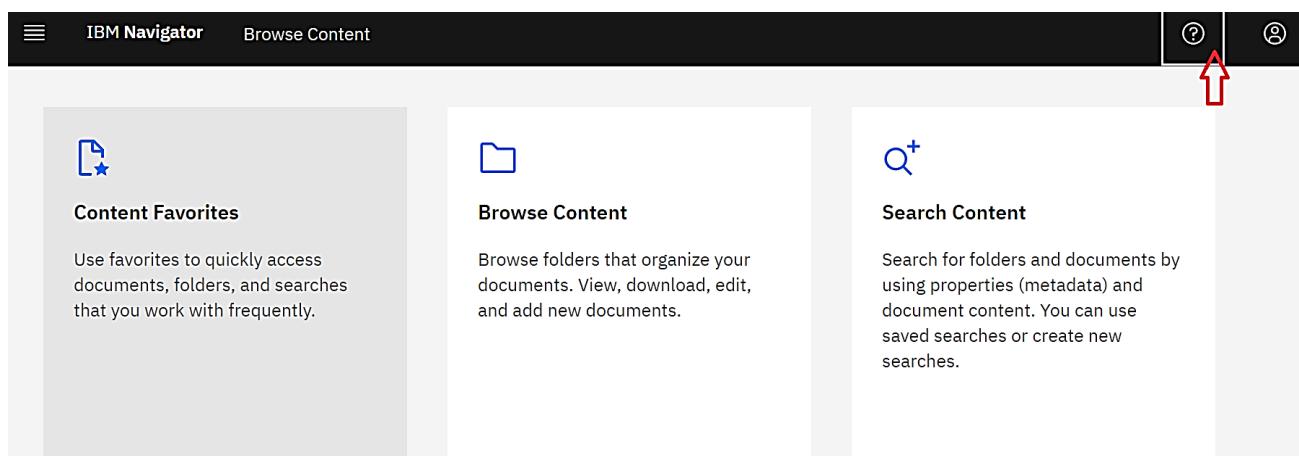
Below are the Edit Service client setup steps which are required for this exercise:

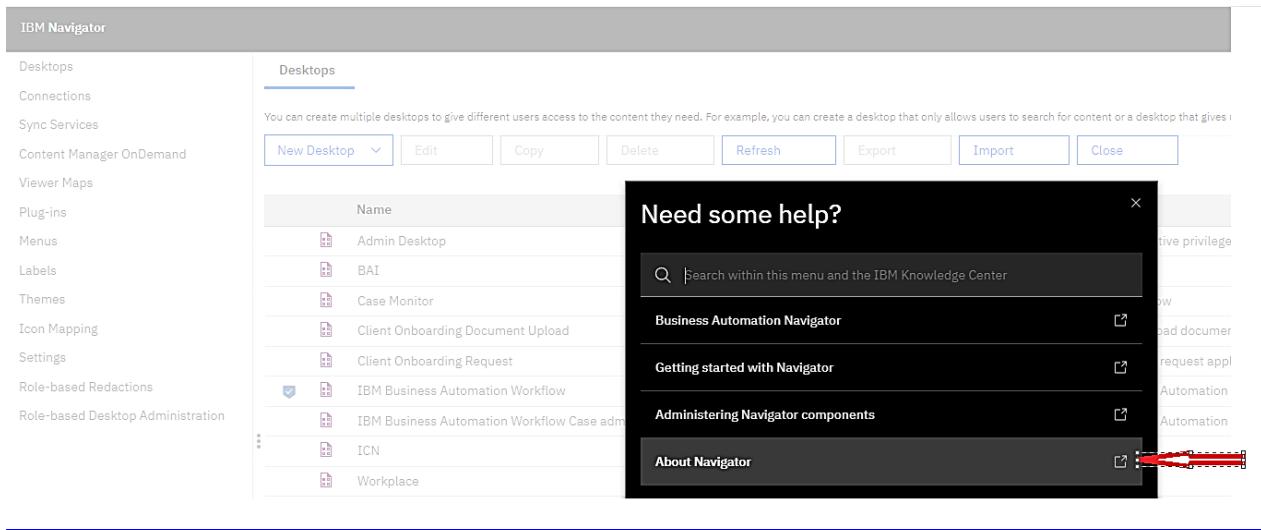
#### \_1. Edit Services client download

Depending on your access rights, you may be able to find and download the base version of Edit Service client from [IBM Fix Central](#). IBMers can also download the Edit Service client from the internal [Software downloads](#) site and external users can download from the [Passport Advantage Online for Customers](#) site by using their IBM Passport Advantage credentials with the below part numbers. Be sure to download a version that is compatible with the version of IBM Navigator you are using in your environment.

Find and download the compatible Edit Service client version and part number based on the IBM Navigator version you are using. Refer to the following screenshots to find out what your IBM Navigator version is.

Your actual screens may vary from the following screen shots shown here, as these screenshots have been captured from a CP4BA v24.0.0 environment.





**IBM Navigator**

Version: 3.1.0  
Build: icn310.000.1102

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Below Edit Service client version and part numbers may vary based on the Cloud Pak for Business Automation version that you are using. You may need to install or upgrade the Edit Service client according to your IBM Navigator version.

If your IBM Navigator version is 3.1.0, then you need to install at least Navigator Edit Service (NES) v3.1.0 or any later iFix after downloading it from IBM Fix Central <https://www.ibm.com/support/fixcentral/> or any of the other locations.

#### Steps for downloading from IBM Fix Central:

- \_1. Open IBM Fix Central using above link in a browser.
- \_2. Search the product by entering **Content Navigator** in the **product selector** and by selecting **Installed Version** as **3.1.0** and your operating system as **Platform** or **All** as shown below. Click **Continue**.

The screenshot shows the Fix Central homepage. At the top, there's a breadcrumb navigation: IBM Support > Fix Central >. Below it is the main title "Fix Central". There's a "Help" link with a question mark icon. A search bar contains the placeholder "Search all IBM for Fix metadata" and a magnifying glass icon followed by the word "tips". Below the search bar is a checked checkbox labeled "Filter search by - IBM Content Navigator".

Fix Central provides fixes and updates for your system's software, hardware, and o  
Advantage to download most purchased software products, or My Entitled System:

For additional information, click on the following link.

[Getting started with Fix Central](#)

**Find product**

Type the product name to access a list of product choices.

When using the keyboard to navigate the page, use the **Tab** or **down arrow** keys to

Product selector\*

IBM Content Navigator



Installed Version\*

3.1.0

Platform\*

All

**Continue**

3. Click **Continue** again.

The screenshot shows the "Browse for fixes" search interface. At the top, there's a navigation bar with "Support" (underlined) and other links: Downloads ▾, Documentation ▾, Forums, Cases ▾, Monitoring ▾. Below the navigation is a section titled "Browse for fixes" with a radio button next to it. To its right is a description: "Browse for all fixes for your specific product, re". Below this are three search options: "APAR or SPR" (radio button), "Individual fix IDs" (radio button), and "Text" (radio button). Each option has an input field for entering search terms. At the bottom, there's a section for "Additional query options" and two buttons: "Continue" (black background) and "Back".

\_4. You can refine the search by putting something like NES-IF001 into the **Filter fix details** field at the right side of the screen as shown below. That way you should find an entry like 3.1.0-NES-MAC for MAC or 3.1.0-NES-WIN and NES-SSLCERT-WIN for Windows.

## Select fixes

Enterprise Content Management, IBM Content Navigator (3.1.0, All platforms)

### Need to download your product?

→ Find full product install images on Passport Advantage

Fixes for product IBM Content Navigator require entitlement.

[Continue](#)

[Clear selections](#)

[Show fix details](#) | [Hide fix details](#)

Filter fix details:

	Description	Release date
<input checked="" type="checkbox"/> 1	interim fix: → <a href="#">NES-SSLCERT-WIN</a> <a href="#">More Information</a> <a href="#">How to manually refresh the SSL certificate used by the IBM Content Navigator Windows Edit Service client</a> <a href="#">How to handle the IBM Content Navigator Edit Service client SSL certificate expiration</a>	2024/07/02
<input checked="" type="checkbox"/> 5	service pack: → <a href="#">3.1.0-NES-WIN</a> <a href="#">More information</a> <a href="#">Fix list for IBM Content Navigator 3.1.0</a>	2024/06/28
<input type="checkbox"/> 6	service pack: → <a href="#">3.1.0-NES-MAC</a> <a href="#">More information</a> <a href="#">Fix list for IBM Content Navigator 3.1.0</a>	2024/06/28

1-3 of 3 results (filtered from 10 total results)

[Continue](#) [Clear selections](#) [Back](#) [Show fix details](#) | [Hide fix details](#)

/node/7158495

\_5. After you agreed to the license, click the type of download and proceed accordingly.

## Download files using HTTPS

Enterprise Content Management, IBM Content Navigator (3.1.0, All platforms)

### Download files using your web browser

Right-click the download link next to each file and choose 'Save link as' or similar.

Order number: 614945963  
Total size: 246.5 MB

[Show normalized list](#) | [Hide normalized list](#)

#### interim fix: NES-SSLCERT-WIN

[More Information](#)  
[How to manually refresh the SSL certificate used by the IBM Content Navigator Windows Edit Service client](#)  
[How to handle the IBM Content Navigator Edit Service client SSL certificate expiration](#)

#### NES-SSLCERT-WIN

The following files implement this fix.

[edit.dat](#) (3.36 KB)

#### service pack: 3.1.0-NES-WIN

[More information](#)  
[Fix list for IBM Content Navigator 3.1.0](#)

#### 3.1.0-NES-WIN

The following files implement this fix.

[MOJG7ML.zip](#) (246.49 MB)

[Back](#)

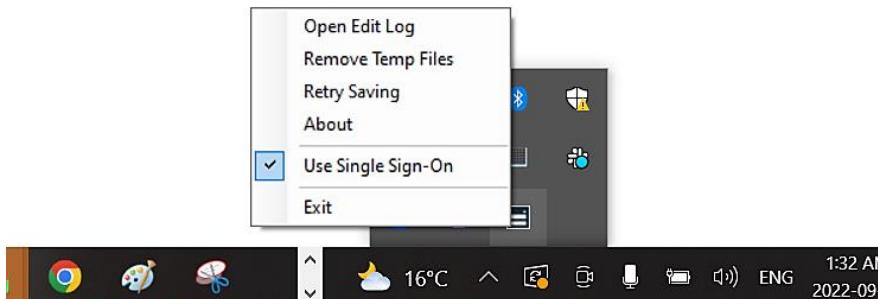
## \_2. Edit service client installation steps:

For Mac OS users, please follow and complete below Edit Service installation steps

<https://www.ibm.com/docs/en/content-navigator/3.1.0?topic=components-installing-edit-service-mac-os>.

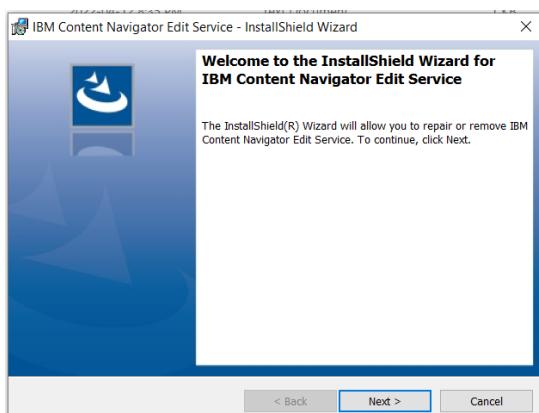
Windows users need to first extract the downloaded ZIP file into a directory.

If you have an older version of the Edit Services client already installed, please close the Edit Service client using the Exit option in its context menu in the taskbar as shown below, before upgrading the Edit Service client or applying an iFix version.



To start the installation process, execute the **ICNEditClient.exe** file contained in the directory. After that follow the screenshot below that show how to install the Edit Service client on Windows.

On the first screen click **Next >**.



After accepting the license on the next screen, click on **Next >** again. The installer will prompt you to select the install folder and if you want to install the client only for yourself (only for me) or all users (for all users). You can choose the option “for all users” if one or multiple users want to use the Edit Service client on the workstation you are installing to. Otherwise choose the option “for your username only”. After you have made your selection, the install starts directly. When done, click **Finish** to complete the installation.

In a situation where the Edit Service client has no connection to the Internet special steps need to be taken as described in the documentation to configure the Edit Service client

<https://www.ibm.com/docs/en/content-navigator/3.1.0?topic=components-configuring-edit-service-client-content-navigator>

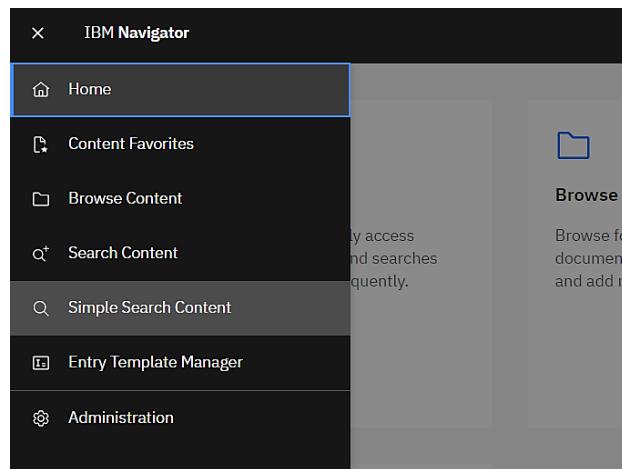
Similarly, in case SSO should be configured, either click on Use Single Sign-On in the context menu of the taskbar Edit Service client icon or follow the alternative procedure that is also described in above link. By default, SSO is not enabled, and Edit Service client will always prompt you for your user credentials when your user session has expired.

## 8.3 Exercise Instructions

### Edit Service client feature:

#### Scenario 1 – From the Simple Search Content feature pane

\_1. Click on the Home menu next to IBM Navigator and select **Simple Search Content**.



\_2. You can search for the document with the title called **Document for edit service** or you can also search for any other existing MS Word document from the search pane as shown below.

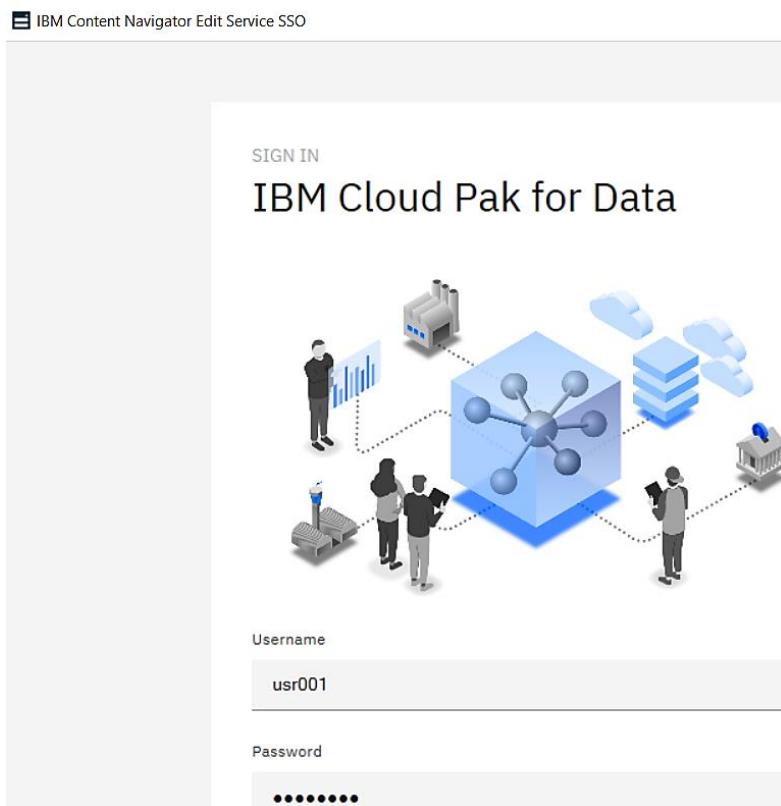
A screenshot of the "Simple Search Content" results page. The top navigation bar shows "IBM Navigator" and "Simple Search Co...". A search bar contains the query "Document for Edit service". Below the search bar, there are two search results. The first result is titled "Customizing and Extending IBM Content Navigator.pdf" and has a PDF icon. The second result is titled "Document for Edit service.docx" and has a Word document icon. Both results show details like size, modified by, and modified on.

\_3. After you have searched for the document which you want to edit with your local Microsoft Word desktop app, right click on the document and select **Edit > Edit with Desktop apps** as shown below.

A screenshot of the context menu for the "Document for Edit service feature.docx" file. The menu is open over the file thumbnail. The "Edit" option is expanded, and the "Edit with Desktop apps" option is highlighted with a gray background.

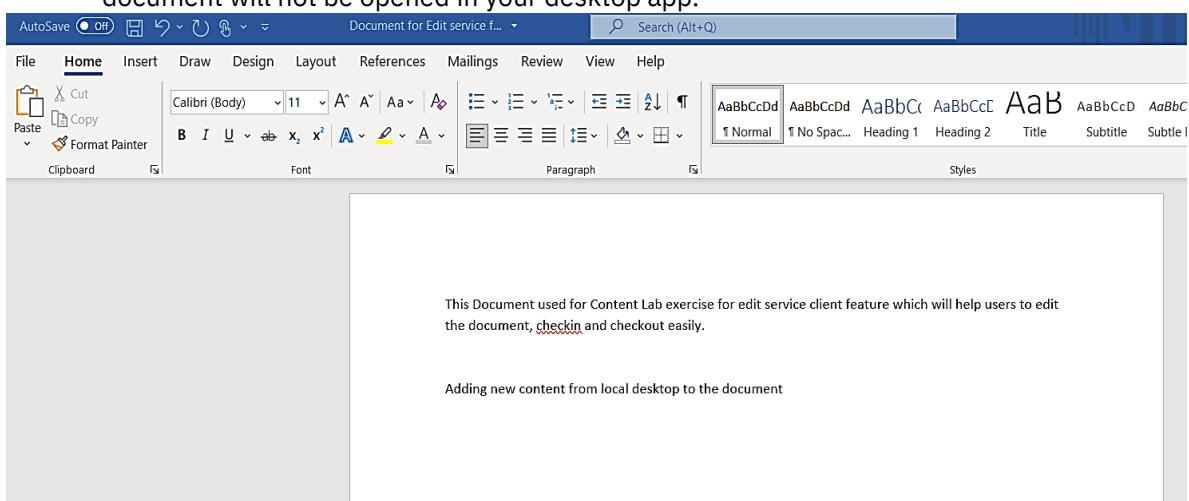
\_4. The Edit Service client will prompt you for your login credentials. as shown in below.

If the login screen does not come up, instead an SSL validation error might be shown in the ICN Content Navigator Edit Service popup in the lower right corner. If this is the case, you need to follow the instructions in the documentation [Disabling automatic validation of IBM Content Navigator server SSL certificate for the Edit Service client](#) on how to disable certificate validation. After that you need to exit and restart the Edit Service client to activate the setting. Once done repeat step 3.



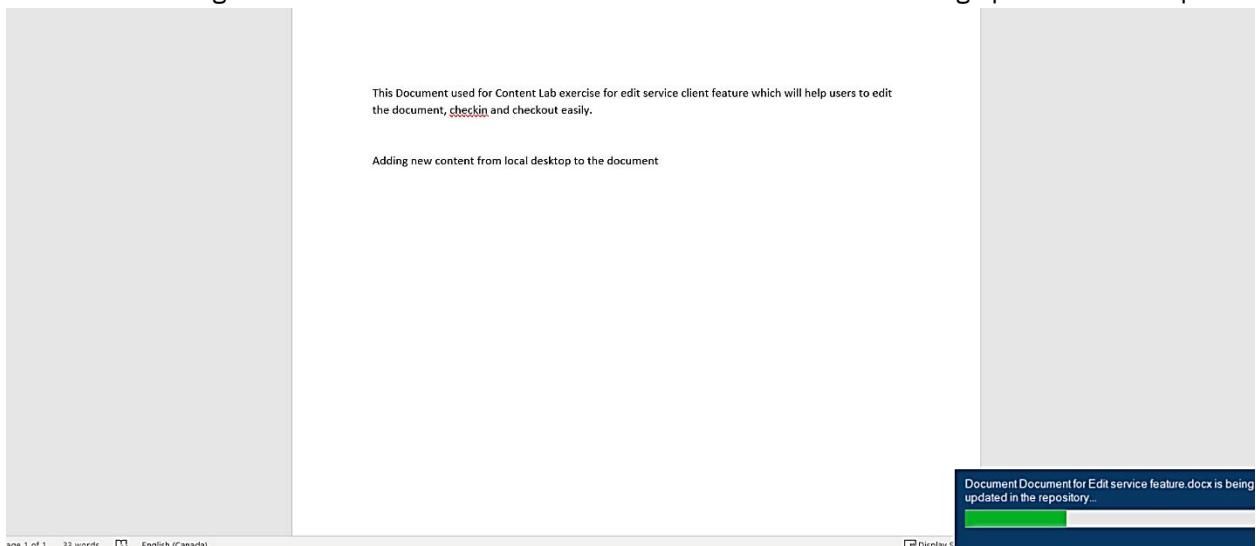
\_5. The document is opened in your local MS Word desktop app as shown below.

Note: You may get an error at this step if the Edit Service client is not installed properly and the document will not be opened in your desktop app.



\_6. Make an arbitrary change to the document.

\_7. After you save or close the document when having modified it, you will see a popup in the bottom right corner as shown below that the modified document is being updated in the repository.



You can use the Edit Service client for Microsoft Word, Excel, and PowerPoint documents.

\_8. You can also create a new document or next version of an existing document using the Edit Service client from the **Browser Content** pane as shown below.

The screenshot shows the 'IBM Navigator' interface with the 'Browse Content' tab selected. The left sidebar shows a tree view of content items like 'Case Folders', 'CodeModuleEmitter', 'Focus Corp', 'Saved Searches', and 'userxx Client Documents'. The main area displays a list of files under 'content / userxx Client Documents'. The list includes:

Name	Size	Modified On	Major Version
Customizing and Extending IBM Content Navigator.pdf	7.9 MB	user5	8/17/2023, 6:27 PM 1
DL for Redaction.pdf	37 KB	user5	8/17/2023, 6:42 PM 1
Document for Edit service feature.docx	12 KB	user5	8/17/2023, 6:42 PM 1

A context menu is open over the third row ('Document for Edit service feature.docx'). The menu options are: Open, Preview, Properties, Edit, Create New, and View Child Documents. The 'Create New' option is highlighted, and its submenu 'New Document with Desktop Apps' is also visible.

\_9. Enter **Document for Edit service feature\_1.docx** as **Document Title** and enter a **Client Name** and **Reference ID** in the entry template popup window as shown below.

Note that here you are creating the new document based on a copy of the existing document, not a new version of the existing document.

New Document

The values that you enter for the document properties can be used to find the document later.

General

Classification:  Use source document: Document for Edit service feature.docx  Major version

Properties

\* Class: Client Document

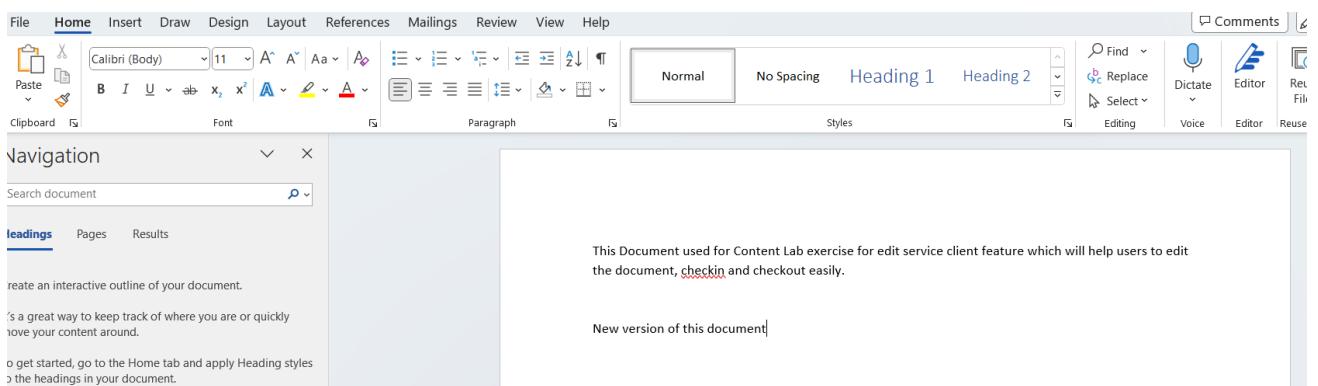
\* Document Title:  Document for Edit service feature\_1.docx

Client Name:  Legacy Consulting

\* Reference ID:  BaXndW

Add Cancel

\_10. Once the document opens in the local Microsoft Word app, add some data, save and close it.



\_11. You can see the new document is created in the **userxx Client Documents** folder.

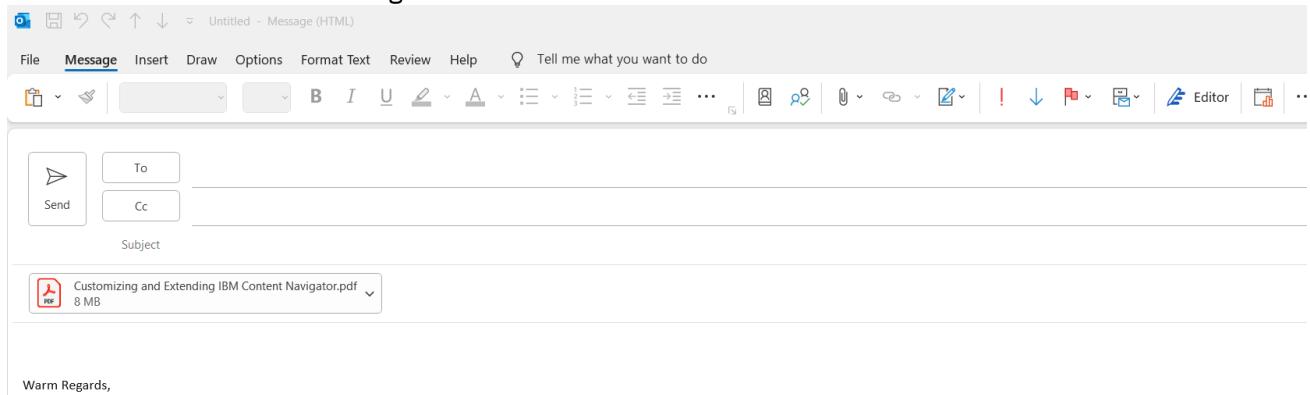
A screenshot of the IBM Navigator interface. The title bar says "IBM Navigator" and "Browse Content". The left sidebar shows a tree view of content, with "userxx Client Documents" selected. The main area displays a list of files in the "userxx Client Documents" folder. The columns are Name, Size, Modified On, and Major. The list includes:

Name	Size	Modified On	Major
Customizing and Extending IBM Content Navigator.pdf	7.9 MB	user5 8/17/2023, 6:27 PM	1
DL for Redaction.pdf	37 KB	user5 8/17/2023, 6:42 PM	1
Document for Edit service feature.docx	12 KB	user5 8/17/2023, 6:42 PM	1
Document for Edit service feature_1.docx	12 KB	user5 8/17/2023, 8:04 PM	1

\_12. In the **Browse Content** feature, select one or multiple documents. Right-click to bring up the context menu and then select **Send Email → As an Attachment**.

A screenshot of the IBM Navigator interface, similar to the previous one but with a context menu open over a selected document. The context menu for the file "Customizing and Extending IBM Content Navigator.pdf" includes options like Edit, Create New, View Child Documents, Download, Add to Favorites, Export, Delete, Check Out, Check In, Cancel Check Out, Link, Send Email, Version, Folders, Print, and Workflow. The "Send Email" option is highlighted, and a submenu for "Send Email" shows "As a Link" and "As an Attachment". The main list continues with Version, Folders, Print, and Workflow.

The Edit Service client opens a new email in your local Microsoft Outlook app and adds the selected document or a ZIP file containing all selected documents as attachment.



You can also try out the other right-click menu options.

## 8.4 Bookmark is integrated with Edit service to edit documents

The bookmark link is now integrated with Edit Service client from v3.0.14 onwards. You can see how easily access the Edit Service for document editing using the bookmark urls.

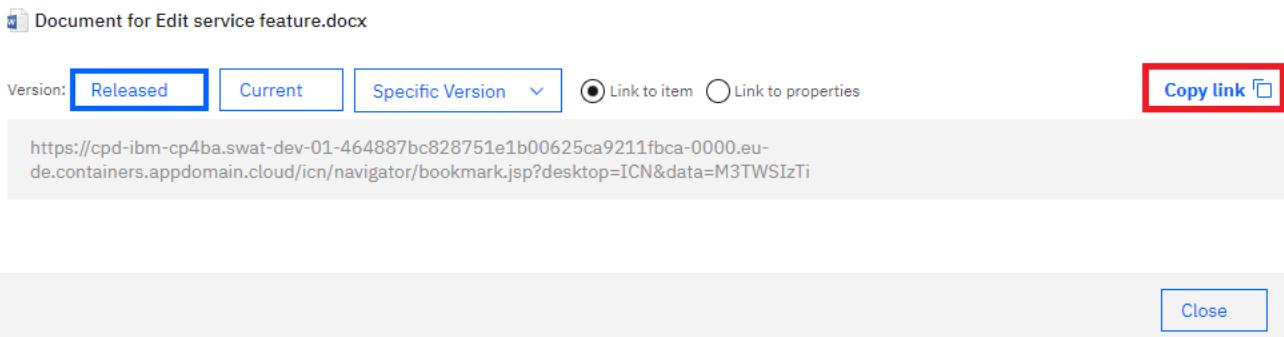
\_1. Right click on link-> View Link option on the Document for Edit service feature.docx from the “Browse Content” menu.

Name	Size	Modified By	Modified On	Major...
Change entry Template.docx	12 KB	usr001	9/25/2023, 8:41 PM	4
Document for Edit service feature.docx	12 KB	usr001	9/25/2023, 12:24 PM	1
DL for Redaction.pdf	64 KB	usr001	9/25/2023, 11:49 AM	1
Customizing and Extending IBM Content Navigator.pdf	7.9 MB	usr001	9/25/2023, 11:49 AM	1

\_2. You can see the **shortcut url** of the document form view link pop-up view Link page. Click on copy link as shown below.

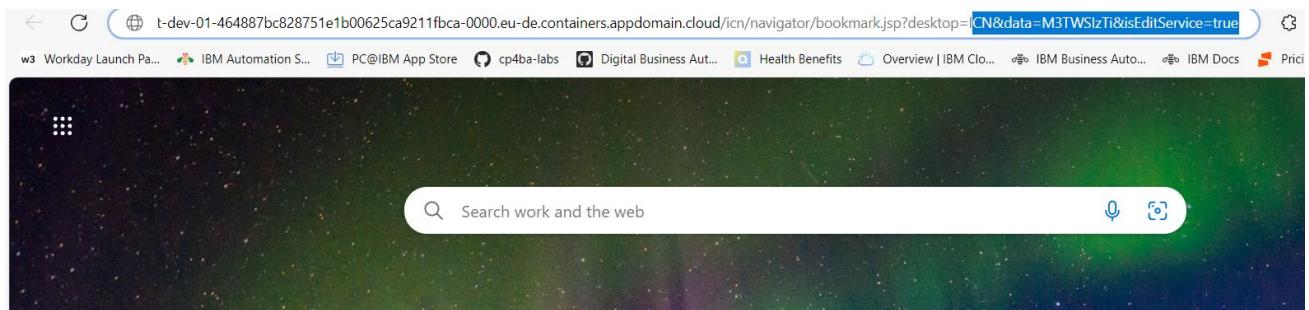
#### View Link

You can copy and paste the link into emails, chats, and web pages. If there are multiple versions of the item, specify which version you want to link to.



\_3. Copy the below example link into notepad and append **isEditService=true** to the url and paste in web browser as shown below

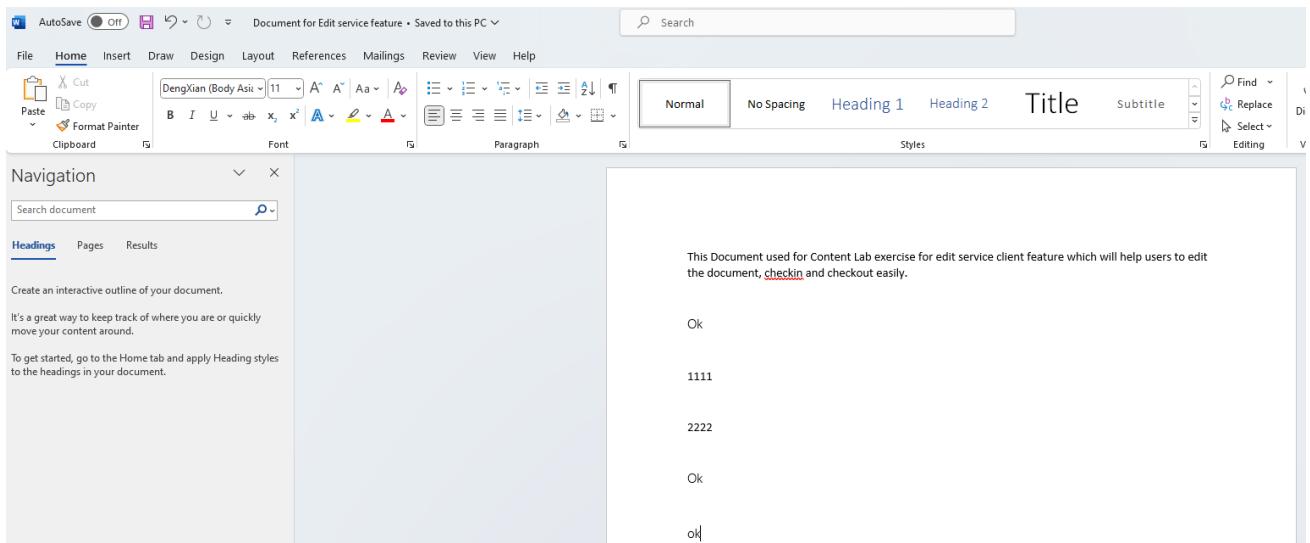
**Example bookmark url** “<https://cpd-ibm-cp4ba.swat-dev-01-464887bc828751e1b00625ca9211fbca-0000.eu-de.containers.appdomain.cloud/icn/navigator/bookmark.jsp?desktop=ICN&data=M3TWSIzTi&isEditService=true>”



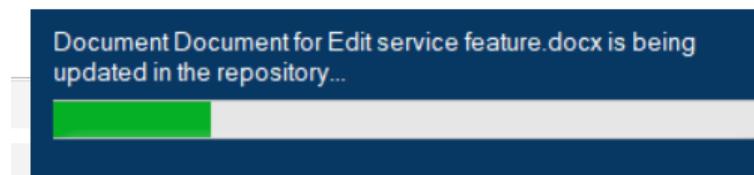
\_4. If you already installed the Edit service and logged into the Edit service client and performed previous exercises, then the document will open in local Microsoft word app as shown below to edit the document from your local app.



\_5. You can see the document open on your local Microsoft word app.



\_6. Once you updated the document and hit the **ctrl-s** to save the document then you can see document is being updated into the repository on **bottom right corner** as shown below.



\_7. When you close the document from your local word app, then you can see Document is being checked into the repository as shown below.



**Congratulations you have successfully completed IBM Business Automation Navigator lab.  
We hope you enjoyed it.**