opentext™

OpenText™ Documentum™ D2

Version 16.4

Administration Guide

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Preface

OpenText™ Documentum™ D2 consists of two components:

- D2 Configuration: The web-based application, hereafter known as D2 Config, for administrators to use to configure settings such as automated content-handling processes and background settings for D2 Client.
- D2 Client: The web-based application, hereafter known as D2 Client, for users that provides the ability to interact with content in one or more repositories.

When this guide refers to D2, it refers to the product as a whole, not the individual components.

Note: Documentum Content Server is now OpenText Documentum Server. OpenText Documentum Server will be called Documentum Server throughout this guide.

Intended audience

The information in this guide is for administrators who access and configure D2 using D2 Config.

Revision history

The following table lists changes in this guide.

Revision Date	Description
April 2018	Initial publication.

Chapter 1

Understanding the Configuration Matrix and Contexts

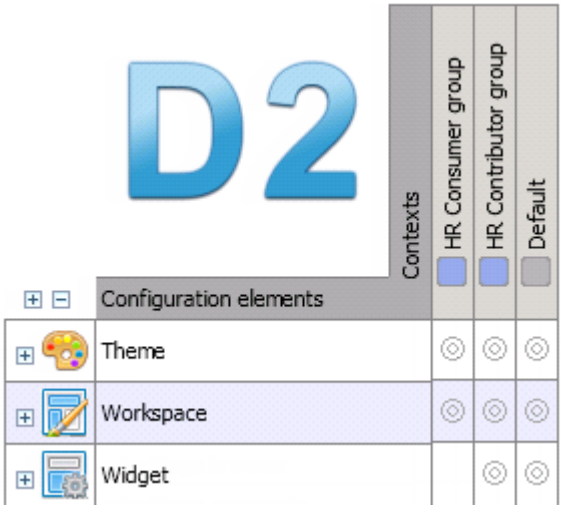
Introduction to D2 Config

D2 Config is the administration client of Documentum D2. You can use D2 Config to:

- Customize the user interface of D2 Client for end users.
- Configure automatic processes run by D2.
- Configure actions available to end users in D2 Client.
- Configure interaction with external applications such as Documentum Administrator, rendition servers, and Retention Policy Services.

Understanding the Configuration Matrix

The configuration matrix is the user interface that you use to control the application of configuration elements to contexts as shown in the following screenshot:



To use the configuration matrix:

- Create a configuration component. Configuration components are the types of configurations, such as autonaming and security. Specific instances of configurations are saved as configuration elements, shown as collapsible rows in the vertical Y-axis of the configuration matrix. For

example, you can create a security element for quality assurance draft writers with WRITE access. You can access the element by expanding the Security configuration component.

- Create a context, shown as the horizontal X-axis of the configuration matrix. Contexts comprise of logical groupings of content qualified by conditions and composed of properties such as document types, DQL conditions, and user groups. Contexts determine when a configuration element applies to content within the repository. For example, you can create a context that applies for all dm_document content types created for quality assurance and set to the Draft status.
- Apply the configuration element to the context. For example, applying the configuration element to the context created in the first two examples leads to a configuration such that the Draft dm_document quality assurance content provides quality assurance draft writers WRITE access.

The D2 engine determines which config, that is autolinking, check-in, inheritance, and other such component configurations to use, by scanning all contexts defined in the matrix from left to right. The first context which is matched will result in the D2 engine applying all component configurations associated to the same context from top to bottom.

Related Topics —

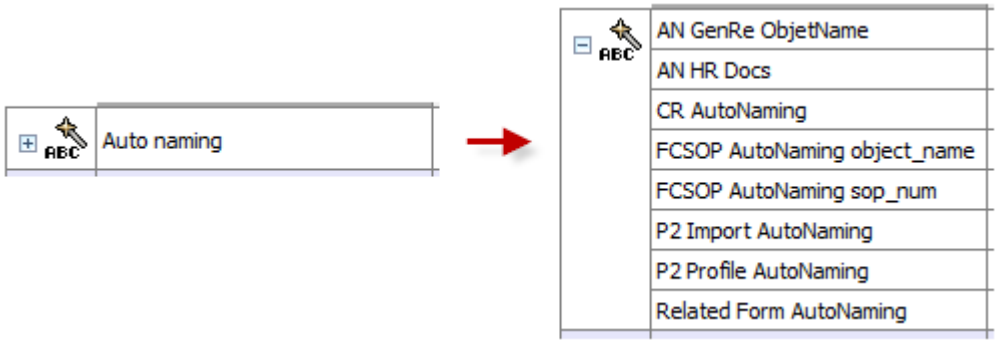
Organizing the Configuration Matrix, page 12
Configuring Contexts, page 15
Configuring Application Filters and Permissions, page 16

Organizing the Configuration Matrix

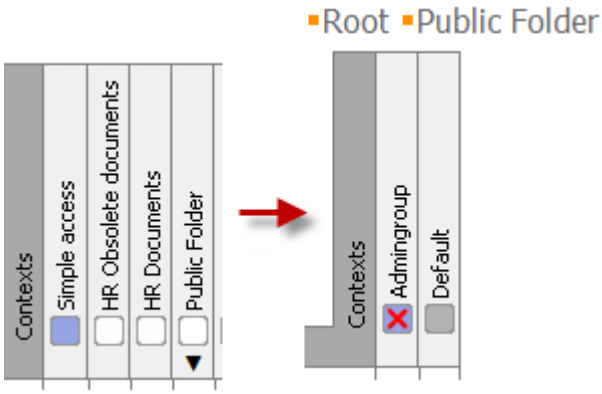
You can organize the configuration matrix in three ways:

- Organize configuration elements and contexts by assigning them to applications. You can designate a user group for an application and assign a set of permissions separate from the Security configuration component. Configuring Application Filters and Permissions contains further instructions on configuring applications.

  The list box on the configuration matrix menu bar allows you to filter the configuration matrix by application.
- Expand and collapse configuration components to show or hide the configuration elements. In the following example, clicking **Expand** next to Auto naming opens the list of Auto naming configuration elements.



- Organize contexts in a tree by designating parent contexts, then expand and collapse contexts to show or hide the child contexts. In the following example, clicking the arrow next to Public Folder opens the Public Folder configuration matrix.



The following table describes the icons next to contexts:

Icon	Description
	A set with a type and user group definition
	A set with one or several type(s)
	A set with one or several user group(s)
	A set with a type not marked (in use)
	A set with a type not marked (in use) in the selected application
	A set with a user group not marked (in use)
	A set with a user group not marked (in use) in the selected application
	A set with a type and user group not marked (in use)

Related Topics —

Understanding the Configuration Matrix, page 11

Understanding Matrix Context Precedence

It is important to understand how the enabled configuration is processed in the matrix contexts (columns) from left to right.

The order of the context in the matrix is crucial because it establishes an order of precedence. When conflicts between configurations exist (for example, two or more configurations apply to a selected document or to the same user), the one associated with the left-most context in the configuration matrix takes precedence. It does this by performing DQL queries to match elements with the properties of the contexts from left to right. This precedence rule spans applications.

Best practice is to place the most specific contexts to the left and more general contexts to the right.

The "Default" context is the column at the farthest right of the matrix, and it acts as a catch all. For example, in a configuration where there are both group or type contexts, certain configurations may be bound to only those contexts so enabling them in the Default context would allow users to see additional configurations. When a user logs in, the matrix is analyzed and processed for only types involved in `dm_user/group` and not content related types. So if a Workspace or Widget config is bound to a type rather than a group it may not show the expected configuration enabled in the matrix.

Note: The best practice for objectless configurations like WidgetMapping and Folder Structure Import Mapping is to omit Type and Condition in the context.

Mapping a property page to a default context can cause the default property pages to be overridden by the matrix configuration. You can create your own property pages for users and groups. For example, you can create a user type and map a property page to that type that shows the customized property page for users.

Users can debug their configuration in a few different ways in the D2 client:

- Use the keyboard shortcut **`Ctrl + Alt + D`** to create a dump of selected content. Right-click and select **Switch** to see the D2 Config matrix applied.

  Note: In a content dump (or **`getString`** on any attributes that are specific to time) the timezone format used is specified in `dfc.time_zone`. You might notice the date in the dump widget is not the same as the actual date.

- Create a widget based on the DumpWidget type.

Understanding the Matrix Evaluation Mode

In **Tools > Options** Runtime Mode section, you have the option to set a select a **Matrix Evaluation** mode:

- **Standard Evaluation**: The default mode, as described in *Understanding Matrix Context Precedence* applies to all contexts, regardless of their application designation in D2-Config.
- **Application Evaluation**: Restricts the Contexts and Configurations that D2 uses to only those marked for a given application before determining Context Precedence and evaluation. This mode must be selected if you want to allow users to select an application at D2 login.

  Note: If you are enabling **Application Evaluation** mode for the first time after a D2 upgrade, you must restart the application server before settings take effect.

Note: In any given configuration where it is possible to select another configuration, the list of configurations presented shows all possible configurations, not just the configurations for a given application. For example, when you design a creation profile, you can choose to assign to it a dictionary, property page, default value template, inheritance, or lifecycle from a choice list that shows any of the configurations already created. But if the selected configuration is not assigned to the same application as the creation profile, the application evaluation will not behave as expected.

Configuring Contexts

Any change to the configuration matrix in D2–Config requires the contexts cached in the D2 App Server to be refreshed. This can be done from **Tools -> Refresh** cache in D2–Config for which the D2 URL needs to be added in the Clients URL section of **Tools -> Options**.

1. Navigate to **Go to** > **Context** from the menu bar.
2. Click **New** to create a context.

   If you want to create a child context that inherits the properties of an existing context, select a context and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this context applies. For example, adding the **QA** application causes the context to only apply to matching quality assurance cases.
Parents	Add or remove parent contexts for this context to correspond to a context tree.
Type	Add or remove content types.

Field	Description
Condition	Type the DQL-query filter.
Group	Add or remove user groups. The field conjoins groups using the **OR** statement. **Note:** Property Pages and the following configs are only supported for use with "Type" or "Document Type" Context and should not be linked to “Group” context: • auto-naming • auto-link • security config • D2 lifecycle

4. Click **Save**.

Related Topics —

Understanding the Configuration Matrix, page 11
Configuring Application Filters and Permissions, page 16

Configuring Application Filters and Permissions

1. Navigate to **Tools** > **Application** from the menu bar.
2. Click **New** to create an application.

   If you want to create a child application that inherits the properties of an existing application, select an application configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Description	Type a description.
Label <language>	Add localized labels for the application. These will appear in the Application drop-down on the D2 login page, if enabled.

Field	Description
Application Parameter	Type a URL parameter for the application so you can create intelligent URLs for user access to D2 objects from a browser. For example, an **Application Parameter** of **`DocLibrary`** would appear in the intelligent URL syntax as shown: **`http(s)://[URL]:[port]/D2?repo=corp1?application=DocLibrary`** **Note:** The Application Parameter field accepts only valid URL characters.
Include at Login	Allow the application to be selected by the user in the D2 login dialog (requires further setup in **D2 > Options** Runtime section).
User/Group names	Use the list controls to add and remove users and groups.
Permissions	Use the list controls to add and remove permissions. If more than one application is applicable to content, end users can only perform actions shared across all applications. For example, Application A grants the permission **Can drag and drop context**, while Application B grants the permissions **Can drag and drop context** and **Can create, modify, and delete content**. The end user can only drag and drop content because both applications grant the permission.

4. Click **Save**.

Related Topics —

Understanding the Configuration Matrix, page 11
Configuring Contexts, page 15

Understanding Parent and Child Configurations

You can create a configuration that inherits the settings of and creates a parent-child relationship with an existing configuration. This action copies the configuration module itself, but does not create a child application that has all the modules assigned to that application and context. When you import a configuration update, you can set D2 to check for changes made to the parent configuration. D2 then generates a PDF document listing the configuration components that were changed and its child configurations. D2 does not automatically apply the changes to child configurations because you may not want to change one or more of the child configurations.

If you delete a parent configuration, the child configurations continue to show the deleted configuration as a parent.

Importing a D2 Configuration contains instructions for importing a configuration.

Chapter 2

Defining Repository Terminology

Note: Due to browser display constraints, a 750 row limit is in place in both D2 Client and D2 Config for each element described in this section: Dictionary, Taxonomy, and Registered Table.

Defining Terminology Using Dictionaries

A D2 Dictionary is a collection of key values and one or more sets of descriptive labels, used to provide value assistance to the end user. Dictionaries help end users by defining choice sets for property values, generating autonaming patterns, and providing input assistance during advanced searches. The choice sets ensure that uniform terminology is used across the context. As a result, it is possible to:

- Increase the likelihood of a property being filled out by an end user.
- Reduce labeling errors such as extraneous spaces, inconsistent plurality, and so on.

You can define values for a dictionary, then apply a language, an alias, or both to each value. Use languages to specify a different value based on the language used by the end user. For example, you can have the value One in English but assign the value Ichi in Japanese. When an end user using an English interface opens a property page with a list box of numbers, they see one of the options is One. An end user using a Japanese interface opens the same property page with the same list box and sees the option Ichi. The value stored in D2 is treated as an equivalent due to the dictionary.

You can use an alias to create an alternate equivalent of the value. For example, you can have the value Draft, and assign as aliases the values Rough Draft, First Draft, and In Progress. In configuration components such as property page fields, you can designate the dictionary and alias used. You can use the different terms to assist end users. For example, in some cases when an end user accesses a list box, they see the option Rough Draft. You can use aliases so that in other cases, the end user sees the option In Progress. Despite the difference, both terms are treated as equivalent values and receive equivalent treatment from automatic processes.

The following screenshot shows an example dictionary:

	Key	French	English
☑	change_request	Demande de modification	Change request
☑	directive1	Directive	Form
☑	instruction1	Instruction	Instruction
☑	procedure1	Procédure	Procedure
☑			

You can use two types of dictionaries:

- Static values such as the category of a document, which is a fixed property.
- Dynamic values such as property of an author that is accessed using a DQL query for existing users.

As dictionaries encourage uniform terminology, D2 can then enforce automatic content linking rules with more confidence. Dictionaries as a whole improve content management from both a manual and automatic perspective. Dictionaries are used in the following configuration components:

- Property pages for combo lists, labels, and so on.
- Creation profile for type and attribute selection.
- Autonaming for alias or languages in naming content.
- Autolinking for using Properties labels for content placement.
- Search mapping for input assistance during advanced searches.
- Column mapping for use of labels and languages.

Related Topics —

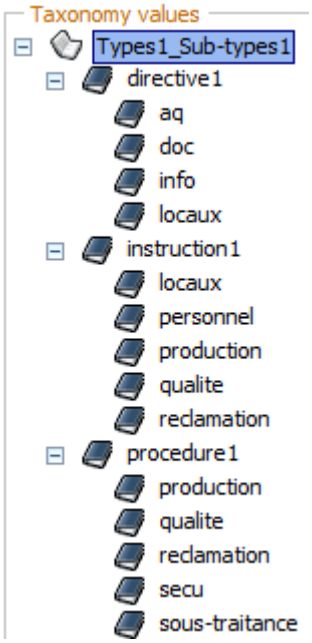
Defining Terminology Using Taxonomies, page 20
Configuring a Dictionary, page 21
Storing a Registered Table, page 24
Importing a Large Dictionary, page 23

Defining Terminology Using Taxonomies

A D2 Taxonomy is a set of values in a tree hierarchy, driven by D2 Dictionaries. Use a Taxonomy if you want to filter values or design a tree of values. You can select dictionaries used in a taxonomy, then select which values to use and at what level of a hierarchy. D2 uses taxonomies in the property page to allow the display of values available for series of attributes. Like dictionaries, taxonomies help end users by defining choice sets for property values, generating autonaming patterns, and providing input assistance during advanced searches. The choices sets ensure that uniform terminology is used across the context. As a result, it is possible to:

- Increase the likelihood of a property being filled out by an end user.
- Reduce labeling error cases such as extraneous spaces, inconsistent plurality, and so on.

For example, you can define a level of Types, then define subtypes for each type, as shown in the following screenshot:



Related Topics —

Defining Terminology Using Dictionaries, page 19
Configuring a Taxonomy, page 24
Storing a Registered Table, page 24

Configuring a Dictionary

1. Navigate to **Data** > **Dictionary** from the menu bar.
2. Select one of the options for creating a dictionary.

   If you want to create a child dictionary that inherits the properties of an existing dictionary, select a dictionary and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

   Click **Restore dictionary** to open a specific version of an existing dictionary.

   Click **Import** to import a table as a dictionary.
3. Fill out the form as described in the following table:

   Note: Avoid the use of special characters (\/*&^%$#@!\) when creating Dictionary elements such as keys as they can cause unexpected issues with auto-linked paths.

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.

Field	Description
Applications	Add or remove the applications to which this dictionary applies. For example, adding the **QA** application would cause the dictionary to only apply to matching quality assurance cases.
Versioned dictionary	Select to use automatic version control for each save operation.
Groups > Administration group	Select a user group to limit the administration and updating of the taxonomy to only the members of the group through the D2 Taxonomy Admin Widget.
Groups > Search Dictionary available for the group	Select a user group to have the ability to search the dictionary.
Labels > Label `<language>`	Type a label to appear in the configuration matrix and during content creation in D2 Client.
Manual sort	Select to enable manual ordering of dictionary values instead of alphabetizing them.
Create a registered table	Select to create an external table based on the values contained within the dictionary. D2 creates the table when you save the changes. **Note:** The D2 dictionaries share a single database table in the repository. The "Create a registered table" option allows the administrator to define the dictionary in a dedicated registered table.

4. Select **DQL dictionary** to enable DQL dictionary creation.

   DQL dictionary is displayed as an option only when **Dictionary caching** is selected. If **Dictionary caching** is not selected for DQL Dictionary then administrators will not be able to select the dictionary under **Interface > Display Configuration** in D2–Config.

   a. Select **Dictionary cache** to enable dictionary updates only when you restart the web application server or when you refresh the cache. Selecting the option increases performance. To use this option, add the Dictionary caching URL to the **Clients URL** field in the **D2 Options** tab.

   b. Type the **DQL query**. The following table describes commands you can use:

Command	Description
as name	Set the preceding attribute as a key attribute.
as is_enabled	Enable or disable boolean properties.
as mon_alias	Create a new matching list for the key. The command is similar to the alias column.

Command	Description
`as label_en/fr`	Translate values
`$value()`	Insert into the WHERE statement to refine results

5. Add dictionary values.

   If **Manual sort** was selected, use the up and down arrows to reorder values.

   You cannot delete dictionary values used in a creation profile and property page. Unselect **Key** to remove it from the dictionary.

6. Add or remove **Languages** values.
7. Add or remove **Alias** values.
8. To save the dictionary:
   - Click **Save** to use automatic versioning.
   - Click **Save dictionary** to manually version the dictionary.
   - Click **Export** to export the dictionary in a file format you want.
9. Click **Update repository** to load the changes in the repository without restarting the server.

If the dictionary is modified, restart the Application Server for the changes to be reflected in D2 Client.

Related Topics —

Defining Terminology Using Dictionaries, page 19
Storing a Registered Table, page 24
Importing a Large Dictionary, page 23

Importing a Large Dictionary

You can use the Dictionaries widget to import or export dictionary data in the form of a CSV, Excel, or XML file. The *D2 User Guide* provides more details.

To import large dictionaries, use the **`D2JobImportDictionary`** job. This job helps avoid performance related problems when you use D2 Client or D2–Config for importing large dictionaries.

1. Create an index for the Oracle table **`d2_dictionary_value`** using the following command:

   ```
   EXECUTE make_index WITH type_name='d2_dictionary_value',
   attribute='dictionary_name', attribute='object_name'
   ```

2. Import the dictionary using the following command:

   ```
   EXECUTE do_method WITH method = 'D2ImportDictionaryMethod', arguments
   ='-overwrite true -folder <path to the dictionary> -sorted false
   -transaction false'
   ```

Related Topics —

Defining Terminology Using Dictionaries, page 19
Configuring a Dictionary, page 21
Storing a Registered Table, page 24

Configuring a Taxonomy

1. Navigate to **Data** > **Taxonomy** from the menu bar.
2. Select one of the options for creating a taxonomy.

   If you want to create a child taxonomy that inherits the properties of an existing taxonomy, select a taxonomy and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

   Click **Restore taxonomy** to open a specific version of an existing taxonomy.

   Click **Import** to import a table as a taxonomy.
3. Fill out the form as described in the following table:

   Note: XML reserved characters cannot be used in the taxonomy. For example, an error message would appear if a dictionary value included a forward slash character.

Field	Description
Name	Type a name that will be listed in the configuration matrix.
Administration group	Select a user group to limit the administration and updating of the taxonomy to only the members of the group through the D2 Taxonomy Admin Widget.
Description	Type a description.
Versioned taxonomy	Select to enable automatic version control of the taxonomy.

4. Add or remove dictionaries used in the taxonomy. You can only remove the lowest level in the list.
5. Use the list controls to add or remove taxonomy values. Check **Default** to set selected values as the defaults in the 2nd to 7th levels of the taxonomy. These defaults can be used to populate the initial values of Combo fields on a property page.
6. To save the taxonomy:
   - Click **Save** to use automatic versioning.
   - Click **Save taxonomy** to manually version the taxonomy.
   - Click **Export** to export the taxonomy in a file format you want.

If the taxonomy is modified, restart the Application Server for the changes to be reflected in D2 Client.

Related Topics —

Defining Terminology Using Taxonomies, page 20
Storing a Registered Table, page 24

Storing a Registered Table

Registered tables are relational database management system tables that are not part of the repository but are known to the Documentum Server. The *Documentum Server DQL Reference* contains further

information about creating and querying registered tables. You can use registered tables as read-only dictionaries. You can import:

- Exported dictionaries.
- Imported .csv or .xsl files. This option can be used only on an existing registered table to edit its values.

Use registered tables as a reference.

1. Navigate to **Data** > **Registered table** from the menu bar.
2. Select one of the options for showing or editing a registered table. **New** does not create a registered table, you must create registered tables in Documentum Administrator or through a dictionary.

   If you want to create a child registered table that inherits the properties of an existing registered table, select a registered table and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a registered table in the repository.
Description	Type a description.
Applications	Add or remove the applications to which this registered table applies. For example, adding the **QA** application would cause the registered table to only apply to matching quality assurance cases.
Administration group	Select a user group to have administration rights.

4. Add or remove table values.

   Add a row by typing values into the empty row at the bottom of the table.
5. To save the registered table:
   - Click **Save** to save the registered table.
   - Click **Export** to export the registered table in a file format you want.

Related Topics —

Defining Terminology Using Dictionaries, page 19
Configuring a Dictionary, page 21
Importing a Large Dictionary, page 23
Defining Terminology Using Taxonomies, page 20

Configuring a Taxonomy, page 24

Chapter 3

Configuring Content Creation Components

Determining Which Creation Processes to Use

You can configure context-dependent automated processes, which are performed when an end user creates content.

Note: The following configurations are for use in D2 client 3.1 only and are not supported in 4.x:

- **Menu for D2 Client**
- **Toolbars**
- **Theme 3.1**
- **Treeview**

Use the following table to determine which processes you want performed:

Process	Description	Example
Context Configuring Contexts, page 15 contains further instructions.	You can define which configurations will be applicable for a given action based on the document properties and/or group membership.	Apply the configurations in this Contexts column if the doctype is procedure and the user is a member of the Authors group.
Auto naming Configuring Autonaming contains further instructions.	You can configure an automatic process to change property values.	An end user creates a quality assurance Draft document. An auto naming process can be run to rename the file to include quality assurance (QA) and Draft, such as QA_project _draft_7-30-2014.docx.

Process	Description	Example
Property pages Configuring a Property Page contains further instructions.	You can create and configure property pages to determine the properties that end users can view and edit. If you do not specify a properties page in a creation profile, the D2 Client content creation wizard skips the properties step. If you remove attributes from an object type using other applications such as Composer or Documentum Administrator, D2 shows the property pages with blank spaces. You must manually update the property pages to remove the deleted properties.	An end user creates a quality assurance Draft document. You can configure a property page to show a comment field and a checkbox for whether it is a private or public draft. This allows end users to view and add comments to the document and set its privacy status. End users cannot view or make changes to all other properties such as the document title, author, and status.
Inheritance Configuring Inheritance contains further instructions.	You can configure an automatic process to copy properties from existing content to new content.	An end user creates a Project 122 documentation that inherits properties from Project 120 documentation. Keywords such as Project 12X are copied from the 120 documentation to the 122 documentation, alleviating the need to manually copy properties.

Process	Description	Example
Security Configuring Security contains further instructions.	You can configure security models, which define dynamic access control lists (ACLs) that apply to contexts. You can specify a condition based on three identifiers to apply a level of permissions. The three types of identifiers are specific users, user groups, and content properties. If multiple conditions match a specific situation, the most extensive set of rights is applied. If no security model is selected, D2 applies the default ACL configured depending on the Documentum repository configuration.	An end user can belong to the quality assurance Draft Writers group, which gives them WRITE permission within the quality assurance documentation folder.

Process	Description	Example
Auto linking Configuring Autolink contains further instructions.	You can configure an automatic process to place content in specified locations within the repository. You can configure an auto link template to have multiple placements, in which case the content is placed in the first, then linked to the other placements. Changing the property values of content and affecting its context can cause a change in the placement of the current version of the content. If no auto link rule is configured, D2 adds content to the selected folder. If no folder is selected, D2 adds content to the cabinet level. Folders with a high volume (roughly 500) of content can have performance issues and errors. Configure auto linking of content to minimize the amount of content within each folder. For example, a project may contain 500 documents, leading to performance degradation. To work around the issue, you can configure an auto link to create and fill subfolders for project phases to reduce the number of content directly found in the project folder.	An end user creates a quality assurance Draft document. The document is placed in the quality assurance Draft folder with all other quality assurance drafts. If the end user sets the document to Private, in which it is hidden from other users, auto link can move the document to a personal, locked folder in the quality assurance Draft folder. When the end user decides to set the document back to Public, auto link can move the document back to the quality assurance Draft folder.

Process	Description	Example
Template list Configuring Template Lists contains further instructions.	You can configure a list of content templates suggested to an end user during the end of the content creation process. Assign lists of templates to contexts, which allows you to provide templates that are only relevant to specific circumstances. End users can be part of the administration group for template lists. This enables configuration of template lists directly through D2 Client. If there is only one template that an end user can select and the end user does not have template creation privileges, the D2 Client content creation wizard selects the template and skips the template step.	You can bundle a set of templates for all quality assurance documentation, such as drafts, presentations, and reports. When an end user creates content using the quality assurance application, they can select from a list of quality assurance-specific templates.
VD Template Configuring Virtual Document Templates	You can configure a virtual document template for inheritance of properties and components. End users can use virtual document templates to insert components of a selected virtual document into a virtual document or create a copy of the template virtual document.	An end user creates a presentation content and selects a virtual document template to inherit. The presentation gains the virtual document children applied to the template.
Folder Structure Import Configuring Folder Structure Import, page 92 contains further instructions.	You can configure the folder types, autolinking, folder security, set what creation profile will be used for the documents when you allow users to import entire folders, and the folders content, including the folder structure. In addition, you can choose to have the newly imported folder structure automatically converted to a virtual document.	An end user selects the option to import a folder structure so they can recreate a folder and it's content including sub-directories on their system in the repository.

Process	Description	Example
Folder Structure Conversion Configuring Folder Structure Conversion	You can configure the behavior about what happens when a user chooses to convert an existing directory in the repository into a virtual document.	An end user can create a virtual document from an existing folder structure.
Linked document Configuring Document Linking contains further instructions for configuring linked documents for new and imported content. Configuring Linked Documents for Importing Emails contains further instructions for importing attachments as linked documents.	You can configure the content creation process to create additional documents during content creation and link them to the base content. This enables end users to create batches of documents that are controlled by a central document.	An end user can create a business plan, then link notes, presentation slides, and so on to the business plan.
Checkin Configuring Checkin contains further instructions.	You can configure aspects of checkin such as versioning and logging.	An end user checks in a quality assurance Draft Checkin configurations result in no versioning. If an end user checks in a quality assurance In-Review document, checkin configurations can result in minor versioning.
Checkout Configuring Checkout contains further instructions.	You can configure aspects of checkout such as warning messages and checkout range.	An end user checks out an approved document. Checkout configuration displays a warning message reminding the end user that the document has already been approved. If the end user checks out a draft document, checkout configuration can differ, such as showing no warning message.

Process	Description	Example
Lifecycle Configuring a Lifecycle, page 98 contains further instructions.	You can configure aspects of a D2 lifecycle such as entry conditions to lifecycle states, actions to execute when going entering a state, and what should happen when moving to the next state.	An end user takes a new document and applies a lifecycle to it making it a draft document. The lifecycle configuration checks to make sure the user belongs to a specific group that is allowed to perform the action and that the document is not checked out and it is marked as **Current**. Then it sets a new a_status of **Draft** on the document and applies security to it.
Lifecycle batch Configuring a Lifecycle Batch, page 104 contains further instructions.	You can configure a D2 lifecycle, target state, and transition type to apply to a group of documents instead of doing so individually.	An end user has uploaded a large number of documents that are **Approved** procedures. The user now needs to make sure they are indicated as approved in the repository and set the applicable attributes associated with Approved SOP documents.
Workflow Configuring a Workflow, page 106 contains further instructions.	You can configure a workflow and the various rules on what is allowed to be sent to a workflow, task parameters, and other options associated with each step of the workflow.	An end user wants to have other authors review his document and then approve it for publication. The end user does so by selecting the document and sending it into the workflow, where the workflow validates that it meets various entry criteria and allows the end user to send the document to authors for review and approval.
Menu D2 Configuring D2 Client Menus, page 192 contains further instructions.	You can configure the menu options that appear in the D2-Client for such things as right-click actions, new, import, or content menu items.	You have a set of users where you want to minimize the number of menu choices available to them. Using D2 menu configuration you can make sure that only the necessary menu options appear when they right-click on documents or use the new, import, or content menus.

Process	Description	Example
User Settings Configuring Default User Settings, page 62 contains further instructions.	You can configure the default user settings for checkout and temp directories, date formats, login settings, user interface settings, and notifications.	Your company wants to make sure that all the users by default use their local home directory for the D2 checkout path and the users temp directory for the D2 temp path. In addition, they want D2 menu position to default to the right hand side and list 50 items per page.
Filter Configuring Display Filters, page 202 contains further instructions.	Using a DQL query, you can configure a filter that can be applied to a doclist widget to display only specified content in the doclist.	You want end users to be able to quickly see procedure documents modified in the last 30 days, so you create a filter that they can select from the filter menu to quickly filter their view of the content in the doclist folder.
Search Configuring Global Search Settings, page 117 contains further instructions.	You can configure what types of content can be searched, what properties of those types can be used to search, if a D2 dictionary or a DQL query should be used, and if the properties should be used for the Facets widgets and how.	You want to create a search configuration so that users can search for all your specific document types, key properties of those types and make sure the properties can be used as facets so the user can further refine their results.
Query form Configuring a Query Form Search, page 122 contains further instructions.	You can configure a DQL query or Advanced Search query with facets that users can choose to run from a list of saved searches in a Search Widget or can be used to create a dedicated query form widget that can be added to a workspace.	Your end users have a need to query for specific set of content and refine the results using pre-selected facets, so you create an advanced search query form using specific types and properties, set key properties to be used as facets, and then make this query available via a query form widget in a prominent location of the users workspace.

Process	Description	Example
Mailing list Configuring a Mailing List, page 133 contains further instructions.	You can configure the recipients, email subject, message, and attachments that should be included to a mail message.	Your end users need to send messages to users notifying or reminding them of a document that needs to be reviewed, so the end user selects the document and then chooses the mailing list that has been configured. An email will automatically be sent to the pre-defined recipients with applicable message and attachment.
Send mail Configuring Options for Sending Emails through D2, page 135 contains further instructions.	You can configure email subject, message, and attachment behavior to allow end users to send email message concerning a selected object.	Your end users want the ability to send messages to both internal and external users of D2 system for a selected object. Using the send mail configuration you have pre-defined the message and subject of the email to streamline this task.
Subscription Configuring a Subscription, page 137 contains further instructions.	You can define specific events and associated emails that end users can subscribe to, so they can be alerted when the event occurs.	Your end users want to know anytime someone checks in a new version of a particular document. By creating a subscription, the end user can subscribe to this event for this document and be notified by email when a new version has been checked in.
Distribution Configuring a Distribution, page 138 contains further instructions.	You can configure a simple workflow like process where you can define attachments, property pages, recipients, an email message, and any electronic signature requirements when accepting or rejecting the requested distribution actions.	Your end users want a quick way of sending a document for review to some people but want to make sure that they accept or reject the new changes in the document. Further, any approval must be electronically signed and the approver must indicate the reason for approval.

Process	Description	Example
Uniqueness check Configuring Uniqueness Check, page 59 contains further instructions.	You can configure a qualification via a DQL statement that can be used in workflows to make sure that objects meet specific qualifications, and if not, what message should be displayed to the end user.	You have configured a specific uniqueness check that makes sure a document being sent into a workflow is not checked out. If it is, then a specific message is displayed to the user who attempts to send that document into the workflow.
Mass update Configuring Mass Update, page 61 contains further instructions.	You can a configure warning message, options, a property page to be used, and who can use the configuration to update multiple selection of documents at one time.	You have configured a specific group of users to allow them to update the properties of a group of selected documents rather than the user having to update the documents individually.
Audit Configuring D2 Audit, page 155 contains further instructions.	You can configure the list of audited events, which events get displayed in the D2 Audit widget, whether to only list D2 events, and whether you want to use extended columns and messages to describe events in place of standard event columns and messages.	You have configured several D2 events to be audited and a subset of events to be displayed in the D2 Audit Widget. In addition you want a simplified more user friendly view of the columns and events, so you have enabled **Extended display**. Finally, you set the properties to be audited. Now, when your users who have view audit privileges looks at the audit trail of a document, they see the date, user, document version, and event description.
Rendition server Configuring a Rendition Server Connection, page 141 contains further instructions.	You can configure the rendition server to generate renditions for documents and specify the rendition server information related to it's queue, event, message, and format information.	You want to have PDFs renditions created for the documents, so you configure one rendition server configuration to handle that and you have a different rendition server configuration set to generate thumbnail images of the documents.

Process	Description	Example
BOCS cache Enabling a Branch Office Caching Service (BOCS) Element, page 143 contains further instructions.	You can configure an existing Documentum repository network location to be used by end users when logging into D2 as their BOCS network location.	You have defined the network locations in the Documentum repository already, and you want to configure their use by your D2 users so that they are made available to the users based on the configuration context.
Plugin	You can choose from a list of existing D2 plug-ins so that you can create configurations to be used in the D2 matrix.	You want to make sure that one or more of the D2 plug-ins you use are only available for some of your users, based on the context in the matrix. So, you create a plug-in configuration for the desired plug-in and then associate it with the matrix to the desired configuration.

Related Topics —

Configuring Autonaming, page 37
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Security, page 77
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Virtual Document Templates, page 71
Configuring Linked Documents for Creating or Importing Content, page 73
Configuring Check-in, page 56
Configuring Checkout, page 74
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61

Configuring Autonaming

1. Navigate to **Go to** > **Auto naming** from the menu bar.
2. Click **New** to create an autonaming rule.

   If you want to create a child autonaming rule that inherits the properties of an existing autonaming rule, select an autonaming rule and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this autonaming rule applies. For example, adding the **QA** application would cause the autonaming rule to only apply to matching quality assurance cases.
Generate the document name for each property modification	Select to have the document name updated whenever a save operation is performed on properties used by the autonaming rule. For example, if an autonaming rule uses the **a_status** property of the content, and the content passes through a workflow or lifecycle that alters **a_status**, selecting the checkbox would cause the property controlled by the autonaming rule to change.
Regenerate on new version	Select to have the document name updated whenever a new version of the content is created.
Property name	Select the property changed.

4. To add a property to the **Auto naming template**:
   a. Select a property from the **Properties** list box in the **Naming** menu bar.
   b. Select a dictionary if the property uses a dictionary. Select a language or alias.

      Note: Autonaming template does not accept dictionary names that contain brackets.
   c. Type the index position of the value if the property is a repeating property and you want to select a specific value.

      For example, if you want to select the first value of the list, type **0**.
   d. Type the date format if the property is a date property, select a DQL action, and enter the value. Use the following table to understand what values to type for each DQL action:

DQL Action	Value
DATEADD	**year|month|week|day** followed by an integer value
DATEFLOOR	**year|month|week|day**

      Note: The valid year format for autonaming is '**yyyy**'.
5. Select the position in the autonaming template, then type text to insert static text.
6. To configure the counter:
   a. Type the initial counter value in **Counter value**.

b. Select **Counter depends on template properties** to count subtype changes. When not selected, changes to content subtype do not increase the counter.

c. Fill the form as follows:

Field	Description
Send email notification to	Type the email address to which D2 sends a notification.
when the number of remaining values is	Type a counter value. When the number of remaining values reaches this number, D2 sends a notification to the previously entered email address alerting the recipient.
Interval start value	Type the starting value.
Interval end value	Type the end value.

d. Click **+** to add another interval of counter values. When one interval ends, D2 continues the counter from the next sequential interval start value.

7. Click **+** to add a regular expression:

a. Fill out the form as follows:

Field	Description
Name	Type the name of the regular expression.
Pattern	Type the statement to be replaced.
Replace	Type the replacement statement.

For example, having **`underscore, _, -`** respectively replaces all **_** with **-**.

b. Use the up and down arrows to reorder the regular expressions. Regular expressions are executed from top to bottom.

8. Select **Do not apply for: Cross repository copy/paste** to disable the auto naming for cross repository copy and paste operations.

9. Click **Save**.

Note: If a user imports multiple files and chooses to use the same creation profile and properties for all files, the Property page wizard step will pre-populate the placeholder label `[filename]` instead of showing an individual file name. The property page represents all files being imported.

Related Topics —

Determining Which Creation Processes to Use, page 27
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Security, page 77
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Virtual Document Templates, page 71
Configuring Linked Documents for Creating or Importing Content, page 73
Configuring Check-in, page 56

Configuring Checkout, page 74
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61

Configuring a Property Page

1. Navigate to **Go to** > **Property page** from the menu bar.
2. Click **New** to create a property page.

   If you want to create a child property page that inherits the properties of an existing property page, select a property page and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the Properties as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this property page applies. For example, adding the `QA` application causes the property page to only apply to matching quality assurance cases.
Document type	Select the document type.

4. Configure Electronic signature options as described in the following table:

Field	Description
Electronic signature required (in edition mode)	Select to require an electronic signature to save properties.
Intention required	Select to require the reason with the electronic signature.
Intentions dictionary	Select a dictionary to enable users to select a reason from a list of options.

5. Configure Dialog options as described in the following table:

Field	Description
Height	Enter the minimum height of the property page in pixels. If the property page widget in D2 Client does not scroll down far enough to show all property page content, increase the height of the property page.
Width	Enter the width in pixels.

Field	Description
Resizable	Select if you want the property page to be resizable.
Button position	Select the position of the buttons on the property page.
No initial invalid states	Select if you want D2 to skip the validation check on load so that fields are not shown as invalid before a user has a chance to enter any data.

6. Configure Structure of the property page.
   a. Add organizational objects to the property page. Use the following table to determine which organizational objects to add:

Icon	Name	Description
	Copy	Copies a node, children of a node, or entire root node from a property structure.
	Paste	Pastes the copied node from one property page to another. **Note:** You cannot copy/paste duplicate properties in the same property page.
	Delete	Deletes the selected node.
	Tab unit	Creates an area to which you can add tabs.
	Tab	Creates a tab in a tab unit. Type a label for the field.
	Field set	Creates a fieldset to cluster property objects together. Type a label for the field and select whether to use a border.

Icon	Name	Description
	Grid	Creates a table using properties as columns. DQL using dependencies on values of other columns and taxonomies configured inside the Grid do not function. Type a height for each grid in pixels. All controls added to the grid can be toggled to have **No empty cell**. When the checkbox is selected, the field must be populated before the properties can be saved. Check **Row Based Evaluation** if you would like the enabled and required conditions for the properties in your grid to be evaluated for each row independently, instead of the column-based default that evaluates for the entire grid. This allows the user to fill in each grid row individually. **Row Based Evaluation** disables the **Visibility** condition and **No Empty Cell** option for each property in the grid. **No Empty Row** can be set, which disregards the condition required for each attribute. **Note:** Repeating attributes in a grid are stored independently of one another when a property page is saved in the D2-client.
	Column set	Organizes property objects by a configured number of columns. Type the number of columns in the set and add objects. The property page automatically organizes objects in columns.
	Comment	Adds a static comment with font styles. Type a label for the field. You can use HTML in the label by selecting the option, or you can use the $value and $alias keywords. Select font color, size, and style.
	Empty cell	Adds an empty cell. Use empty cells in grids and column sets to organize property placement.
	Separator	Adds a horizontal bar. Use separators to add a visual marker for different sections of the property page.

b. Configure **Display time** and **Default time value** options to display the time setting options in the date picker calendar panel in the D2 Client.

   You can set default time as **Current time** or **Specific time**.

c. Configure property conditions. Configuring Property Conditions contains further instructions.

7. Add property objects.

   You can preview the property page by clicking the **Display preview in create mode**, **Display preview in edit mode**, and **Display preview in import mode** buttons. The buttons show a dialog box with the selected property page form, allowing you to check your work. Permissions configured for each property are active for the preview. If you do not belong to the correct groups, certain properties may not appear when previewing properties.

   a. Use the following table to determine which property objects to add:

      Note: Several of the following objects allow property attributes to be set to **Load Asynchronous**, but still allow you to disable the attribute so it is not available in the user interface. The values in a combo field, for example, are only loaded when the attribute is clicked on, so if the property is asynchronous, then the property should always be visible and enabled in the user interface so the user can click on it to execute a query. Data loss could result from a disabled asynchronous attribute setting.

Icon	Name	Description
	Label	Adds as static text the property name, a colon, and the value of the property. Select a property. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder. For example, if you select the property **`date_finish`** and type the label **`Finishing Date`**, the property page shows **Finishing Date : 8/9/2017** If you type the label **`Finish date`** the property page instead shows **Finish date : 8/9/2017**
	Text	Adds a text field for end users to type values into and save. Select the property for storing the value and type a label if you do not want to use the label that was defined for the property using Documentum Application Builder.
	Password	Adds a text field for end users to type a password into for saving. D2 displays the password during auditing and when producing info dumps, so make sure end users account for the risk of password exposure. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder.
	Memo	Adds a text box for end users to type a memo into and save. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and the row height of the field.

Icon	Name	Description
	Rich text editor	Adds a rich text editor for users to format the content or value of a property. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder.
	Boolean	Adds a checkbox that returns a boolean value. Type a label if you do not want to use the label defined for the property in Documentum Application Builder.
	Date	Adds a date field for end users to select a date from a calendar. D2 uses the server date and time to register the selected date and can show an error when you click **Save** if the dates do not match due to timezone differences. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder.
	URL hyperlink	Adds a list field for end users to add, remove, reorder, and access external links. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select which action you want users to perform to open the URL.

Icon	Name	Description
	Combo field	Adds a list for end users to select values from a DQL query, a dictionary, or a taxonomy. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select **Load asynchronously** to load values on click and filter as opposed to when the dialog box is opened. Use the option when the list contains a large number of values. If the combo box includes a single value and you want to populate the field with that value by default, select **Auto select single valued list**. You do not have to select the value from the list; it is auto-populated. You can set the field value to display a blank, if required. If you do not select **Auto select single valued list**, a blank value gets saved to the object. However, when another user views the property page, the field displays the single value instead of a blank. You can set the combo field's **Trigger Action** to control if a drop down list is filtered when the user activates the combo field. Choose one of the following options: **(Empty/No Value)**: Empty means D2 uses the defaults: "QUERY" is used for DQL value assist and "ALL" is used for other cases. **ALL**: Trigger shows all values; See ALL_CLEAR if using DQL and `$value(filter)`. **ALL_CLEAR**: Trigger shows all values, and filter in `$value(filter)` is explicitly cleared so the server returns all values. **QUERY**: Trigger shows a filtered list. **Note:** The editable and non-editable combo fields implement client side filtering that is compatible with server side **`$value(filter)`** use. The wildcards **`*`** and **`?`** can be used to match ANY or a SINGLE character respectively. If no wildcards are specified, values that "Starts with" the filter value are matched. Wildcards can be added to match more complex patterns. For example **`"*group*"`** will match any name that contains the word "group". If you want the D2 client to not apply standard client side filtering to list items, select **No client filtering**. Client filtering implements filtering compatible with D2 server side filtering that is performed when DQL includes **`$value(filter)`**. This client filtering can be undesirable if DQL contains alternate filtering when not using **`$value(filter)`**.

Icon	Name	Description
	Editable combo field	Adds a list for end users to select values from a DQL query, a dictionary, or type. End users can type text in the field to filter the list of values. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select **Load asynchronously** to load values on click and filter as opposed to when the dialog box is opened. Use the option when the list contains a large number of values. You can also type a width and height for the popup dialog box shown to the end user. If the combo box includes a single value and you want to populate the field with that value by default, select **Auto select single valued list**. You do not have to select the value from the list; it is auto-populated. You can set the field value to display a blank, if required. If you do not select **Auto select single valued list**, a blank value gets saved to the object. However, when another user views the property page, the field displays the single value instead of a blank. You can set the combo field's **Trigger Action** to control if a drop down list is filtered when the user activates the combo field. Choose one of the following options: **(Empty/No Value)**: Empty means D2 uses the defaults: "QUERY" is used for DQL value assist and "ALL" is used for other cases. **ALL**: Trigger shows all values; See ALL_CLEAR if using DQL and `$value(filter)`. **ALL_CLEAR**: Trigger shows all values, and filter in `$value(filter)` is explicitly cleared so the server returns all values. **QUERY**: Trigger shows a filtered list. **Note:** The editable and non-editable combo fields implement client side filtering that is compatible with server side **`$value(filter)`** use. The wildcards **`*`** and **`?`** can be used to match ANY or a SINGLE character respectively. If no wildcards are specified, values that "Starts with" the filter value are matched. Wildcards can be added to match more complex patterns. For example **`"*group*"`** will match any name that contains the word "group".

Icon	Name	Description
	List field	Adds a list for end users to select several values from a DQL query or a dictionary. The selected values must have the **Repeating** property. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder, select the row height for the field, select whether to sort the list in alphabetical order, select whether to enable import and export of the list of values from and to XLS documents, and type the height and width of the selection dialog box. Select **Load asynchronously** to load values on click and filter as opposed to when the dialog box is opened. Use the option when the list contains a large number of values. Select **Load on selection popup opening** to load values when the selection dialog box is opened. If not selected, users must press **ENTER** to load the list. If the list box includes a single value and you want to populate the field with that value by default, select **Auto select single valued list**. You do not have to select the value from the list; it is auto-populated. You can set the field value to display a blank, if required. If you do not select **Auto select single valued list**, a blank value gets saved to the object. However, when another user views the property page, the field displays the single value instead of a blank. Select **Auto select multiple valued list** to pre-populate the field with the default multiple values. Select **Always update upon Edit** to update the list after each edit attempt.

Icon	Name	Description
	Editable list field	Adds a list for end users to select several values from a DQL query or a dictionary, or add text. The selected values must have the **Repeating** property. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder, select the row height for the field, select whether to sort the list in alphabetical order, select whether to enable import and export of the list of values from and to XLS documents, and type the height and width of the selection dialog box. Select **Load asynchronously** to load values on click and filter as opposed to when the dialog box is opened. Use the option when the list contains a large number of values. Select **Load on selection popup opening** to load values when the selection dialog box is opened. If not selected, users must press **ENTER** to load the list. If the list box includes a single value and you want to populate the field with that value by default, select **Auto select single valued list**. You do not have to select the value from the list; it is auto-populated. You can set the field value to display a blank, if required. If you do not select **Auto select single valued list**, a blank value gets saved to the object. However, when another user views the property page, the field displays the single value instead of a blank. Select **Auto select multiple valued list** to pre-populate the field with the default multiple values. Select **Always update upon Edit** to update the list after each edit attempt.
	Radio	Adds a list for end users to select a single value with a single click. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select whether to list the options vertically instead of horizontally.

Icon	Name	Description
	Checkbox	Adds a list for end users to select multiple values. The selected values must have the **Repeating** property. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select whether to list the options vertically instead of horizontally.
	Controlled relation	Adds a controlled relation field for users to add related documents for that relationship type. Select a configured relationship type from the **Relation** type list box. Do not use the **D2_COPY_OF** relationship type because it is an internal relation used for inheritance. When creating or importing content, D2 does not create a relationship for the **D2_COPY_OF** relationship type and does not show the relation in the property page.
	PDF preview	(For D2 Client 3.1 only) Adds a preview of the content to the property page. Type a label if you do not want to use the label that was defined for the property using Documentum Application Builder and select the height of the preview box.
	Button	(For D2 Client 3.1 only) Adds and enables the ability to configure buttons. By default, the button executes a Save operation. You can configure the buttons to execute a Javascript action. Type the: • Label if you do not want to use the label that was defined for the property using Documentum Application Builder • Width. • Javascript action to execute. You can configure buttons to appear on the left or right of the property page. Otherwise, they appear on the bottom. List of Custom Actions contains further information on the commands you can use.

b. To fill the field with a value, select a **Type** and fill out the subsequent fields. You can select a type for labels, radio buttons, checkboxes, combo fields, and list fields.

The following table describes keywords that you can use if you select **DQL**:

Keyword	Description
`as name`	Save the value as the **Name**.
`as label`	Save and use the value as the **Label**.
`$value(property name)`	Use the value of the property `property name`.

If you load asynchronously, a DQL query for loading values must include **`as name`**, **`as label`**, and **`$value(filter)`**

For example, **`select user_name as name, user_name as label from dm_user where $value(filter) order by 1`**

Ensure that you use specific queries such as the above example. D2 may not be able to process large sets of results returned by queries that are too general, such as **`select * from`**.

c. To save the value of the field to a property, select a **Property**. If you do not want to save the value to a property, select **Do not link to property** and type an ID for the field in **Control id**. Use the control ID to create value assistance fields. Configuring Value Assistance Fields contains further instructions on linking fields to create dynamic forms.

d. Configuring Property Conditions contains instructions on configuring conditions in which a property applies.

e. When applicable, use < and > to configure reinitialization of properties when content is modified.

8. Click **Save**.

Note: While saving a property page, incomplete property conditions are not validated if they are based on the fields that do not exist in the property page.

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Configuring Property Conditions, page 67
Configuring Value Assistance Fields, page 66

Configuring Inheritance

1. Navigate to **Go to** > **Inheritance** from the menu bar.
2. Click **New** to create an inheritance rule.

   Select an inheritance rule and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this inheritance rule applies. For example, adding the **QA** application would cause the inheritance rule to only apply to matching quality assurance cases.

4. Use the list controls to add and remove inherited properties.
5. Select the relation type used during inheritance. The following table describes the differences:

Relation type	Description
Default	Use the **COPY_OF** relation.
None	No relation used.
Other relation	Select a defined relation type from the list box.

6. If you want to prevent inheritance of Virtual Document structure:
   a. Type the inheritance prevention condition for each Virtual Document component in **Testing condition on each component**.
   b. Type a warning message in **Warning message**. The message is shown in D2 Client when inheritance is performed.
7. Click **Save**.

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Configuring Auto Link

1. Navigate to **Go to** > **Auto link** from the menu bar.
2. Click **New** to create an auto linking template.
   Select an auto linking template and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this auto linking template applies. For example, adding the **QA** application would cause the auto linking template to only apply to matching quality assurance cases.
Label for undefined property	Type a name for the folder to be created if a property is not filled. For example, if you define the path **:/Property 1/Property 2/Property 3** If `Property 1` = **Apple** and `Property 2` = **Berry**, but `Property 3` is not set with a value and you typed **Orange** in the **Label for undefined property** field, the auto link template places the content in **:/Apple/Berry/Orange**
No empty folder on the extremity	Select if you do not want to create a folder for a missing property value. For example, if you take the example from **Label for undefined property**, instead of placing the content in **:/Apple/Berry/Orange** the content is placed in **:/Apple/Berry**
Link all versions to current version folders	Select if you want all versions of the content to be moved to the new location in the repository. If you do not select this checkbox, other versions are kept in their original locations.

4. Configure repeating properties:

Fields	Description
Link only the first value of the repeating properties	Select to link the first values of each repeating property together.
Link repeating properties between themselves	Select to link repeating attributes together.

The following table shows examples of the two checkboxes:

Property 1	Property 2	Property 3	No checked boxes	Link only the first value of the repeating properties	Link repeating properties between themselves
A,B	**C,D**	**E** (single)	**/A/C/E** **/A/D/E** **/B/C/E** **/B/D/E**	**/A/C/E**	**/A/C/E** **/B/D/E**
A,B	**C,D**	**E** (repeating)	**/A/C/E** **/A/C /Undefined** **/A/D/E** **/A/D /Undefined** **/B/C/E** **/B/C /Undefined** **/B/D/E** **/B/D /Undefined**	**/A/C/E**	**/A/C/E** **/B/D /Undefined**

5. Click **Add path** to add a path.
6. Click **/+** to add a folder to a path.
7. Click the text field above the folder category to select and configure a folder property:
   a. Select a property from the **Properties** list box.
   b. Type a **Repeating Index** if the selected property is a repeating property.
   c. If applicable to the selected property, select a dictionary from the **Dictionaries** list box, then select an alias or language.
   d. Click the hand button to add the property.
   e. You can type static text into the folder property.

f. To reorder properties, drag and drop properties.

8. Click the space between the / symbols and select a default value to associate with the content at different folder levels:
9. Click the space below the default values and select an ACL template for the security of the folder:
10. To set the cabinet to your personal folder, select **Home cabinet**.
11. Click **+** to add a regular expression.
    a. Fill out the form as follows:

Field	Description
Name	Type the name of the regular expression.
Pattern	Type the statement to be replaced.
Replace	Type the replacement statement.

    For example, having **`underscore, _, -`** respectively replaces all **_** with **-**.

    b. Use the up and down arrows to reorder the regular expressions. Regular expressions are executed from top to bottom.
12. Click **Save**.

Note: Auto Linking is performed only by the installation owner account. You cannot restrict this feature to a specific set of users or groups.

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Configuring Template Lists

1. Navigate to **Go to** > **Template** from the menu bar.
2. Click **New** to create a template list.

   If you want to create a child template list that inherits the properties of an existing template list, select a template list and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this template list applies. For example, adding the **QA** application would cause the template list to only apply to matching quality assurance cases.
Administration group	Select a user group to have administration rights over the list in D2 Client (D2 Client 3.1 only).
Enable document without content	Select to allow documents with empty content bodies.

4. You can create a static, defined list of templates or a dynamic list of templates based on a DQL filter. To create a static list, select **List**.
   a. Click **Browse** to show the **Templates** dialog box and use **<** and **>** to configure the list of template documents.

      For each template, you can add a template display condition. Select the template, then type a DQL statement in **Selected template display condition**.

   b. Click **Import** to show the **Import** dialog box add a template to the repository, then fill out the form as described in the following table:

Field	Description
Name	You can change the name after importing the file. By default the name of the imported file name is used.
File	Click **Browse**, then locate and select the document to use as a template. Do not select a blank document as a template.
Format	Select the file format.

      Click **OK** to close the **Import** dialog box and import the template to the repository.

   c. When you have imported all templates you wish to add to the repository, click **OK** to close the **Templates** dialog box.

5. To create a dynamic list of templates, select **Query**, then type a DQL filter into **Qualification** to create a template list based on a DQL query of the templates in the repository.

   For example, **`mes_templates where a_status = 'Approved'`** creates a list of templates that have been set to Approved. The produced list uses the **`object_name`** property as the template name.

6. Click **Save**.

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Setting Up Thumbnails for Template List Previews

When renditions that are generated using the ADTS are available for the template, D2 shows a preview of the template file. You can configure this by ensuring that template files have the correct **`.jpg`** rendition associated with them. To do so, you can:

- Configure the ADTS to automatically create thumbnail renditions for the D2 environment. In this case, you should see previews instead of file format icons.
- Request a thumbnail rendition from the rendition server.

When a thumbnail server is configured, D2 uses the **`.jpeg`** thumbnail files as follows:

- **`jpeg_lres`**: Used in the Thumbnails widget when an end user sets the page modifier for the widget to **`large_jpeg_th`**. The pictures displayed in the Thumbnails view are renditions with **`full_format jpeg_lres`** and the page modifier **`large_jpeg_th`**.
- **`jpeg_lres`**: Used in the Preview widget.

Use the following query to retrieve the URL used to display the thumbnail:

- **`select r_object_id, mfile_url('jpeg_lres',0,'large_jpeg_lres') from dm_sysobject where r_object_id = '`**

To preview, use query rendition with **`jpeg_lres`** format.

Related Topics —

Configuring Template Lists, page 54

Configuring Check-in

1. Navigate to **Go to** > **Check-in** from the menu bar.
2. Click **New** to create a check-in setting.

   Select a check-in setting and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this check-in setting applies. For example, adding the **QA** application would cause the check-in setting to only apply to matching quality assurance cases.
Silent check-in	This is an optional setting. Select **Same version** to have the check-in performed in the background for same versions. Select **Minor version** to have the check-in performed in the background for minor versions. Select **Major version** to have the check-in performed in the background for major versions.
Display property page with check-in	Select to display a property page dialog during check-in. This option will be disabled if **Silent check-in** option is selected.
Choose property page	(Optional) Select the desired property configuration (if any). If left blank, the property page is selected based on the matrix configuration. This option will be disabled if **Silent check-in** option is selected. Preview icon button allows to view the selected property page configuration in a dialog window. Preview icon is enabled only when a property page is selected in the **Choose property page** field.

Field	Description
Allow check-in as	Select **Same version** to allow check-in of same versions. This option is applicable only for the current version of the document. Select **Minor version** to allow check-in of minor versions. Select **Major version** to allow check-in of major versions. Select **Branch version** to allow check-in of branch versions. This option is applicable only for the non current versions of the document. It enables user to check-in the non current version of the document as a branched version. By default, minor and branch versions are selected. These options will be disabled and unchecked if **Silent check-in** option is selected. **Note:** You must select at least one of the three options for same, minor, or major versions.
Allow check-in from file	Select to allow check-in from the file, such as when importing content as a new version.
Display log entry	Select to show the **Log entry** property for the user to add comments during check-in. The comments are saved in the **`log_entry`** property and can be shown in the audit.
Require log entry	Select to make log entry required. This option will be disabled if **Display log entry** option is unchecked.
Reset log entry before each check-in	Select to clear the **Log entry** field after each check-in. This option will be disabled if **Display log entry** option is unchecked.

Field	Description
Request new rendition	Select to request new renditions of the content.
Keep symbolic version label	You can configure processes such as lifecycles to apply additional labels on the content version. Select this option to keep the label on the current version. For example, if you apply the **DRAFT** label, D2 shows the current content as: • **1.0,CURRENT,DRAFT** If this option is selected and an end user creates a new minor version, D2 transfers the version labels: • **1.1,CURRENT,DRAFT** • **1.0** If this option is not selected and an end user creates a new minor version, D2 keeps the additional labels on the version in which they were introduced: • **1.1,CURRENT** • **1.0,DRAFT**

4. Click **Save**.

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Configuring Uniqueness Check

You can configure D2 to check for content uniqueness using DQL qualification.

1. Navigate to **Go to** > **Uniqueness check** from the menu bar.

2. Click **New** to create a uniqueness check.

   If you want to create a child uniqueness check that inherits the properties of an existing uniqueness check, select a uniqueness check and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this uniqueness check applies. For example, adding the **QA** application would cause the uniqueness check to only apply to matching quality assurance cases.

4. Click **Add a check** to add a DQL qualification:

   a. You can use **$value** and **#repeatingvalue** in **Qualification** and **Message**.

   b. Fill out the row as described in the following table:

Field	Description
Qualification	Type a DQL directive. D2 inserts i_chronicle_id to the predicate if the DQL qualification contains a WHERE clause This is done to avoid testing on the same object but in different location.
Message <language>	Type a warning message for when the content is not unique.

5. Click **Save**.

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Configuring Mass Update

You can allow users to update multiple content with a single process using the mass update component. Mapping a mass update configuration with a context allows you to define the documents that must be updated. If you do not map a mass update configuration to any context in D2 Client, although the configurations appear in the list in the D2 Client side, none of the documents get updated.

1. Navigate to **Go to** > **Mass update** from the menu bar.
2. Click **New** to create a mass update.

   If you want to create a child mass update that inherits the properties of an existing mass update, select a mass update and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this mass update applies. For example, adding the **QA** application would cause the mass update to only apply to matching quality assurance cases.
Do not display warning message	Select to prevent D2 Client from showing a warning message for confirming the mass update.
Do not display mass update options dialog	Select to prevent D2 Client from showing the dialog box for end users to fill out the mass update property form.
Update virtual document and all descendants	Select to update a virtual document and all of its components. This option is disabled when you are not configuring a virtual document property page.
Update folder and all sub-folders and objects	Select to update sub-folders and content within sub-folders. This option is disabled when you are not configuring a folder property page.
Property page	Select the property page the user fills out.
Display only for users in this group	Select the user group that can use this mass update. You can leave the field empty to allow all end users to access this mass update configuration.
Label `<language>`	Type a label.

4. Click **Save**.

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Configuring Default User Settings

Default user settings are the values for individual user settings that are applied when D2 Client users log in for the first time.

Note: Any change to the User Settings in D2-Config requires that you manually delete the x3_preferences object for that user after first login. Otherwise, the changes will not be displayed in D2-Client.

1. Navigate to **Widget view** > **User Settings** from the menu bar.
2. Click **New** to set default user settings.
3. Specify the properties as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which these user preferences apply.

4. Fill out the **General** tab as described in the following table. All the general property settings are optional.

Field	Description
Temporary path	Specify the directory in which to save viewed files. Viewed files are not checked out. The system deletes files the next time you log in to the system.
Checkout path	Specify the directory in which to save checked out files.
Import Content	Select the checkboxes to set the default import files setting options. **Same creation profile for all files** and **Same properties for all files** are available. **Note:** An administrator can set the default import file setting for the users. The default import setting is available to users from their initial D2 Client login. However, a user can change this import setting in the Import dialog based on the requirement.
Date format	Select the date format used for content properties. If no value is specified, the default date format is **`d MMM yyyy`**.
Date and time format	Select the date and time format used for widget columns. If no value is specified, the default date and time format is **`d MMM yyyy HH:mm:ss`**.
Input format	The date format used for the date picker or date input controls. The default date input format is determined by locale. For example, if the locale is **`EN`**, the default date input format is **`dd/MM/yyyy`**, otherwise the default format is **`MM/dd/yyyy`**.
Default language	Select the default language for the D2 Client user interface. This overrides the web browser language setting. Your system may be configured to hide this field.

Field	Description
Default Workspace	Select the default workspace(s) for the users. **Note:** Make sure you map these user settings in the hyper matrix (which has default workspace configuration). **Do not allow user to change default workspaces**: Select this checkbox to lock the default workspace selection for the users. Such workspaces are displayed with the lock icon for users. You can uncheck the checkbox to allow users to change the default works pace settings. Even with default workspaces locked, users can add additional non-default workspaces.
Login settings	**Restore Session**: Select this option to restore the previous workspaces and make this option available to the users when they log in to the D2 Client. This options is selected by default. **Reset application/default workspaces**: Select this option to set the default workspace settings for the users. If selected, the same will be reflected in the D2 Client user settings. **Do not allow user to change default workspaces**: Select this checkbox to lock the default workspace selection for the users. You can uncheck the checkbox to allow users to change the default workspace settings. **Do not allow user to change restore session option**: Select the checkbox to make the 'Restore session' or 'Reset application/default workspaces' options non-editable for users. This checkbox is unchecked by default.

5. Fill out the **User Interface** tab as described in the following table:

Field	Description
Content by page	Select the number of items you want to show in each page of a list.
Group folders then files	Select to enable D2 to sort and group list widget folders first, followed by files.
Table row height	Select the height of a row in a list.

Field	Description
Menu position	Select to position the menu at the top or left of the position. Log out and log in to see the change.
Template Selection Default	Select the default view for content creation templates: **Gallery View** (which shows graphical representations of each template), or **List View** (which summarizes each template with a set of non-configurable columns: **Name**, **Title**, and **Subject**). The **Subject** field of the d2c_template object that represents your template field can be updated to contain information to help the user choose which template to use.

6. Fill out the **Events** tab as described in the following table:

Field	Description
Subscription events	Use the list controls to add or remove the subscriptions events for which D2 creates notifications.

7. Click **Save**.

Default User Settings for Checkout and View Location Environment Variables

When using the D2 applet, the user settings define checkout and view locations. These locations contain references to operating system environment variables from the client system. The variable names enclosed in braces ("{" and "}") are replaced with the user profile when files are viewed or edited. For example, **`{USERPROFILE}\Documentum\checkout`**.

Note: If the user is still in the same session after changing the path in the environment variables, the document will be checked out to the previously configured location. Close the browser to reflect the changes made in the environment variables.

Restricting Folder Location Access in the Properties Dialog

The combo-picker control on the Properties dialog is a dual trigger control that accepts the standard assist attributes and a new *`restrict`* attribute. Using *`restrict`* attribute, you can restrict the folder location access and other folder operations. You must export, edit, and re-import the property page to add this new control.

For example, if you are using the dictionary assist to populate the list with UNC paths. Use the Browse button of the combo-picker to open the folder selection dialog with the selected path. If *restrict* is set to startpath, the folder selection dialog restricts the folder selection to the start path or below the hierarchy only. Select a path in the folder selection dialog and click **OK** to update the text field with the new selected path.

Use the following settings while editing the property page to restrict the folder selection to the startpath:

```
<combo-picker id="title" assistance_dictionary="UNCPaths"
assistance_type="dictionary" asynchronous="false" control="true"
label_en="Folder Path (title)" restrict="startpath"/>
```

When *restrict* is set to startpath, the following changes are applied to the standard folder selection dialog:

1. **Up One Level** icon is disabled (except when below the root)
2. **Create New Folder** icon is disabled
3. Toolbars are hidden (home, recent, desktop, and so on)
4. Folder selection available only below the start path

When *restrict* is set to none or not specified, the full folder is accessible.

Configuring Value Assistance Fields

You can set fields in property pages to act as assistance for filling out other fields.

For example, you can have a **State** list field and a **Facility** list field. With this example, an end user can select a state, which populates the **Facility** field with a list of facilities specific to the selected state.

This helps an end user to find a facility within a state.

1. To use DQL assistance:
   a. Set the **Type** of the property object receiving assistance to **DQL**.
   b. Type a filtering query using **$value(<the control ID of the assisting object>)**

   For example, during configuration of the **State** field, you can enter **selected_state** as the **Control id**. During configuration of the **Facility** field, select **DQL** as the **Type**, then type as the query **select * from facilities where state=$value(selected_state)**

   The following table shows a summary of the fields:

Assisting property object (State)	Assisted property object (Facility)
Control id: **selected_state**	Type: **DQL**
	DQL Query: **select * from facilities where state=$value(selected_state)**

   If the user selects **Maryland** in the **State** field, the DQL query is run. The DQL query filters all facilities with the state value matching **Maryland** and populates the **Facility** field with a selectable list.

   Append **enable (return_top <maximum number of results>)** to limit the result set of the query to the indicated value. Use this parameter to avoid performance problems associated with large result sets.

2. To use Taxonomy assistance:

   a. In the property object being used as assistance, select **Taxonomy**, fill out the respective fields, then select the level of the taxonomy to be used in the assisted field in **Next Property**.

   b. In the property object receiving assistance, select **Taxonomy** and select the **Level** to match the **Next Property** field selected previously.

   This example uses the taxonomy **Facilities by state**, which has the hierarchy of **Country** > **State** > **Facility**.

   During configuration of the **State** field, select **Taxonomy**, select the taxonomy **Facilities by state**, select the level **State**, and select in **Next Property** the subtype **Facilities**. During configuration of the **Facility** field, select the taxonomy **Facilities by state** and select the level **Facilities**.

   The following table shows a summary of the fields:

Assisting property object (State)	**Assisted property object (Facility)**
Type: **Taxonomy**	Type: **Taxonomy**
Taxonomy: **Facilities by state**	Taxonomy: **Facilities by state**
Level: **State**	Level: **Facilities**
Next Property: **Facilities**	

   If the user selects **Maryland** in the **State** field, the **Facility** field is populated by the subtypes of **Maryland** in the taxonomy.

Related Topics —

Configuring a Property Page, page 40
Configuring Property Conditions, page 67

Configuring Property Conditions

You can configure the display, activation, and requirements for every property object added to a property page, as described in the following table:

Tab name	**What the conditions are for**
Enabled condition	Conditions configured in this tab determine whether the property object can be edited.
Visibility condition	Conditions configured in this tab determine whether the property object can be viewed.

Tab name	What the conditions are for
Required condition	Conditions configured in this tab determine whether the property object is a required property. Not all objects contain a required condition tab.
Validation constraint	The regular expression configured in this tab forces a validation to be performed on a text field, password field, date fields, or a combo field/editable combo field in a grid. This tab does not appear for other property objects. Validation is performed: • When validating the dialog during creation. • While leaving each field during editing.

There are two editors for property conditions:

- Simple view editor: This editor provides a user interface for adding conditions.
- Advanced view editor: This editor provides a text field for inputting complex property conditions that are not supported in the Simple view editor.

1. On the **<tab>** tab:
   a. If you are using the simple view editor, use the list controls to add and remove conditions. If you do not set conditions, D2 assumes that conditions have been met. Select a condition attribute and operator and type the condition value. For example, you can have the condition attribute **`object_name`**, the operator **Contains**, and the value **`QA`**. The property then requires the content to have **`QA`** in the file name. The simple conditions allow you to evaluate if 'all of' or just 'one of' the conditions are met to fulfill the rule.
      When using 'all of' it is the equivalent of having 'And' **&&** between all conditions.
      When using 'one of' it is the equivalent of having 'Or' || between all conditions.
   b. If you are using the Advanced view editor you can type in a more complex condition to be evaluated. This allows any number of conditional statements using parenthesis **( )**, And **&&**, Or || conditions.
      You must provide the attribute field names that exist on the property page. If an attribute field name is not present, then the condition will be evaluated in unexpected ways. To determine how the D2 javascript engine is evaluating the condition at run time, D2 logging can be set to **`FINE`** or **`FINEST`**.

Supported Operators for Comparing and Evaluating Different Conditions	Example
Parenthesis to control order evaluation **( )**	`(((cond1) && (cond2)) || cond3) || (cond4 && cond5)`
And **&&**	
OR ||	

Supported Operators for Evaluating Conditions	Examples
contains	`getValue(attribute).contains('value')`
notContains	`getValue(attribute).notContains('value')`
equals	`getValue(attribute).equals('value')`
notEquals	`getValue(attribute).notEquals('value')`
isGreaterOrEqualsThan	`getValue(attribute).isGreaterOrEqualsThan ('value')`
isGreaterThan	`getValue(attribute).isGreaterThan('value')`
isLessOrEqualsThan	`getValue(attribute).isLessOrEqualsThan ('value')`
isLessThan	`getValue(attribute).isLessThan('value')`
is	`getValue(attribute).is('value')`
isNot	`getValue(attribute).isNot('value')`
beginWith	`getValue(attribute).beginWith('value')`
endWith	`(getValue(attribute).endWith('value')`

- getValue and Operators are case sensitive.
- '`value`' is enclosed in single quotes and '`value`' can be a constant string or refer to another * attribute that exists on the property page. For example: **`getValue(attrName).operator('getValue(attrName2)')`**
- Date attributes will be resolved using the format as configured for the user.
- White spaces are ignored everywhere except between **`getValue().operator()`**

c. Fill out the form as described in the following table:

Field	Description
Enabled only for group	Select the content subtype for which the property is enabled.
Reinitialize when this control is disabled	Select to reset the attribute value when the content is deactivated.
Creation mode	Select to use this property element when content is being created.
Edit mode	Select to use this property element when the properties page of content is being edited.
Import mode	Select to use this property element when content is being imported.

2. On the **Visibility condition** tab:

a. Use the list controls to add and remove conditions. If you do not set conditions, D2 considers that conditions have been met.

If you are using the simple view editor, select a condition attribute and operator and type the condition value. For example, you can have the condition attribute **`object_name`**, the

operator **contains**, and the value **QA**. The property then requires the content to have QA in the file name.

If you are using the advanced view editor, type your condition.

b. Fill out the form as described in the following table:

Field	Description
Visible only for group	Select the content subtype for which the property is shown.
Reinitialize when this control is disabled	Select to reset the attribute value when the content is deactivated.
Reserved space	Select to keep the space allotted for the property element even if the element is set to invisible.
Creation mode	Select to use this property element when content is created.
Edit mode	Select to use this property element when the properties page of content is edited.
Import mode	Select to use this property element when content is imported.

3. On the **Required condition** tab:

a. Use the list controls to add and remove conditions. If you do not set conditions, D2 considers that conditions have been met.

If you are using the simple view editor, select a condition attribute and operator and type the condition value. For example, you can have the condition attribute **object_name**, the operator **contains**, and the value **QA**. The property then requires the content to have QA in the file name.

If you are using the advanced view editor, type your condition.

b. Fill out the form as described in the following table:

Field	Description
Required only for group	Select the group for which filling out this property element is required.
Creation mode	Select to use this property element when content is being created.
Edit mode	Select to use this property element when the properties page of content is being edited.
Import mode	Select to use this property element when content is being imported.

4. On the **Validation constraint tab**, set a validation constraint:

a. If you are adding a combo field or an editable combo field to a grid, you can select the **Unique values only** checkbox to ensure that a user is forced to pick a unique value from each control. Their selection is removed from subsequent fields so that no two fields can contain

the same value. This functionality can be used in combination with the regular expression logic outlined below.

b. Configure the regular expression:
   - Text property validation accepts Javascript regular expressions.
   - Date validation accepts two types of constraints (**`equals`**, **`notEquals`**, **`Greater`**, **`Lesser`**, **`LesserOREquals`**, **`GreaterOREquals`**) when comparing to other date fields, or **`$TODAY`** when comparing to the current date. The other field must be available in the dialog box.

c. Type a **Message** to show when validation fails. This message is appended to the default message:

   `'attr' is invalid.`

   For example, if a user is validating a phone number for an attribute "pnumber" with the label "Phone Number", and a message "Please use the format (xxx) xxx-xxxx." The resulting display to the user will be: "Phone Number is invalid. Please use the format (xxx) xxx-xxxx."

   Note: 'attr' is a keyword that is replaced with the attribute name. You cannot use this value in your own text.

5. Click **Save**.

Related Topics —

Configuring a Property Page, page 40
Configuring Value Assistance Fields, page 66

Configuring Virtual Document Templates

1. Navigate to **Go to** > **VD Templates** from the menu bar.
2. Click **New** to create a virtual document template.

   If you want to create a child virtual document template that inherits the properties of an existing virtual document template, select a virtual document template and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Label `<language>`	Type a label.
Description	Type a description.

Field	Description
Applications	Add or remove the applications to which this virtual document template applies. For example, adding the **QA** application would cause the virtual document template to only apply to matching quality assurance cases.
Asynchronous build	Select to create the virtual document in asynchronous mode.

4. Click **+** to add an operation. D2 applies all applicable operations for each child of the VD:
   a. To create a virtual document with copied root and components, select **Copy** as the **Operation**, then fill out the properties as described in the following table:

Field	Description
Qualification DQL	Type a single DQL query to filter the source components. For example, `dm_document where a_status = 'Draft'`
New object type	Select the object type of the newly created component.
Inherit content	Select to inherit the content of the component.
Default values	Select a default values template.
Component inheritance	Select an inheritance template for the properties of the VD children.
Root inheritance	Select an inheritance template for the properties of the VD root.
Version label	Type the version label for the copied output.
Default lifecycle	Select a default lifecycle to set the starting status of the copied output.

   b. To link the source component to the new virtual document, select **Link** as the **Operation**, then fill out the properties as described in the following table:

Field	Description
Qualification DQL	Type a single DQL query to filter content.
Binding rule	Type the version number or version label of the content to link. The option allows you to force D2 to show a specific version in the new virtual document. If a matching version is not found, D2 shows the current version of the source component.

   c. To exclude the content in the VD, select **Exclude** as the **Operation**, then type a single DQL query to filter content. You can only exclude copy or link operations.

5. Click **Save**.

Related Topics —

Determining Which Creation Processes to Use, page 27
Configuring Autonaming, page 37
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Security, page 77
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Linked Documents for Creating or Importing Content, page 73
Configuring Check-in, page 56
Configuring Checkout, page 74
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61

Configuring Linked Documents for Creating or Importing Content

1. Navigate to **Go to** > **Linked document** from the menu bar.
2. Click **New** to create a document link.

   If you want to create a child document link that inherits the properties of an existing document link, select a document link and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this document link applies. For example, adding the **QA** application would cause the document link to only apply to matching quality assurance cases.

4. Add a document link by clicking **Add linked document**.
5. For each row of the table:

   a. Select the link type. The following table describes the three available types:

Type	Description
Relation	The document link is derived from a relation. Select a relation name and type.
VD and Relation	The document link is derived from a virtual document and a relation. Select a relation name and type.
VD	The document link is derived from a virtual document.

b. Select the creation profile for the content being created.

c. Type the message shown before creating the document.

d. Select one of the following:

- **Required** to require the end user to configure a linked document.
- **Silent creation** to create the linked document as a background process.

  Always select a default value template when using silent creation to avoid property inheritance errors.

If you select **Required** or leave both options unselected, D2 Client shows end users the message typed in step 5c.

6. Click **Save**.

Related Topics —

Determining Which Creation Processes to Use, page 27
Configuring Autonaming, page 37
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Security, page 77
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Virtual Document Templates, page 71
Configuring Check-in, page 56
Configuring Checkout, page 74
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61

Configuring Checkout

1. Navigate to **Go to** > **Checkout** from the menu bar.
2. Click **New** to create a checkout setting.

If you want to create a child checkout setting that inherits the properties of an existing checkout setting, select a checkout setting and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this checkout setting applies. For example, adding the **QA** application would cause the checkout setting to only apply to matching quality assurance cases.
Allow checkout	Select to allow content checkout.
Warning message	Select to show a warning message before checkout.
Warning message `<language>`	Type a warning message.

4. Configure checkout settings for XML applications:

Field	Description
Checkout range	Select the scope.
Checkout support documents as well	Select to checkout supporting documents included in the DocApp.

5. Click **Save**.

Related Topics —

Determining Which Creation Processes to Use, page 27
Configuring Autonaming, page 37
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Security, page 77
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Virtual Document Templates, page 71
Configuring Linked Documents for Creating or Importing Content, page 73
Configuring Check-in, page 56
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61

Configuring Content Assistance configuration

Content Assistance allows you to designate how users find content (through simple search or repository folder browsing) when attaching content to workflows, creating relationships, or adding children or inherited components to virtual documents.

1. Navigate to **Widget view** > **Content Assist** from the menu bar.
2. Click **New** to create a content assistance configuration.

   If you want to create a child workspace that inherits the properties of an existing configuration, select a configuration from the **Content Assist** list and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this configuration applies. For example, adding the **QA** application would cause the configuration to only apply to matching quality assurance cases.
Label `<language>`	Type a label.
List Assistance Options	Select the type of list assistance that will be available in the dialog. At least one option must be selected: • **Browse**: (default) user is restricted to browsing through the repository folder structure. • **Search**: user can perform a simple or advanced search. • **Favorites**: displays the content of the user's favorite items.

4. Click **Save**.

Chapter 4

Configuring Security

Configuring Security

1. Navigate to **Go to** > **Security** from the menu bar.
2. Click **New** to create a security model.

   Select a security model and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix. Configuring Security Inheritance contains more information on using the Name field to configure security inheritance.
Description	Type a description.
Applications	Add or remove the applications to which this security model applies. For example, adding the **QA** application would cause the security model to only apply to matching quality assurance cases.

4. Configure levels of permissions:
   a. Use list controls to add, remove, and reorder permission levels.
   b. For each level, select an **Identifier** from one of the three list boxes:
      - User
      - Group
      - Property

      You can merge text and property context using the following keywords:

Keyword	Description
`$dqlvalue('<dql request>')`	Perform a DQL request. You must include the quotation marks.
`$value(<property>)$value(<property>)`	Merge two properties, for example `$value(country)$value(state)`

Note: The recommended way to manage the security configuration is via properties associated with the object in question. Using a complex DQL query may not result in expected behavior when D2 is not able to compute the ACL accordingly due to the DQL complexity.

c. Use list controls to add, remove, and reorder conditions. You cannot remove the default condition.

   Conditions relate a property list box to an expression. D2 prioritizes the matching of the conditions from top to bottom.

d. Toggle permissions by double-clicking on the cells as described in the following table:

Right	Description
Change State	Users can change the state of content that has been applied a lifecycle.
Change Owner	Users can change the owner of content. If the user is not the content owner or a superuser, they must also have Write permission.
Change Permit	Users can change the basic permissions of content.
Delete Object	Users can only delete the object. Grant the permission if you want to allow a user to delete without being able to read the content.
Change Folder Links	Users can create or remove links to a folder. Grant the permission if you want to allow a user to move content into a folder without having permissions to read or write within the folder.
Change Location	Users can move content within the repository. The user must also have Write permission to move content and Browse permission to link content.
Execute Proc	Users can run external procedures stored in the repository as a **`dm_procedure`** on certain object types.
IRM Print	Users can print content through an IRM server. This permission is shown when D2 detects the installation of an IRM server.
IRM Copy	Users can copy content through an IRM server. This permission is shown when D2 detects the installation of an IRM server.

Right	Description
IRM Take Offline	Users can access a local copy of content when disconnected from the IRM server. You can configure in the IRM server the duration of offline access, This permission is shown when D2 detects the installation of an IRM server.
IRM View Activity	Users can view the IRM activity log for content. This permission is shown when D2 detects the installation of an IRM server.

5. Click **Save**.

Related Topics —

Determining Which Creation Processes to Use, page 27
Configuring Autonaming, page 37
Configuring a Property Page, page 40
Configuring Inheritance, page 51
Configuring Auto Link, page 52
Configuring Template Lists, page 54
Configuring Virtual Document Templates, page 71
Configuring Linked Documents for Creating or Importing Content, page 73
Configuring Check-in, page 56
Configuring Checkout, page 74
Configuring Uniqueness Check, page 59
Configuring Mass Update, page 61
Editing a Security Model, page 80
Configuring Security Inheritance, page 81
Understanding Minimum Security Rights, page 79

Understanding Minimum Security Rights

Users require at least a certain level of security rights to perform different content-related tasks. Use the following table to understand the minimum rights for users and superusers for creating, modifying, and copying content:

	Without folder security	**With folder security**			
	Superuser	**User**	**Superuser**	**User**	
Creation of content	**Parent folder**	**None**	**Browse**	**Write**	**Write**

Deletion	**Parent folder**	None	Browse	Write	Write
	Object	Delete	Delete	Delete	Delete
Move	**Parent folder**	None	Browse	Write	Write
	Destination folder	None	Browse	Write	Write
	Object	Write	Write	Write	Write
Duplicate	**Parent folder**	None	Browse	Read	Read
	Destination folder	None	Browse	Write	Write
	Object	Read	Read	Read	Read

By default, the admingroup group or the Documentum System administrator's group is created during D2 installation or upgrade and contains all Superusers in the repository. When you grant Superuser privileges to a user, you may also need to add that user to the admingroup group to enable them to run jobs or administration methods. Users belonging to the admingroup group have no inherent privileges other than those they have as Superusers. However, administrative jobs, methods, and other related objects use an ACL which restricts their use to the admingroup group. If you revoke Superuser privileges from a user, the user should also be removed from the admingroup group.

Note: Do not delete the admingroup group from the repository. The admingroup group, which includes all Superusers within the repository, is used by the jobs that make up the administration tool suite.

Related Topics —

Configuring Security, page 77

Editing a Security Model

Changing an existing security model can affect newly created content as well as existing content that uses the model being changed.

1. To modify a security model and affect existing content, modify the security model and do not modify the configuration matrix.

   D2 runs a job in the background to modify the ACL of all previously created content using the security model.

2. To modify a security model and avoid affecting existing content, unless you perform a manual operation:

   a. Create a copy of the security model.

   b. In the configuration matrix, unselect the previous security model and select the new security model.

   D2 applies the security model to new content and to existing content when it is saved, checked in, or has a property changed.

3. To modify a security model and avoid affecting existing content:

   a. Create a copy of the security model.

b. Create a copy of the content context used for the previous security model. Add the condition **`r_creation_date > <the date of creation for the new security model>`** to identify the content created for the new security model.

c. Drag the new context before the old context in the configuration matrix.

d. Activate the new context.

D2 applies the new model to all new content, and old content continues using the old security model. You can launch D2CoreJob using Documentum Administrator or run a mass update to apply the new security model to linked content.

Related Topics —

Configuring Security, page 77
Configuring Security Inheritance, page 81

Configuring Security Inheritance

1. Create or configure a security model.
2. Type one of the following keywords corresponding to the set of ACLs you want inherited in the **Name** field:
   - **`FOLDER`** for the rights of the creation folder.
   - **`USER`** for the rights of the user.
   - **`TYPE`** for the rights of the document type.
3. Click **Save**.

Related Topics —

Configuring Security, page 77
Editing a Security Model, page 80

Chapter 5

Configuring Content Creation Defaults

Understanding the Content Creation Process

End users can add content to the repository using two methods:

- Create content using a rendition format and template
- Import content from the local file directory

You need an additional configuration to allow end users to import attachments to email and messages.Configuring Importing Email Attachments contains further instructions.

You can configure actions requested of users and automated processes performed by D2 when content is created or imported. Automated processes can help users avoid manual content management. Use the following table to understand how to configure creation and import:

When content is created or configured, you can configure:

- A creation profile with at least one document type. Depending on the user group, application, and method of creation, the end user can select a document type from a creation profile. The document type applies property pages, default values, and so on to the created content.

  If there is only one document type that the end user can select, the D2 Client content creation wizard automatically selects the document type and skips the selection page. You can configure creation profiles by context in this way to streamline the content creation process for end users.

  For example, create a creation profile for the quality assurance writers group available for creation and import, then create a document type for drafts. You can then set configuration elements such as the quality assurance property page, a default value template, and so on.

  Configuring Creation Profiles contains further instructions.

- A default value template to set initial property values. Default value templates set values to properties during content creation when the creation profile using the template is used. The end user can then edit the property page.

  For example, create a default value template that sets the keywords quality assurance and Draft, uses the quality assurance property page, and enters the content into the quality assurance documentation workflow.

  Configuring Default Value Templates contains further instructions.

- Configuration components and contexts to apply to the content. You can configure content-related configuration components such as property pages, permissions, inheritance, automatic file renaming, and so on. When the end user saves the property page during creation, D2 checks for context matches and runs the applicable configuration elements on the content.

  For example, create configuration elements such as a quality assurance Draft security and autonaming of the file to conform with quality assurance documents. Create a context that applies for all dm_document content for quality assurance with the a_status Draft. After enabling the

corresponding cell in the configuration matrix, whenever the end user creates a quality assurance document with the Draft status, D2 applies the configuration elements.

Determining Which Creation Processes to Use contains further information about creation-related configuration components.

Related Topics —

Configuring Default Value Templates, page 88
Configuring Creation Profiles, page 84
Configuring Importing Email Attachments, page 91
Configuring Folder Structure Import, page 92
Configuring XML Import, page 94

Configuring Creation Profiles

Before configuring creation profiles, configure the following components:

- Dictionary (required)
- Taxonomy
- Context (required)
- Inheritance
- Default value template
- Autonaming
- Autolinking
- Lifecycle
- Workflow

Note: Ensure that any sub-component of a creation profile belonging to a specific application also belongs to the application. There is no constraint on sub-component selection based on application. When you design a creation profile, you can choose a dictionary/property page/default value template/inheritance/lifecycle that is not part of the application creation profile, which might cause unexpected results.

1. To configure:
   - A non-context-based creation profile, navigate to **Creation** > **Creation profile** from the menu bar.
   - A context-based creation profile, navigate to **Go to** > **Extended creation profile** from the menu bar. An extended creation profile must be mapped to a context for the content type **`dm_folder`**.

Note: When an end user selects a folder, D2 retrieves the creation profiles in the following priority order:

- A standard creation profile if the "Folder properties used for creation" match.
- An extended creation profile if standard creation profiles that match the configuration property are not found.
- A standard creation profile, if an extended creation profile does not exist.

2. Click **New** to create a creation profile.

   If you want to create a child creation profile that inherits the properties of an existing creation profile, select a creation profile and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Source content	Type a name. The name appears in the configuration profile for extended creation profiles.
Description	Type a description.
Label	Type a label.

Field	Description
Available for	Select the creation method for which the profile is eligible. This is applicable only for a regular creation profile. • Select **Create** to allow end users to control the behavior of a creation profile during content creation but not during content import. • Select **Import** to allow end users to control the behavior of a creation profile during content import but not during content creation. • Select **Linked Documents** to allow end users to control the behavior of linked documents during the content creation and import process. • Select **Single repository paste** to allow end users to control the copy/paste behavior within a single repository. • Select **Multi repository paste** to allow end users to control the copy/paste behavior between multiple repositories. **Note:** If a creation profile is created with **Single repository paste**, then the cut and paste action works as copy and paste. **Note:** If the creation profile does not exist for a content during a single or multi repository copy and paste operation, and the doctype of the copied object exists in the target repository, the object is copied as is without any changes. If the doctype of the copied object does not exist, then the content import wizard appears, and you need to follow the same steps as for importing a new content.
Users group	Select the user groups for which the creation profile applies. This is applicable only for a regular creation profile.

Field	Description
Folder properties used for creation	Select one or more properties. D2 only shows the creation profile for folders when the list properties match the **Name** of the creation profile. Leave this field blank if you do not want to restrict the creation profile by any property. This is applicable only for a regular creation profile. For example, you can name a creation profile **`Project A`** and type the **`keywords`** property for this field. The end user does not receive the option to select this creation profile unless the content being edited contains **`Project A`** as a keyword.
Skip edit content step	Select to skip the content editing step after importing the content.
Hide inheritance tab	Select to hide the inheritance options from the creation profile. If you hide the inheritance tab, no properties and content are inherited during creation and import.
Properties inheritance	Select to enable inheritance of content properties.
Content inheritance	Select to enable inheritance of parent content.
Virtual Document structure inheritance	Select to enable inheritance of virtual document structure.
Block inheritance modification	Select to prohibit the user from modifying the source content for inheritance through a file selector in the creation profile.

4. Add or remove dictionaries and properties to the creation profile.
5. Use the list controls to add and remove document types and fill out the fields as described in the following table:
   a. Fill out the default fields as described in the following table:

Field	Description
Property	Select a property to which the value selected from the dictionary is saved.
Values	Select the values from the dictionary to which the document type relates.
Type	Select the content type.
Property pages	Select the property page applied to the content.

Field	Description
Version	Type the starting version number of the new content. **Note:** For creation profiles that allow paste operation, you can set the version to blank. In such cases, the source object version is retained for the newly pasted object.
Inheritance	Select the inheritance rule applied to the content.
Default values template	Select the default value template applied to the content.
Lifecycle	Select a lifecycle to which the content is entered. The lifecycle sets the status of the content to the initial state, and if the lifecycle is set to **Execute actions on start**, the first action is executed.
Workflow	Select a workflow that the content executes after the create or import process.

b. Click **Add column** to add a column to the document types.

6. For extended creation profiles, toggle the configuration for contexts in the configuration profile.
7. Click **Save**.
8. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Understanding the Content Creation Process, page 83
Configuring Default Value Templates, page 88
Configuring Importing Email Attachments, page 91
Configuring Folder Structure Import, page 92
Configuring XML Import, page 94

Configuring Default Value Templates

You can use default value templates to define the default values assigned to properties when content is created.

1. Navigate to **Creation** > **Default value templates** from the menu bar.
2. Click **New** to create a default value template.
   Select a default value template and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Description	Type a description.
Applications	Add or remove the applications to which this default value template applies. For example, adding the **QA** application would cause the default value template to only apply to matching quality assurance cases.

4. Click **+** to add properties and their default values:
   a. Select a property in the **Properties** list box.
   b. Type the default value for the selected property n the **Default values** field.
      The keywords you can use in the default values field are as described in the following table:

Keyword	Description
$FILENAME	The file name. During content export, you can store the file name into properties other than the **object_name** by using this keyword. During content import, the file name of the imported file is stored in the property corresponding to the **$FILENAME** value in the template.
$USER	The connected user.
$dqlvalue("<DQL>")	A DQL query.
$TODAY	The current date.
$NOW	The current date and hour.
$ALIAS	The alias.

5. Click **Save**.

Related Topics —

Understanding the Content Creation Process, page 83
Configuring Creation Profiles, page 84
Configuring Importing Email Attachments, page 91
Configuring Folder Structure Import, page 92
Configuring XML Import, page 94

Configuring Linked Documents for Importing Emails

If an end user imports an email without any attachments, the creation wizard skips the linked document steps.

1. Navigate to **Go to** > **Linked document** from the menu bar.
2. Click **New** to create a document link.

   If you want to create a child document link that inherits the properties of an existing document link, select a document link and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this document link applies. For example, adding the **QA** application would cause the document link to only apply to matching quality assurance cases.

4. Add a document link by clicking **Add linked document**.
5. For each row of the table:
   a. Select the link type. The following table describes the three available types:

Type	Description
Relation	The document link is derived from a relation. Select a relation name and type. If the linked documentation configuration is used by an end for importing an email, D2 Client only allows end users to select the first configured relation.
VD and Relation	The document link is derived from a virtual document and a relation. Select a relation name and type.
VD	The document link is derived from a virtual document.

   b. Select the creation profile for the content being created.
   c. Type the message shown before creating the document.

d. Select one of the following:
   - **Required** to require the end user to configure a linked document.
   - **Silent creation** to create the linked document as a background process.

     Always select a default value template when using silent creation to avoid property inheritance errors.

   If you select **Required** or leave both options unselected, D2 Client shows end users the message typed in step 5c.

6. Click **Save**.

Configuring Importing Email Attachments

You can configure content import such that when an end user imports an email with an attachment, the attachment is processed and saved to the repository as a rendition. The content types accepted are .eml or Outlook formats.

1. Navigate to **Creation** > **Mail attachments** from the menu bar.
2. Fill out the form as described in the following table:

Field	Description
Import attachments	Select to enable import of attachments. When selected, the D2 Client user interface shows a checkbox asking users if they want to import the attachments.
Keep initial mail format	Select to retain the format of the attachment.
Make a rendition	Select to export the email as a rendition. • **Keep attachments in rendition**: select to include email attachments in the rendition. • **Rendition format**: select the file format to save the email.

3. Use the list controls for **Excluded attachment document format** to add or remove accepted file formats.
4. Click **Save**.

Related Topics —

Understanding the Content Creation Process, page 83
Configuring Default Value Templates, page 88
Configuring Creation Profiles, page 84
Configuring Folder Structure Import, page 92
Configuring XML Import, page 94

Configuring Folder Structure Import

You can import a folder and its subfolders and content, and configure the folder type, security, and default autolink rules for the folders.

1. Navigate to **Go to** > **Folder structure import** from the menu bar.
2. Click **New** to create a folder structure import setting.

   Select a folder structure import setting and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this folder structure import setting applies. For example, adding the **QA** application would cause the folder structure import setting to only apply to matching quality assurance cases.
Label	Type a label name to appear in the Folder Import dialog.

4. Set import settings as described in the following table:

Field	Description
Root folder type	Select the folder type applied to the root folder.
Root folder autolink	(Optional) Select the autolink rule you want to use for placing the folder.
Sub-folder type	Select the folder type applied to subfolders.
Sub-folder structure security	Select the security configuration you want used on the root folder and all subfolders.
Creation Profile	Select the content type of the imported folder.
Convert folder structure to virtual document automatically after import	Select to automatically initiate a virtual document conversion after folder structure import.

5. Click **Save**.

Related Topics —

Understanding the Content Creation Process, page 83
Configuring Default Value Templates, page 88
Configuring Creation Profiles, page 84

Configuring Importing Email Attachments, page 91
Configuring XML Import, page 94

Configuring Folder Structure Conversion

You can configure to convert a folder structure in a repository into a virtual document.

1. Navigate to **Go to** > **Folder Structure conversion** from the menu bar.
2. Click **New** to create a folder structure conversion setting.

   If you want to create a child folder structure conversion setting that inherits the properties of an existing folder structure conversion setting, select a folder structure conversion setting and click **Create from**.Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this folder structure import setting applies. For example, adding the **QA** application would cause the folder structure import setting to only apply to matching quality assurance cases.

4. Set **Conversion settings** as described in the following table:

Field	Description
Create profile	Select the content type of the virtual document root folder.
Child node type	Select the type of the subfolders in the new virtual document.
Child node default values	Select to automatically set the default values for the subfolders.
Root node inheritance	Select the inheritance configuration to define the properties you want to inherit from the root folder.
Source folder inheritance	Select the inheritance configuration to define the properties you want to inherit from the source folder. **Note:** Source folder inheritance takes precedence over virtual document root inheritance.

5. Click **Save**.

Configuring XML Import

Use XML import for the integration of:

- Large amounts of data, such as migrating a content management system or importing a content dump from an external application.
- Content on a routine basis, such as the daily retrieval of content produced by another application.

For example, you can configure an external application to save content to a specific folder. You can then configure the XML import component of D2 to scan the folder on a regular basis. D2 automatically imports content found into the repository.

1. Create a folder on the Documentum Server to store content imported into the repository.
2. In Documentum Administrator, configure D2JobImportMassCreate similarly to the example described in the following table:

If you are using a creation profile	If you are not using a creation profile
`-folder C:/d66_02/import`	`-folder C:/d66_02/import`
`-naming false`	`-naming false`
`-createconfig matrix_name`	
`-args argument_name`	

   List of D2 Jobs contains further information.

3. In Documentum Administrator, configure D2JobCoreDeQueue similarly to the following example:

   ```
   -scan_queue true
   -naming true
   -create true
   ```

   List of D2 Jobs contains further information.

4. Create an XML file to function as a metadata template for the content imported from the folder. The XML must contain:
   - A root element: **`<?xml version="1.0" encoding="UTF-8"?>`**
   - Documentum attribute values: **`<d2_import_xml>`** followed by properties, such as **`title`**, **`authors`**, and **`keywords`**. The specific properties used in the XML file depend on the configuration of the content type and property page. You can designate a property as a repeating property by adding the **`<value/>`** tag.
   - The same file name as the content to be imported. To import only the properties of content, name the XML file **`<filename of the content>-meta.xml`**
   - If you did not use a creation profile using **`-createconfig`**, specify the **`r_object_type`** to determine the context and configuration components to use. If you do not set an **`r_object_type`** nor a **`-createconfig`**, D2 does not perform the import operation.

The D2JobImportMassCreate scans the folder according to the configured interval, and D2JobCoreDeQueue browses the d2c_mass_create_queue to apply job parameters and D2CoreMethod to import the content into the repository.

Related Topics —

Understanding the Content Creation Process, page 83
Configuring Default Value Templates, page 88
Configuring Creation Profiles, page 84
Configuring Importing Email Attachments, page 91
Configuring Folder Structure Import, page 92

Chapter 6

Configuring Content Processes Components

Understanding Lifecycles

A lifecycle is a sequence of states and is used to:

- Denote the status of the content as it passes from one business protocol to another.
- Apply and change content retention and markup policies.

The following table describes an example lifecycle:

State	Conditions	Next state
Draft	None	Reviewed
Reviewed	Content is in Draft state r_lock_owner is empty	Draft Approved: requests electronic signature
Approved	Content is in Reviewed state Content is a PDF	None

In this example:

- Content can progress from Draft to Reviewed to Approved. Content can progress by repeatedly going to Draft after Reviewed.
- If you progress from Reviewed PDF to Approved, the system confirms the conditions have been met. If this progression requests an electronic signature, a prompt appears. When you electronically sign the approval, the system progresses the state to Approved.
- If you try to progress a spreadsheet instead of a PDF, the system rejects the progression request because one of the conditions was not met.

For each state, you can configure:

- Entry conditions for the state, such as conditions based on properties, permissions, and linked content.
- Actions to execute when moving to the next step, such as filling a property, creating a version, applying security, and changing the document state.
- Next states and transitions between states, such as popup dialog boxes, messages, and menu labels.

Related Topics —

Understanding Workflows, page 105
Configuring a Lifecycle, page 98

Configuring a Lifecycle Batch, page 104

Configuring a Lifecycle

1. Navigate to **Go to** > **Lifecycle** from the menu bar.
2. Click **New** to create a lifecycle.

   If you want to create a child lifecycle that inherits the properties of an existing lifecycle, select a lifecycle and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a lifecycle.
Description	Type a description.
Applications	Add or remove the applications to which this lifecycle applies. For example, adding the **QA** application would cause the lifecycle to only apply to matching quality assurance cases.
Execute actions on start	Select to execute actions related to the lifecycle when an end user starts the lifecycle.
Alternate attribute for state (default is a_status)	Select a property to control the state of the content.

4. Click **Add lifecycle state** to add a state to the lifecycle:
   a. Type a name for the lifecycle state.
   b. Select **Start state** to initialize the content with the selected state.
   c. Select **Direct state** if all states of the lifecycle can access the state.
5. Configure the entry conditions for each **Lifecycle state**:
   a. Use the list controls to add, remove, and reorder entry conditions.
   b. Fill out the form as described in the following table depending on the entry condition selected:

Entry condition	Description
Condition VD children	Select the lifecycle state that is required of all virtual document components, type a DQL request to filter virtual document components, and type a warning message that appears when the condition is not met. **Note:** This entry condition test is not used verify the state of a linked document or virtual document children, but to test each condition you have configured into entry condition of target state.
Condition check by Method	Select the method to run for verifying that the condition is met, type arguments and parameters required by the method, and type a warning message that appears when the condition is not met.
Condition on group	Select whether the group was **Saved in a property** or whether the end user types the group name using **Free input**. **Saved in a property** extracts the group name from the property of the document associated with the lifecycle operation. When you create a document, `group_name` is defaulted to the group name of the creator. When you perform the transition, the extracted group name will be verified against the allowed groups in the dictionary alias. Note that the property is not restricted to `group_name`. You can create a new property where you save your group name while creating a document but it has to be the same property name you specify in the configuration. **Free input** is more restrictive. You have to specify a fixed group name under **Property containing group or group name** which will be verified against the dictionary alias values. Type the property that contains the group or group name, select the dictionary and alias, and type a warning message that appears when the condition is not met.

Entry condition	Description
Condition on linked document	Select the relation type for the linked documents, select the lifecycle and state to which the linked documents are to be set, and type a warning message that appears when the condition is not met.
Condition on property	Select the property, operation, and value for a property-based condition, and type a warning message that appears when the condition is not met.
Condition on rendition	Select the required rendition format, and type a warning message that appears when the condition is not met.
Condition on uniqueness	Select the configured uniqueness check that must be passed, and type a warning message that appears when the condition is not met.
Condition permission	Select the minimum permission level required, and type a warning message that appears when the condition is not met.

6. Click a state from **Lifecycle state** to configure the actions of each lifecycle state:
   a. Click **Add action** and select an action.
   b. Fill out the form as described in the following table depending on the action selected:

Action	Description
Action on VD children	Select the lifecycle state you want to apply to all virtual document components and select actions you want ignored.
Apply autolink	No entry required. By default, D2 uses the highest priority configuration in the configuration matrix.
Apply autonaming	No entry required. By default, D2 uses the highest priority configuration in the configuration matrix.
Apply method	Select the method to run against the content and type the arguments and parameters required. Check the **Fetch Current** checkbox to ensure that the new object's current version is fetched so that the next action operation can pick up the right version to work on.

Action	Description
Apply parameters	No entry generally required. By default, D2 uses the highest priority configuration in the configuration matrix. **Apply Parameters** can also be executed if parameters need to be applied at a specific step. For example, if you need parameters from properties set before calling a server method, or before O2 method execution and rendition creation. **Note:** The **Apply Parameters** action in D2 does not work for controls not linked to properties (for example, Documentum attributes), and D2 does not resolve `$value` expressions correctly for these controls.
Apply security	No entry required. By default, D2 uses the highest priority configuration in the configuration matrix.
Change linked document state	Select the relation type for the linked documents, select the relation direction between the parent and child documents, and select the lifecycle and state to which the linked documents are set.
Change other versions state	Select the state you want other versions to be set to and type a DQL query to further specify the versions.
Copy repeating property	Select the repeating property you want to copy, the copy operation, the target property, and select **Remove duplicate values** if you want to remove duplicate values.
Make version	Select the type of versioning you want to perform.
Manage distribution	Select the distribution configuration and action you want to use.
Mark	Type a version label to **with value**.
Remove other versions	Select **Authorize destruction of annotated document** to enable removal of annotated content and type a DQL query to further specify the versions.
Rendition request	No entry required.
Send email	Select the mailing list configuration.
Send in workflow	Select the workflow configuration and type a name and note for the workflow being entered.

Action	Description
Set property	Select the property and type the value to assign.
Set repeating property	Select the repeating property and the set operation, type the value you want to assign, then select **Remove duplicate values** to remove duplicate values.
Snapshot	Type a title.
Unmark	Type a version label to **with value**.
Work offline	No entry required.
Delete this action	No entry required.

c. Use **Action up** and **Action down** to reorder the lines in the table of actions..

7. Click a state from **Lifecycle state** to configure next states and transition condition:

a. Click **Add transition** and select a next state.

b. Fill out the form as described in the following table:

Field	Description
Type	Select the type of transition to perform during this state change.
Action to perform	Select the type of action to perform. • Checkin: check in the content. • ExportFile: export the content. • Insert PDF: insert a PDF inside the rendition.
Dialog box	Select the dialog box to display as a popup form for the end user to fill.
Trigger event for transition	Select the event that serves as a trigger for automatic progression of the lifecycle. • Check in: lifecycle progresses when checked in. • (For D2 3.1 only) Cancel checkout: lifecycle progresses when checkout is canceled. • D2 import: lifecycle progresses when the file is imported.
Menu label `<language>`	Type a menu label that is visible when the end user opens the lifecycle context menu.
Electronic signature required	Select to require the reason with the electronic signature.

Field	Description
Intention required	Select to require an electronic signature to end the lifecycle state.
Intentions dictionary	Select a dictionary to enable users to select a reason from a list of options.
Confirmation message `<language>`	Type a confirmation message.

c. Configure the entry conditions for each transition.

8. Configure the transition conditions for each **Lifecycle state**:
   a. Select a **Next state** to set a transition condition from the selected lifecycle state to the selected next state.
   b. Use the list controls to add, remove, and reorder transition conditions.
   c. Fill out the form as described in the following table depending on the transition condition selected:

Entry condition	Description
Condition VD children	Select the lifecycle state that is required of all virtual document components, type a DQL request to filter virtual document components, and type a warning message that appears when the condition is not met.
Condition check by Method	Select the method to run for verifying that the condition is met, type arguments and parameters required by the method, and type a warning message that appears when the condition is not met.
Condition on group	Select whether the group was **Saved in a property** or whether the end user types the group name using **Free input**. Type the property that contains the group or group name, select the dictionary and alias, and type a warning message that appears when the condition is not met.
Condition on linked document	Select the relation type for the linked documents, select the lifecycle and state to which the linked documents are to be set, and type a warning message that appears when the condition is not met.
Condition on property	Select the property, operation, and value for a property-based condition, and type a warning message that appears when the condition is not met.
Condition on rendition	Select the required rendition format, and type a warning message that appears when the condition is not met.

Entry condition	Description
Condition on uniqueness	Select the configured uniqueness check that must be passed, and type a warning message that appears when the condition is not met.
Condition permission	Select the minimum permission level required, and type a warning message that appears when the condition is not met.

9. Click **Save**.

Related Topics —

Understanding Lifecycles, page 97
Configuring a Lifecycle Batch, page 104

Configuring a Lifecycle Batch

You can configure lifecycle batches to control lifecycles for all content assigned to a context simultaneously. For example, you can create the Draft, Review, and Approved folders, and configure a context for each folder. Using autolink, you can configure D2 to place content created by an end user in the Draft folder. You can configure D2 to pass all content automatically within the Draft folder through the Review and Approved folders.

Lifecycle batches use the D2JobLifecycleBatch job. List of D2 Jobs contains further information.

1. Navigate to **Go to** > **Lifecycle batch** from the menu bar.
2. Click **New** to create a lifecycle batch.

   If you want to create a child lifecycle batch that inherits the properties of an existing lifecycle batch, select a lifecycle batch and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a lifecycle batch.
Description	Type a description.
Applications	Add or remove the applications to which this lifecycle batch applies. For example, adding the **QA** application would cause the lifecycle batch to only apply to matching quality assurance cases.
Lifecycle	Select the lifecycle you want to use.
Target state	Select the target state.
Transition type	Select the type of transition performed.

4. Click **+** to add and configure properties modified by the lifecycle batch.

Configure each property as described in the following table:

Field	Description
Property	Select a property from the list box.
Value	Type the value of the property.

5. Click **Save**.

Related Topics —

Understanding Lifecycles, page 97
Configuring a Lifecycle, page 98

Understanding Workflows

A workflow is a formalized version of a business process which has been broken down into individual tasks. Users use workflows to:

- Apply business processes into the lifecycle of a content.
- Support commenting, tracking of workflow progress, management of various participants, and attaching of supplementary content.

You can use Documentum Workflow Manager to create and configure workflows, then install them as templates into the repository. D2 Config recognizes the templates, allowing you to select the templates when creating a workflow for use by users in D2 Client. In order to use a workflow template in D2, the following conditions must be met:

- There must be a task.
- There must be a name for each task.
- There must be flow.
- There must be aliases for the recipients of the workflow.
- There must be triggers and transitions.
- There must be delegation if necessary.
- There must only be a single package from start to end.

D2 workflows work with the following performer types that are available in Documentum Server:

- All users in group
- Multiple sequential performers
- Previous activity's performer
- Single user from group
- Specific user
- Workflow supervisor
- Repository Owner

The following performer type is not supported:

- Work queue
- Some users from a group

Note: D2 workflows do not manage the **Some users from group** alias. You must configure workflows to use either the **All users from group** alias or the **Single user from group** alias. When you use the **All users from group** alias, a temporary group for the workflow instance is created and the list of recipients can be specified.

Related Topics —

Understanding Lifecycles, page 97
Configuring a Workflow, page 106

Configuring a Workflow

If you used Documentum Workflow Manager to create a workflow template, you can use D2 to configure the workflow template to allow end users to perform business processes on content. When configuring the workflow template in Workflow Manager:

- Create short aliases in the list of performers.
- Do not use spaces in the list of performers.
- Select **Optional** in the **Version** field if you want to be able to send any version of a document into a workflow, or select **Current** to allow only the current version of a document.

D2 creates groups in real time to represent performers.

1. Navigate to **Go to** > **Workflow** from the menu bar.
2. Click **New** to create a workflow.

   If you want to create a child workflow that inherits the properties of an existing workflow, select a workflow and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Workflow label `<language>`	Type a label that appears when the end user access the workflow context menu.
Description	Type a description.
Applications	Add or remove the applications to which this workflow applies. For example, adding the **QA** application would cause the workflow to only apply to matching quality assurance cases.

Field	Description
Workflow template	Select a workflow template.
View	Click to see a popup dialog with a graphical diagram of the workflow template.

4. Click **Add condition** and select entry conditions for the workflow.
   Fill out the form as described in the following table depending on the entry condition selected:

Entry condition	Description
Condition on property	Select the property, operation, and value for a property-based condition, and type a warning message that appears when the condition is not met.
Condition permission	Select the minimum permission level required, and type a warning message that appears when the condition is not met.
Condition on group	Select whether the group was **Saved in a property** or whether the end user types the group name using **Free input**. Type the property that contains the group or group name, select the dictionary and alias, and type a warning message that appears when the condition is not met.
Condition on rendition	Select the required rendition format, and type a warning message that appears when the condition is not met.
Condition check by Method	Select the method to verify that the condition is met, type arguments and parameters required by the method, and type a warning message that appears when the condition is not met.
Condition on uniqueness	Select the configured uniqueness check that must be passed, and type a warning message that appears when the condition is not met.

   a. Use **Condition up** and **Condition down** to reorder conditions.

5. Configure workflow abort options as described in the following table:

Field	Description
Lifecycle	Select the lifecycle to use for an aborted workflow.
Target state	Select the final state of the content.
Apply on attachments	Select the checkbox to apply the state to all associated content.

Note: During a workflow abort, the entry conditions set for the lifecycle state are not evaluated when the state is changed.

6. Select a task from the **Task configuration** list. Manual tasks are shown with a white background, while tasks that are automatically processed are shown with a gray background.
   a. Fill out the **Task parameters** tab as described in the following table:

Field	Description
Subject <language>	Type a subject to appear in the D2 Client user task inbox. Use **$value(<property name>)** to refer to properties.
Message <language>	Type the email message.
Category <language>	Type a category with which to associate the task when an end user sorts the Workflow task browser widget by category. You can create a subcategory using **/** to designate a category path. For example, to create the subcategory **Reviewing** under the category **Review Process**, type **Review Process/Reviewing**. You can configure autolinks to organize the user task inbox.
Priority	Select a priority level for the task as it appears for end users in their list of tasks.
Replace “Accept” with Label <language>	Type a custom task action label. The custom label replaces the default **Accept** label.
Replace “Reject” with Label <language>	Type a custom task action label. The custom label replaces the default **Reject** label.
Display tasks in workflow manager	Select to show the task in the D2 Client workflow manager for end users.
Manual acquisition	Select to require users to manually acquire a task. This is necessary when the manual task is set in Workflow Manager to use a single user from a group. When not selected, tasks are automatically considered being performed by the assigned user. Requiring users to manually acquire tasks adds a level of work to the end user in performing tasks, but lets you see when an end user has seen and acknowledged the task.
Check lifecycle consistency on task end	Select to verify lifecycle entry conditions before an end user accepts or rejects a task.

Field	Description
Always display dialog box	Select to improve the speed of the validation process by hiding dialog boxes such as the comment box of a task.
Mandatory comments in case of reject	Select to require end users to provide comments when rejecting a task.
Mandatory comments in case of forward	Select to require end users to provide comments when forwarding a task.
Property page in case of reject	Select a property page to show when an end user rejects a task. The option enables end users to supply additional information for the content. This information is saved with the attachment content only if you add auto activity after manual activity, select the properties in the **Workflow property** list provided in D2 Config workflow configuration, and select **Apply on attachment** to apply the changed attribute on attachments.
Property page in case of forward	Select a property page to show when an end user forwards a task. The option enables end users to supply additional information for the content. This information is saved with the attachment content only if you add auto activity after manual activity, select the properties in the **Workflow property** list provided in D2 Config workflow configuration, and select **Apply on attachment** to apply the changed attribute on attachments.
Electronic signature required	Select to require an electronic signature to end a task.
Required for	Select which progression case for which you want an electronic signature.
Request a signature for each document	Select if you want a signature for each attached document.
Intentions dictionary	Select a dictionary to enable users to select a reason from a list of options.
Intention required	Select to require the reason with the electronic signature.

Field	Description
Audit information add-on	Configure a manual tasks audit for electronic signatures by typing additional audit information. You can use the DQL keywords **$value** and **$dqlvalue** for this field.
Audit task on acquisition	Select to audit when users acquire a task.
Audit choice of next task	Select to audit the progression of the task.
Don't send notification for this task	Select to avoid sending an email notification to the workflow performer.

You can use the **$value** keyword to use property values. For example, **$value(<document.property_name>)** shows the property of a document.

You can use the **$alias** keyword to use a dictionary.

You can use HTML in the body of the email.

b. Fill out the **Participants management** tab as described in the following table:

Field	Description
Task participant	Type the alias of the group performing the task.
Can add or remove a task when the activity is running	Select to allow current performers to add or remove participants during workflow execution. **Note:** This option is only available for dynamic tasks and only works for the "`All Users in Group`" performer type in the activity definition.
Participants available and Participants modifiable	Use the list controls to configure available and modifiable participant lists.
Required on Forward	Select if a participant must be assigned to the task if it is Forwarded.
Required on Reject	Select if a participant must be assigned to the task if it is Rejected.
Type	Select the user list to propose delegation. You can use **DQL** or **Dictionary** to filter the list of users. You can use the DQL keyword **$value**.

c. Fill out the **External task** tab as described in the following table:

Field	Description
Define external task	Select to send an email to an external participant.
Attach document	Select to allow attachment of documents.
Add workflow notes in the message	Select to allow addition of workflow notes to the message.
Add workflow scheme (HTML/VML)	Select to allow addition of the workflow scheme in HTML/VML format.
Add rendition with format	Click **Browse**, then use the list controls to modify the list of formats.
Checkin options	Select **Add as annotation** to check in the change as a content annotation. Select **Silent checkin minor version** to check in the change as a minor version and as a background process. Select **Silent checkin same version** to check in the change without version control and as a background process. Select **No checkin** to not check in the change.
Log entry `<language>`	Type a log entry.
Mandatory attached file in case of reject	Select to require end users to attach a file if they reject the task.
Add reply as a workflow note	Select to add the mail message as a workflow note.

d. Fill out the **Task follow up** tab as described in the following table:

Field	Description
Task duration in days	Type an integer for the total number of days allotted for the task.

Add or delete followup procedures using **Add notification** and **Delete this notification**, and configure the process as described in the following table:

Field	Description
Remaining days before	Type an integer for the number of days remaining in the task. When the number of days remaining until the task deadline reaches the entered number, the follow up process is triggered. You can type a negative integer to send a notification when the deadline has passed.
Notification recipients	Select one or more of the following users to receive the notification: • **Supervisor** • **Task owner** • **Other** If you select **Other**, you can use the DQL keywords **$value**, **$alias**, and **$dqlvalue**.
Action	You can select an action to perform on the workflow when the follow up is sent.
Subject `<language>`	Type the subject of the email.
Message `<language>`	Type the message body of the email.

You can use the **$value** keyword to use property values. For example, **$value(<document.property_name>)** shows the property of a document.

You can use the **$alias** keyword to use a dictionary.

You can use HTML in the body of the email.

e. Fill out the **Reject follow up** tab as described in the following table:

Field	Description
Activities available	Select an activity in the list and click > to enable a follow up activity for this task.
Reject Follow up Activities	Select an activity in the list and click < to disable the activity as a follow up. Reject follow-up allows for an alternate icon to be displayed when a reject action happens for the indicated workflow action. When the task is sent back to the configured users, the rejected task that is configured via the follow-up function will now have an clipboard icon with a red 'return' arrow in their task widget. This is used to indicate to the user that the task was previously approved, but has been rejected back to their queue.

7. To configure a system task, fill out the form as described in the following table:

Field	Description
Label `<language>`	Type a label.
Transition type	Select the transition type.
Lifecycle	Select the lifecycle to use.
Target state	Select the lifecycle state for the content.
Apply on attachments	Select to add attachments during this process.

Field	Description
Add workflow properties	Click **Browse**, then use < and > to modify the list of additional properties. For example, you can configure a workflow task to require users to fill out a date property page. The task can be performed at different stages of the workflow by different user groups, such as the Product team, the Testing team, and the Management team. To keep and show the dates input by the different teams, configure the date property as a workflow property. If you do not configure the property, you cannot display the dates. **Note:** The values entered by the user in a manual task are stored in the workflow, not in the document. If you want to send values from the workflow to the document, you must use a lifecycle change state automatic method and use the **Add Workflow Properties** feature in the workflow configuration.
Display task in workflow manager	Select to show the task in the workflow manager.

8. To configure the performer list, configure the properties page using the editor. The buttons function the same as in the property page. For each participant, fill out the fields shown for the selected list control as described in the following table:

Field	Description
Participant	Select the participant being modified in this object. D2 can manage only one participant alias per task. **Note:** It is not desirable to use a participant alias which is the same as the document's attribute. The participant segregation does not work properly in the workflow property page, when the DQL used to populate a synchronous list control, contains any dependency on the document's attribute using $value evaluation.
Default value	Type default values, such as user names.

Field	Description
Linked attribute	Select a property. D2 sets the value of the property as the list of performers listed under the alias. You can use this property with a D2 security template to ensure that workflow performers have access rights to the documents in the workflow. If the workflow is set to allow multiple performers and the list of performers contains groups, D2 adds the individual users contained in the groups when the workflow is started. As a result, if a user is removed from a group after the workflow is started, D2 does not update the list of workflow performers and the linked attribute. You must manually remove users from the list of performers to update the linked attribute.
Load asynchronously	Select to load values on click and filter as opposed to when the dialog box is opened. Use the option when the list contains a large number of values.
Label `<language>`	Type a label.
Read-only on startup	Select to disable the field in the workflow startup page.
Required on workflow start-up	Select to make the field required when the end user starts the workflow.
Type	Select DQL or Dictionary to filter the list and select or type the condition.
Rows number	Type the number of rows the field shows.
Required values count	Type the minimum number of values for accepting the performer list.
Maximum values count	Type the maximum number of values for accepting the performer list.
Sort list	Select to sort the list alphabetically.
Enable values import export	Select to enable the import and export of the list of performers in .xls format.
Popup width and Popup height	Type the size of the popup dialog.

9. To prevent workflow supervisors from changing the list of performers:
   a. In **Participant's Structure**, select **Read-only on startup** for each performer.
   b. On the **Participants management** tab, clear **Can add or remove a task when the activity is running** and remove the performer from **Participants modifiable**.

   D2 requires default values when workflow supervisors cannot change performers.

10. Use the list controls to reorder tasks.
11. Click **Save**.

Related Topics —

Understanding Workflows, page 105

Chapter 7

Configuring D2 Search

Configuring Global Search Settings

Configure the properties of the search engine, type, and results to apply to every search performed in D2 Client.

Note: When `DQL Fulltext` in D2 Search config is enabled, DFC generates the DQL, and the CS Query Plugin translates the DQL into an `xQuery`. When `Documentum xPlore` in D2 Search config is enabled, DFC generates the `xQuery` directly. This means that `Order by Score` is not calculated the same when using DQL with and without `xPlore` for fulltext search in D2.

Note: The execution of quick and advanced searches with DQL can be slower than expected if all three of the following conditions are present:

- Multiple types are included in the search criteria.
- A custom attribute is added to the columns.
- The search result returns a huge data set.

1. From the menu bar, navigate to **Interface** > **Search**
2. Select a dictionary as described in the following table:

Field	Description
Dictionary for object type labels	Select a dictionary to add specific labels to object types.
Alias/Locale	Select an alias or language.

3. Use the list controls to configure the **Groups allowed to create public search**. Users in the selected groups can create and save public searches.

   Note: By default, all users are allowed to create public searches. To limit the ability of creating public searches only to selected users, you must first define a group that is allowed to create public searches, add selected users to that group, and then add the group to the list of **Groups allowed to create public search**.

4. Configure the search engine as described in the following table:

Field	Description
Maximum results returned by search	Type an integer to restrict the number of maximum returned results. Type `0` to have all results shown.
Maximum number of asynchronous searches in a user session	(D2 3.1 only) Type an integer to restrict the number of asynchronous searches that a user can launch. Type `0` to allow an unlimited number of asynchronous searches.
Enable full text search	Select to enable full-text search. By default only simple searches are performed.
Quick search on all versions (default is CURRENT)	Select to enable quick search on all versions of content. By default, quick search is only executed on current versions of content.
Indexing engine choice	Select the search engine used by D2. If you do not enable full-text searches, you do not have to select a search engine. Simple searches are performed using DQL queries and do not need an external search engine. **DQL Fulltext** is the same as **Documentum xPlore**, except that end users cannot configure and use facets. If you use **Documentum xPlore**, end users can set D2 Client to highlight search terms in the search results.

5. You can select and configure the OpenSearch Search engine for only the 3.1 version of D2 Client:
   a. Configure the OpenSearch properties as described in the following table:

Field	Description
Search Engine URL	Type the search engine URL. You can define parameters. For example, **`http://<server>:<port>/D2-Client/opensearch?q=corporate/tree:Top security_user:"$USER" security_group:"$USER_GROUPS"`**
Open in a new window	Select the checkbox to open search results in a new window in D2 Client 3.1.

Field	Description
HTTP Method	Select the HTTP method to pass queries.
Number of results per page (if the user does not have paging)	Type the number of results per page. D2 uses the field only if you use **$COUNTINDEX** in the parameter list or in the search engine URL.
XSLT to use	Select the OpenSearch stylesheet for transformation (XSLT) operation to use. Add XSLTs to D2 by naming the stylesheets **opensearch-<name>.xsl** and placing them in the **/system/D2/OpenSearch** folder. D2 automatically places all XSLTs found in the list box. By default D2 uses the first XSLT it finds.

b. Configure extensions to the search engine URL request to improve interoperability.

c. Click **Add a search extension** to add a search extension.

d. Fill out the **Search Extension** table as described in the following table:

Field	Description
Name	Type a name for the search extension.
Value	Type one of the available alias for the search extension. **$STARTINDEX** defines the starting index value of the pagination of results. **$COUNTINDEX** defines the number of results per page. **$USERGROUP** resolves the list of groups to which the user belongs. **$USERTICKET** resolves the Documentum ticket of the user. **$DOCBASE** resolves the repository name for which the search is being performed.
Type	Select **refine** to refine the search term. Select **param** to add a security parameter.

6. If you select the Documentum xPlore search engine, fill out the form as described in the following table:

Field	Description
Use xPlore for all searches (even the searches without full-text criteria)	Select to enable xPlore for all searches. You can configure the length of the search summary D2 shows when configured to use xPlore. The *OpenText Documentum xPlore Administration and Development Guide* contains further information.
Enable Facets	Select to enable search facets. Facets represent one or more important characteristics of an object in the Documentum object model. Configure facets to search large data sets without explicit queries and to avoid queries that do not return desired results. The *OpenText Documentum System Search Development Guide* contains further information about facets. Configuring Advanced Search contains further information on how to configure properties for use as facets.
Maximum number of result by Facet	Type the number of property values retrieved by facets.
Limit xPlore term highlighting to Dictionary values only	Select to limit xPlore term highlighting. Dictionary values are highlighted in xPlore search results, but corresponding dictionary keys (that are not identical to the search term) are not highlighted.

7. Click **Save**.

   After search results are displayed in a D2 doclist, the default behavior for actions such as edit, check out, and cancel checkout is to perform a locate action along with the user indicated action. This results in the doc list being refreshed and focused on the document within the repository folder structure.

   To alter this behavior and allow the user to remain on a refresh view of the search results, use a D2 menu configuration to define the menu action for Edit, Checkout, and Cancel Checkout as indicated below:

   - Set **Locate content and refresh state upon action** (default = true) to `false`
   - Set **Refresh state** (default = false) to `true`

   The refreshed view of the search results may not display the current lock icon state when xPlore full-text is used due to xPlore index configuration and latency.

   Configuring D2 Client Menus, page 192 has information about creating and using D2 Menus.

Related Topics —

Configuring a Query Form Search, page 122

Configuring Advanced Search, page 121

Configuring Advanced Search

Use search mapping to enable types and properties that have been defined in the repository for advanced searches. You can construct different search modules in accordance with different contexts.

1. Navigate to **Go to** > **Search** from the menu bar.
2. Click **New** to create an advanced search.

   If you want to create a child advanced search that inherits the properties of an existing advanced search, select an advanced search and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this advanced search applies. For example, adding the **QA** application would cause the advanced search to only apply to matching quality assurance cases.

4. Use the list controls to configure the list of available types for **Type**.
5. Select **Include type as search default** to set the types that will be available by default to the user for selection in the advanced search dialog box. The selected types are listed in **Default types for advanced search** list.
6. Select an available type, select a property, and use the list controls to configure the list of **Properties of selected type**.
7. Select a property and select **Dictionary** or **DQL** to create input assistance:
   a. If you select **Dictionary**, select a dictionary from the **Dictionary** list box, then an alias or a language from the **Alias/Locale** list box.
   b. If you select **DQL**, type a DQL query in the **Query** field.

      Note: To ensure that a single document with multiple dates in a custom repeating date field displays as a single result in the search results:

      a. Configure server.ini of Documentum Server with return_top_results_row_based = false in the [SERVER_STARTUP] section.

      b. Include r_object_id in the SELECT statement of your DQL query.
   c. Select **Include property as facet** to allow end users to include the property of the selected types in the facet configuration table.

The facet configuration table allows the administrator to set the display order of the facets, define the sorting of the facet values, set a default facet for search, and configure the structured facets. Using the toolbar buttons, the administrator can move the facet properties to change the display order, indent or outdent the facet properties to configure structured facets, and remove a property from facet use. The administrator can select multiple properties in the table and can simultaneously perform these operations.

The structured facets are configured by indenting a facet property and making it a child of the previously listed facet. Only one level of indenting is supported. The remaining structure is defined by ordering the indented sibling facets.

For example:

Document FormatOwner NameModified By

This structure implies, Document Format > Owner Name > Modified By, that is Category > sub-category1 > sub-category2.

Here, **Document Format** facet has a sub-category **Owner Name**, and Owner Name further has a sub-category **Modified By**.

d. Select **Default Facet** to set a facet property as the default facet for Quick searches.

8. Click **Save**.

Related Topics —

Configuring Global Search Settings, page 117
Configuring a Query Form Search, page 122

Configuring a Query Form Search

Use query form searches to provide property templates to end users of D2 Client. End users can select a query form, fill out the properties, then search. The alternatives would be to perform:

- A standard search, in which end users can only input a general query.
- An advanced search, in which an end user must specify the properties they wish to use.

Note: If you perform a `select *` query, the lock symbol for a document (which indicates it is checked-out) does not appear in the query form search result.

1. Navigate to **Go to** > **Query form** from the menu bar.
2. Click **New** to create a query form.

   If you want to create a child query form that inherits the properties of an existing query form, select a query form and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.

Field	Description
Applications	Add or remove the applications to which this query form applies. For example, adding the **QA** application would cause the query form to only apply to matching quality assurance cases.
Label <language>	Type the form label.
Property page	Select the property page to display for the search from the list box. You can preview the property page by clicking the magnifying glass. **Note:** The query form does not support multiple panel property pages, hence these pages are not available in the list.
Default value	Select a default value template to add values to the properties. **Note:** For repeating attribute r_creation_date, if the field is non-mandatory and blank in the query form, then a default value of 01/01/1970 is used.
Mapping options	Select one of the following options: • **DQL query**: This option enables a DQL based query but does not support the use of facets with search results. • **xPlore query**: This option enables an Advanced Search configuration that can use facets to refine the search results.

a. If you select DQL query, configure the following details:

Field	Description
DQL	Type a DQL query using the attributes of the property page. Use **$value(<property name>)** to retrieve the values of different properties. Ensure that the DQL query is selective. Neither the **Maximum results returned by search** field in the global search configuration page nor the **dfc.search.max_results** options in **dfc.properties** affect the result size returned by query forms. End users could experience performance issues when a large number of search results are returned. To ensure that a single document with multiple dates in a custom repeating date field displays as a single result in the search results: a. Configure server.ini of Documentum Server with return_top_results _row_based = false in the [SERVER_STARTUP] section. b. Include r_object_id in the SELECT statement of your DQL query. c. Include order by r_object_id. For query forms involving date type attributes follow the steps mentioned in the Note below. Ensure that you include r_object_id or a_content_type in the select statement to display the icon in the query form results.
Using repeating attribute values	You can use repeating attribute values by using the `$repeatingvalue<repeating_attribute>` method. For example, Select object_name from dm_document where subject IN($repeatingvalue(authors)) **Note:** If your DQL select clause contains any repeating attributes, and also includes a distinct function, add an **i_position** attribute in the select clause to avoid a DQL execution error.

Field	Description
Add mandatory attributes in hidden mode	Select this option to retrieve properties required for content control in the search results. If you do not select this option, the search result returns an informational listing of matching content. In this state, you cannot make any changes to the retrieved content, including launching a lifecycle. If you select this option, some of the attributes included in the query may not be displayed in the results, as they are added in hidden mode. For example, r_lock_owner attribute. **Note:** If you want DQL search results in a Query form on a Doclist to engage with other widgets, you will need to add **`r_object_id`** to the query in DQL for Query form or check **Add mandatory attributes in hidden mode**.
Add the user column preferences	Select the option to retrieve content properties matching the column preferences of the user. If you do not select the option, added columns using properties that are not automatically retrieved for showing search results remain blank.

Note: For query forms involving date type attributes:

- Add a constraint "<date attribute> is not nulldate" to where clause in the DQL if `nulldate` values are not required in the result set. For example, select r_object_id,r_modify_date from dm_document where (r_modify_date is not nulldate) enable(return_top 10)
- The `Datefloor` function rounds a given date down to the beginning of the year, month, or day in UTC. We recommend that you use “utc” in literal values used in equals comparison. For example, assuming both D2 Application Server and Documentum Server are in the same GMT+5:30 time zone, the following DQL returns all records with r_modify_date as '25 january, 2016' in GMT +5:30 timezone, select r_object_id,r_modify_date from dm_document where datefloor(day,r_modify_date) =date('01/25/2016utc','mm/dd/yyyy') enable(return_top 10). The *DQL Reference Guide* provides additional details for `datefloor` and timezone syntax.
- For the operators “less than” and “greater than”, adding timezone "utc" to the date literal changes the results as well. You can decide on the usage based on docbase timezone and business requirements. For example, assuming both D2 Application Server and Documentum Server are in the same GMT+5:30 timezone, the following DQLs returns different results:select r_object_id,r_modify_date from dm_document where

r_modify_date >=date('02/16/2016','mm/dd/yyyy') enable(return_top 10) includes results such as `r_modify_date=2/16/2016 5:26:55 AM`select r_object_id,r_modify_date from dm_document where r_modify_date >=date('02/16/2016utc','mm/dd/yyyy') enable(return_top 10) includes results such as `r_modify_date=2/16/2016 5:37:57 AM` with the addition of timezone, the second DQL returns values greater than or equal to midnight past 5:30 hours.

- If you use any date aliases such as `$value(r_modify_date)`, that do not directly specify the date literal, for example: `"2/16/2016 5:26:55"`, D2 automatically translates the aliases to the UTC time (with the UTC keyword already appended). There is no requirement to convert the time to UTC time nor append the UTC keyword manually.

  For example, the following will be translated properly to UTC time with UTC keyword appended:

  select * from dm_document where r_modify_date >= DATE('$value(r_modify_date)', 'mm/dd/yyyy') enable(return_top 10)

b. If you select xPlore query, configure the following details:

Field	Description
Type	Select an available object type for the search. Move the selected types to the right for use. Use the list controls to add and remove content types.
Criteria	Create search equations by using the one of the following modifiers: • **AND**: Matches content where both the search terms are found. • **OR**: Matches content where one or both terms are found. **Note:** To add another row for a property-based criteria, click **+**.
Property	The object types you select provide value assistance for the properties list box. The property attributes configured for the object types are available for selection.
Condition	For the selected property, specify a condition from the list box based on which you want to perform the search operation.

Field	Description
Value	For the selected combination of property and condition, specify the value to be searched. The search operation displays the results if the combination of property, value, and condition is satisfied. You can use the keyword **$value** (property page attribute). The value of the indicated attribute is passed from the Query Form Property page and used in the query. For example, if the query form passes the value of the 'Title' attribute to a query form value using **$value(title)**, the D2 query will uses that value in the search.
Full Text	Select a search option from the list box and type the search terms you want to use for the full-text portion of the search. You can use the keyword **$value** (property page attribute). The indicated attribute is passed from the Query Form Property page and used in the query. For example, if you use the search option **Containing any words** and type the text term as **$value(user_input_text)**, D2 fetches all the documents that contain the text you enter for the search operation. **Note:** You cannot use search-term modifiers such as **AND** and **+**.
All versions	Select if you want to search all versions of the content. If you do not select this option, only the current version is searched.
Case sensitive	Select to perform a case-sensitive search. **Note:** This feature is not supported in this release.
Search Path	Type the source folders to be used by the search operation. To additional folders, click **+**. To remove a selection, click **X**.
Include sub-folders	Select to include the subfolders of the selected folders. If you do not select this option, the search checks only the selected folders.

Field	Description
Columns	Define the columns to configure the display settings of the search results. Select the columns from the available list and move them to the right column for use.
Order by	The selected columns are displayed in the list box. Specify whether you to list the columns in the search results in the ascending or the descending order.
Properties for facet	The list of properties for facet is populated based on the object types you select. From the available list, move the properties to the right for use as facets. The selected facets automatically appear in the facet configuration table below.

Field	Description
Definition	You can further configure the individual property facets using these options: • **Dictionary**: If you select this option, select a dictionary from the **Dictionary** list box, and then an alias or a language from the **Alias/Locale** list box. • **DQL**: If you select this option, type a DQL query in the **Query** field. **Note:** Best practice is to include a unique attribute name and attribute type when defining a facet. The uniqueness should be at database level. For example, if you run the following query: **`select distinct attr_type from dm_type where attr_name = '<attribute_name>' enable (row_based)`** one row should be returned in the result.
Configure facet order and structure	The properties selected for using as facets are listed in the **Facet Property** column, along with their type in parenthesis. The **Sort** column provides the following options to sort a property: • Frequency: Sorts the facet values based on the number of matches in the search result. • Ascending: Sorts the facet values in the increasing order (A to Z) of their labels. • Descending: Sorts the facet values in the decreasing order (Z to A) of their labels. • Fixed: The original configured order is retained. You can use the toolbar buttons to move the facet properties to change the display order. You can configure structured facets by indenting / outdenting a facet. The indented facet becomes the child of the parent facet under which it is indented. You can select multiple properties in the table and can simultaneously perform these operations. You can also remove a property from facet use. Only one level of indenting is supported. The remaining structure is defined by ordering the indented sibling facets.

4. Add the query form to a search category so that end users can locate it for use:
   a. In the **Existing categories** browser, navigate to the folder in which you want to add the query form.
   b. Type **/<folder name>** in **Path**.
   c. Type a description for the category.
   d. You can configure the name, title, and user group permissions of a category by right-clicking the category and selecting **Modify search category**.
5. Click **Save**.

Related Topics —

Configuring Global Search Settings, page 117
Configuring Advanced Search, page 121

Chapter 8

Configuring Administrator-to-User Communication

Understanding How to Communicate with Users Through D2 and Email

If you have an email server to which D2 connects and communicates, you can configure:

- Mailing lists that end users can use to send pre-configured batch emails.
- The ability for end users to send emails directly from the D2 interface instead of having to open up an email application.
- Distributions that end users can use to create an email-based distribution of content for expedited and external validation.
- Subscriptions that end users can use to receive email notifications for events, such as workflow and lifecycle tasks. An end user who creates or owns the subscription does not receive notifications even if the end user had configured to receive the subscription.

Related Topics —

Configuring the Mail Server, page 131
Configuring a Distribution, page 138
Configuring a Subscription, page 137
Configuring Options for Sending Emails through D2, page 135
Configuring Options for Sending Emails through D2, page 135
Configuring a Mailing List, page 133

Configuring the Mail Server

1. Navigate to **Tools** > **Email** from the menu bar.
2. Fill out the **Email server** form as described in the following table:

Field	Description
Protocol	Select the mail protocol used by the server.
Using SSL	Select to use an SSL connection.
Server	Type the server address for the email server.
Port	Type the port number for the server.
Login	Type the username for the email address to use when sending messages.

Field	Description
From address	Type an address to mask the sender email.
Password	Type the password for the username. D2 stores passwords as encrypted text for existing email configuration. It is recommended that you reconfigure email configurations in D2 Config.
From name	Type the name to use when sending messages.

The email server is used for sending emails.

3. Fill out the **Email reception server** form as described in the following table:

Field	Description
Protocol	Select the mail protocol used by the reception server.
Using SSL	Select to use an SSL connection.
Server	Type the server address for the email server.
Port	Type the port number for the server.

The reception server is checked for received emails.

4. Fill out the **Accepted task account** form as described in the following table:

Field	Description
Login	Type the username for the email address to use when accepting tasks.
Address	Type an address to mask the sender email.
Password	Type the password for the username.

When using the email reception server, D2 logs into the accepted task account to accept tasks.

5. Fill out the **Rejected task account** form as described in the following table:

Field	Description
Login	Type the username for the email address to use when rejecting tasks.
Address	Type an address to mask the sender email.
Password	Type the password for the username.

When using the email reception server, D2 logs into the rejected task account to reject tasks.

6. Fill out the **Administration of errors into external task inbox** form as described in the following table:

Field	Description
Send back mail on task error	Select to send mail back to the sender if the email address used by the task assignee returns an error.
Active mail history	Select to enable keeping a history of emails, including duplicate messages, in the event that a message is sent back in the above option.

7. Click **Add a notification** to add an event:

   Fill out the form for each row as described in the following table:

Field	Description
Event	Select or type the event to use from the list box. D2 accepts Documentum audit events as a trigger for sending a notification. For example, if you want D2 to send a notification when a workflow is started, select or type **d2_workflow_started**. **Note:** To enable d2_workflow_started, you must select the **Send notification when the workflow is started** in the **Planning /Sending of workflow** dialog box.
Subject <language>	Type the subject of the email.
Message <language>	Type the body of the email.

   You can use the **$value** keyword to use property values. For example, **$value(<document .property_name>)** shows the property of a document.

   You can use the **$alias** keyword to use a dictionary.

   You can use HTML in the body of the email.

8. Click **Save**.

Related Topics —

Understanding How to Communicate with Users Through D2 and Email, page 131
Configuring a Distribution, page 138
Configuring a Subscription, page 137
Configuring Options for Sending Emails through D2, page 135
Configuring Options for Sending Emails through D2, page 135
Configuring a Mailing List, page 133

Configuring a Mailing List

1. Navigate to **Go to** > **Mailing list** from the menu bar.
2. Click **New** to create a mailing list.

If you want to create a child mailing list that inherits the properties of an existing mailing list, select a mailing list and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this mailing list applies. For example, adding the **QA** application would cause the mailing list to only apply to matching quality assurance cases.
Attach document	Select to allow attaching of documents.
Attach rendition with format	Click **Browse**, then use ® and Ø to configure the list of allowed rendition formats. The end user can only add attachments that have an allowed rendition format.

4. Click **+** to add a recipient, then select or type a recipient.
   Use the following table to understand the options shown:

Field	Description
User	Select a user from the list box.
Group	Select a user group from the list box.
Property value	Select a property to use the value of the property as the recipient.
Email address	Type an email address.

5. Fill out the content of the email as according to the following table:
   You can use the DQL keyword **$value(<property name>)**.
   The body accepts HTML.

Field	Description
Email subject `<language>`	Type the subject of the email.
Email message `<language>`	Type the body of the email.

   You can use the **$value** keyword to use property values. For example, **$value(<document .property_name>)** shows the property of a document.
   You can use the **$alias** keyword to use a dictionary.
   You can use HTML in the body of the email.

6. Click **Save**.

Related Topics —

Understanding How to Communicate with Users Through D2 and Email, page 131
Configuring the Mail Server, page 131
Configuring a Distribution, page 138
Configuring a Subscription, page 137
Configuring Options for Sending Emails through D2, page 135
Configuring Options for Sending Emails through D2, page 135

Configuring Options for Sending Emails through D2

1. Navigate to **Go to** > **Send mail** from the menu bar.
2. Click **New** to create an email sending option.

   If you want to create a child email sending option that inherits the properties of an existing email sending option, select an email sending option and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this email sending option applies. For example, if you add the **`Quality Assurance`** application, D2 makes the configuration available only when an end user interacts with content recognized by the **`Quality Assurance`** application.
Enable external recipients	Select to allow end users to add email addresses of recipients outside of the repository when sending an email through D2 Client.
Enable attachments	Select to allow end users to add attachments when sending an email through D2 Client.
Email subject `<language>`	Type the subject of the email.
Email message `<language>`	Type the body of the message.

You can use DQL substitutions such as **`$value(object_name)`** in the email subject and message. To specify the smart URL for the selected content item, use **`$value(locate_url)`**

You can use the following parameters for **$value** to enhance Email Configuration:

- **$value(document.object_name)**: Displays attributes of the packaged object. The package type is selected during the process of configuring the workflow. These attributes can be accessed using “document” as the prefix.
- **$value (tracker.<<some_attribute>>)**: Accesses d2c_workflow_tracker details using **tracker.some_attribute**. If the attribute data returned has any **$alias**, then that will also be processed.
- **$value(task.subject)** or **$value(task.message)**: When you pass either of these strings to **$value**, it picks workflow config's, current task instance configured details (subject and message will be picked based on the activity name) and the subject or message strings will then be internally processed. During this process, inner **$value** and **$alias** are considered. At this point, **$value** processing is different from general **$value** processing of email configuration. Rules that were applied for a string in Email Configuration cannot be parsed (for example,**$value(tracker.<<some_attribute>>**) because the value for 'task.subject' and 'task.message' are from Workflow/Task configuration.

Emails are triggered from the D2EventSenderMailMethod in different scenarios, such as: Workflow notifications, Workflow with external task, Lifecycle Notifications, Workflow Subscriptions, Send Mail, Email.

Note: Emails that are triggered by lifecycle notifications are sent via a multi-threaded process to avoid impacting the overall performance of D2LifecycleBatch. The number of threads is dynamically allocated, but you can manually define or disable the thread count by adding the following to the AppServer JVM property **-Dmail.nothreads=x**. **0** value disables the threading.

Here is a list of parameters that you can use, but values will be set conditionally based on the flow:

docbase_name, due_date, event_name, message_text,object_name, package_id, planned_start_date , task_priority , sender_name, supervisor_name, task_name, task_number, recipient_login_name, recipient_name, platform, mail_user_name, stamp, date_sent, link_cnt, package_type, content_type, content_size, dos_extension, temp_file_name, mail_script

4. Click **Save**.

Related Topics —

Understanding How to Communicate with Users Through D2 and Email, page 131
Configuring the Mail Server, page 131
Configuring a Distribution, page 138
Configuring a Subscription, page 137
Configuring a Mailing List, page 133
Understanding How to Communicate with Users Through D2 and Email, page 131
Configuring the Mail Server, page 131
Configuring a Distribution, page 138
Configuring a Subscription, page 137
Configuring a Mailing List, page 133

Configuring a Subscription

1. Navigate to **Go to** > **Subscription** from the menu bar.
2. Click **New** to create a subscription.

   If you want to create a child subscription that inherits the properties of an existing subscription, select a subscription and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this subscription applies. For example, adding the **QA** application would cause the subscription to only apply to matching quality assurance cases.
Differ notifications	Select the option to send notification events to the intermediate queue **subscription_audit**. After treating the queue, D2 launches the job D2JobSubscriptionSendMail to send the notification email to subscribed users. When using the delayed notification feature, configure the email message using **$foreachdoc{}** to list the documents. For example, **$foreachdoc{$value(title),$value(r_modifier)}** As D2JobSubscriptionSendMail sends a single message that can contain events for multiple documents, not configuring the message with the above syntax can cause confusion.
Label <language>	Type a label.

4. On the **Events** tab, click **Add an event** to add an event:
   a. Select an event to audit.

      You cannot use the following events for event subscriptions because they do not apply to content:

      - d2_template
      - d2_taxonomy
      - d2_dictionary
      - d2_workflow_added
      - d2_workflow_removed

- d2_workflow_sent
- d2_delegation
- d2_connect

Event names may be suffixed by one or more characters.

b. Type a DQL qualification to filter the event. If you want to configure more than one condition for an event, change the DQL qualification for the event instead of adding another instance of the event because you can only save one instance of a configuration for an event. For example, to configure an event for one of two titles, use the following query:

```
title='toto' or title 'titi'
```

5. Select the **Email** tab to configure notification parameters as described in the following table:

Field	Description
Attach document	Select to attach content to the notification message.
Attach rendition with format	Click **Browse** to add a rendition format.
Email subject `<language>`	Type the subject of the email.
Email message `<language>`	Type the body of the message.

You can use the **$value** keyword to use property values. For example, **$value(<document .property_name>)** shows the property of a document.

You can use the **$alias** keyword to use a dictionary.

You can use HTML in the body of the email.

6. Click **Save**.

Related Topics —

Understanding How to Communicate with Users Through D2 and Email, page 131
Configuring the Mail Server, page 131
Configuring a Distribution, page 138
Configuring Options for Sending Emails through D2, page 135
Configuring Options for Sending Emails through D2, page 135
Configuring a Mailing List, page 133

Configuring a Distribution

1. Navigate to **Go to** > **Distribution** in the menu bar.
2. Click **New** to create a distribution.

   If you want to create a child distribution that inherits the properties of an existing distribution, select a distribution and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this distribution applies. For example, adding the **QA** application would cause the distribution to only apply to matching quality assurance cases.
Attach document	Select to attach content to the distribution email.
Attach rendition with format	Click **Browse** to add the rendition formats you want to use when sending content.
Label `<language>`	Type a label.
Property page	Select a property page. You can click the magnifying glass to preview the page. **Note:** Distribution does not support multiple panel property pages, hence these pages are not available in the list.
Attribute which contains recipients	Select a property that contains the list of recipients.
Email subject `<language>`	Type the subject of the email.
Email message `<language>`	Type the body of the message.
Electronic signature	Select to require an electronic signature during when accepting a distribution and rejecting a distribution.
Intention required	Select to require the reason with the electronic signature.
Intentions dictionary	Select a dictionary to enable users to select a reason from a list of options.

You can use the **$value** keyword to use property values. For example, **$value(<document .property_name>)** shows the property of a document.

You can use the **$alias** keyword to use a dictionary, and you can use HTML in the body of the email.

4. Click **Save**.

D2 Distribution is limited by the fact that it is configurable for one type only. In configuration matrix, D2 Distribution should be checked with the context which is the same type as the type used in the property page which is configured for the distribution.

Related Topics —

Understanding How to Communicate with Users Through D2 and Email, page 131

Configuring the Mail Server, page 131
Configuring a Subscription, page 137
Configuring Options for Sending Emails through D2, page 135
Configuring Options for Sending Emails through D2, page 135
Configuring a Mailing List, page 133

Chapter 9

Configuring External Services

Configuring a Rendition Server Connection

You cannot configure specific connections to rendition servers through D2 Config. Use D2 Config to send events and messages to preconfigured queues.

Note: System behavior for multiple rendition requests made on a document can be controlled with **`allowRenditionRequest`** set in the **`d2fs.properties`** file. See the *D2 Installation Guide* for more information.

1. Navigate to **Go to** > **Rendition server** from the menu bar.
2. Click **New** to create a rendition server connection.

   If you want to create a child rendition server connection that inherits the properties of an existing rendition server connection, select a rendition server connection and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this rendition server connection applies. For example, adding the **`QA`** application would cause the rendition server connection to only apply to matching quality assurance cases.
Queue name	Select the rendition server queue you want to use. For example, when using default event names used by Documentum Server, you can select: • **dm_autorender_win31** for legacy PDF/HTML rendition requests. • **dm_mediaserver** for other rendition requests
Priority	Select the processing priority.

Field	Description
Event	If you selected **dm_autorender_win31**, type **`rendition`** If you selected **dm_mediaserver**, type **`dm_register_asset`** for imported items and **`dm_transcode_content`** for other rendition requests.
Message	Type the message you want accompanying the event.
Rendition format	Select format to which the rendition is created.
Don't overwrite the rendition of a document with the same format	Select if you do not want the rendition server to overwrite a rendition if a rendition of the same format already exists.

4. Click **Save**.

Related Topics —

Configuring an Advanced Documentum Transform Services (ADTS) Rendition Server Connection, page 142
Enabling a Branch Office Caching Service (BOCS) Element, page 143

Configuring an Advanced Documentum Transform Services (ADTS) Rendition Server Connection

You must configure ADTS servers to use thumbnail view mode.

Note: System behavior for multiple rendition requests made on a document can be controlled with **`allowRenditionRequest`** set in the **`d2fs.properties`** file. See the *D2 Installation Guide* for more information.

1. Navigate to **Go to** > **Rendition server** from the menu bar.
2. Click **New** to create a rendition server connection.

   If you want to create a child rendition server connection that inherits the properties of an existing rendition server connection, select a rendition server connection and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.

Field	Description
Applications	Add or remove the applications to which this rendition server connection applies. For example, adding the **QA** application would cause the rendition server connection to only apply to matching quality assurance cases.
Queue name	Select the queue **dm_mediaserver**.
Priority	Select the processing priority.
Event	Type the event **dm_register_asset**
Message	Do not type a message.
Rendition format	Select format to which the rendition is created.
Don't overwrite the rendition of a document with the same format	Select if you do not want the rendition server to overwrite a rendition if a rendition of the same format already exists.

4. Click **Save**.

Related Topics —

Configuring a Rendition Server Connection, page 141
Enabling a Branch Office Caching Service (BOCS) Element, page 143

Enabling a Branch Office Caching Service (BOCS) Element

Set up BOCS elements that have been installed and configured in D2 Config to allow use by end users.

1. Navigate to **Go to** > **BOCS cache** from the menu bar.
2. Click **New** to create a BOCS element.

   If you want to create a child BOCS element that inherits the properties of an existing BOCS element, select a BOCS element and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a BOCS element.
Description	Type a description.
Applications	Add or remove the applications to which this BOCS element applies. For example, adding the **QA** application would cause the BOCS element to only apply to matching quality assurance cases.

4. Click **Save**.

Related Topics —

Configuring a Rendition Server Connection, page 141
Configuring an Advanced Documentum Transform Services (ADTS) Rendition Server Connection, page 142

Chapter 10

Configuring D2 Config Tools

Configuring Relations

Create and configure relations in Documentum Application Builder, then install them into the repository. *OpenText Documentum Administrator User Guide* contains further information. You can configure specific application of relations in D2, such as the type of relation, inheritance of the relation during versioning, and so on.

You can place controlled relations in property pages, so that end users can set related contents depending on the type of relation.

1. Navigate to **Tools** > **Relation** from the menu bar.
2. Click **New** to create a relation.

   If you want to create a child relation that inherits the properties of an existing relation, select a relation and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. For each relation, fill out the row as described in the following table:

Field	Description
Relation Type	Select a relation type.
Permanent link	This field is automatically set, and it indicates the **`permanent_link`** property of the relation as created in Documentum Application Builder. If **Permanent link** is set to **`Yes`**, new versions of the content creates a new, identical relation to keep the relation through versioning.
Multiple relation	Select if the relation is a one-to-many relationship.

Field	Description
Controlled relation	Select if you want the relation to only be set through the properties page.
Child version	Select the behavior of the relation for child versions of the content. Select **All versions** to have each child version link to the relation. In this case, where one parent has a relation with multiple child versions, end users see one relation in the **Relation** tab when selecting he parent. Select **Current** to have the only the current version link to the relation. In this case, where a child document has relations toward several versions of the parent document, end users see one relation in the **Relation** tab when selecting the child. Select **Unique version** to have only the version used for creating the relation link to the relation.

4. Click **Save**.

Related Topics —

Configuring Automated Delegation, page 146
Configuring Fonts, page 147
Configuring Access to D2 Client and D2 Config, page 148
Configuring D2 Options, page 149

Configuring Automated Delegation

Use the automated delegation tool to create automated delegation on behalf of other users. For example, if a user goes on vacation for two weeks and forgets to set up self delegation using Delegations widget, another user from the team can set up the delegation on his behalf to automatically delegate all the workflow tasks from that user to specified users and groups.

1. Navigate to **Tools** > **Manage Delegations** from the menu bar.
2. Click **New** to create a delegation control.

   If you want to create a child delegation control that inherits the properties of an existing delegation control, select a delegation control and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
User/Group name	Select a user or group who can setup a delegation for other D2 Client users.
Manage user/group delegations	Select the list of users or groups for whom the automated delegations can be targeted. Click **Browse**, then use the list controls to add or remove automated delegation targets.

4. Click **Save**.

Related Topics —

Configuring Relations, page 145
Configuring Fonts, page 147
Configuring Access to D2 Client and D2 Config, page 148
Configuring D2 Options, page 149

Configuring Fonts

You can configure the fonts used in the XSL outputs produced by plugins.

1. Navigate to **Tools** > **Fonts** from the menu bar.
2. Click **Import** to add a font, then fill out the table as described in the following table:

Field	Description
Name	Type a name.
File	Locate and select the font file.
Format	Select the file format.

3. Click **OK**.
4. Type a **Label**.
5. To save the font:
   - Click **Save** to save to the repository.
   - Click **Export** to export the font in a file format you want.

Related Topics —

Configuring Relations, page 145
Configuring Automated Delegation, page 146
Configuring Access to D2 Client and D2 Config, page 148
Configuring D2 Options, page 149

Configuring Access to D2 Client and D2 Config

Configure access privileges to D2 Client and D2 Config based on user groups.

1. Navigate to **Tools** > **Options** from the menu bar.
2. Select **Display all groups** if you want to limit the list boxes to only the groups to which you have administrator rights.
3. Select user groups for the list boxes as described in the following table:

Field	Description
Access group for D2-Client	Select the user group to have access to D2 Client.
Access group for D2-Config	Select the user group to have access to D2 Config.
Access group for administration node	Select the user group to have access to the Users, Groups, Dictionaries, and Taxonomies widgets in D2 Client.
Access group for users administration node	Select the user group to have access to only the Users widget in D2 Client.
Access group for groups administration node	Select the user group to have write access to only the Groups widget in D2 Client.
Group and user administration parent node	Select the user group to have access to the Users and Groups widgets in D2 Client.

   If you leave the list box blank, all groups have access.
4. Click **Save**.

Related Topics —

Configuring Relations, page 145
Configuring Automated Delegation, page 146
Configuring Fonts, page 147
Configuring D2 Options, page 149
Configuring Access to Administration Widgets in D2 Client, page 205

Configuring Application Selection at Login

D2 can be configured to allow users to select the application they want to access through the D2 login dialog. You can select an application that appears as the default selection in the dialog, and acts as the default if the user accesses D2 objects through a URL that does not feature an application parameter.

Note: To enable application selection at login, **Load on startup** needs to configured for all the applicable repositories. See the *D2 Installation Guide* for more information about modifying the `D2FS.Properties` file for this purpose.

1. In **Tools > Options** Runtime Mode section, select **Application Evaluation** as the Matrix Evaluation mode.
2. Make sure the **Allow application selection on login** checkbox is checked.
3. Make sure you designate Applications as eligible for selection at D2 login. In **Tools > Options** (or when creating a new application), check the **Include at Login** checkbox.
4. Choose the application you want to appear as the default in the D2 login dialog's **Default Application** drop-down list. This default will also be selected if a URL is used to access D2 objects, and no explicit application parameter is defined in the URL.

Depending on individual permissions, users will be able to select from the range of available applications in the **Application** drop-down list in the D2 login dialog.

Configuring D2 Options

1. Navigate to **Tools** > **Options** from the menu bar.
2. Fill out the form as described in the following table:

Field	Description
Copy not allowed	Select content that you want to forbid copying. For example, you can prevent the copying of content with a counter in its name. To add a content set, select a set from **Document sets** and click the **>** button. To remove a set, select a set from **Document set which copy is not allowed** and click the **<** button.

Clients URL	Type client web application URLs to refresh the caches of application servers.
	
	Click **Add**, type the URL for the application server you want to add, and click **OK**.
	
	To remove a server, select the server and click **Delete**.
	
	All D2 App Servers with the following URL style should be added to the list:
	
	`http://d2hostname1:8080/D2FS`
	`http://d2hostname2:8080/D2FS`
	
	Note: You can include proxy URLs for the D2 App Servers as long as the proxy URLs distinguish each D2 app server and the proxy does not require authentication.
	
	If you have D2 BOCS Servers with the following URL style, they should be added as well:
	
	`http://d2bocshostname1:8080/D2-BOCS`
	`http://d2bocshostname2:8080/D2-BOCS`
	
	It is not necessary to include the D2-Config app server in this list. If it is present, it will be skipped when sending a request to the other clients. The D2-Config caches are first invalidated and, in some cases (like dictionaries, taxonomies, etc.) reloaded before sending requests to the other clients. Caches that are invalidated but not reloaded are subsequently repopulated "just-in-time".

Enable the Word files comparison	Select to enable comparison of content through two different versions of Word using the Versions widget.

Field	Description
Properties list display mode	Select the display mode for properties: • **Name**: for only names. • **Label**: for only labels. • **Name (Label)**: for names followed by labels. • **Label (Name)**: for labels followed by names.
Use DocApp constraints in property pages	Select to use the constraints for values defined for the repository when the attributes were created in Documentum Application Builder.
Move all versions	Select to move all versions of the selected document. This enables the following behavior: • All versions of the selected document in the same folder are moved. • No matter if the target document is the current or a previous version, in either case, all versions of the document that are linked to the same folder are moved. • When a virtual document is selected and moved, the root document is moved with all its versions, including descendants (which also reside in the same folder as the root document).
Redirect URL	Type a URL to configure a redirect URL for D2 logout. **Note:** The redirect URL must have a protocol such as **`http://`** or **`https://`**.
Structure import	(For D2 Client 3.1 only) Select the creation profile to use for importing folder structure. Configuring Folder Structure Import, page 92 provides details about folder structure import for 4.5 onwards.

3. Click **Save**.

Related Topics —

Configuring Relations, page 145
Configuring Automated Delegation, page 146
Configuring Fonts, page 147

Configuring Access to D2 Client and D2 Config, page 148

Enabling Actions for Intelligent URLs

To prevent end users from performing unintended actions, such as deleting content, D2 set the default to have actions disabled for use in intelligent URLs. You can change the setting for an action to enable it for your end user.

1. Navigate to **Tools** > **Options** from the menu bar.
2. Use the list controls to add or remove **Allowed actions** in the **Allowed actions in URL** section.
3. Click **Save**.
4. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Renaming a User with a Script on the Documentum Server

1. Retrieve the **RenameUser.bat** and **RenameUser – Example.bat** scripts from the `d2userrename/User_Rename_Config.zip` file, which can be found in the `D2-Config/utils` folder.
2. Edit the **RenameUser.bat** script and verify that the following settings are suitable for your installation:

```
set JBOSS_HOME=%DOCUMENTUM%\jboss5.1.0
    set JARS_FOLDER=%JBOSS_HOME%\server\DctmServer_MethodServer\deploy
    \ServerApps.ear\lib
```

3. Save any changes in **RenameUser.bat**.
4. Edit the **RenameUser – Example.bat** script to add the correct **-docbase_name**, **-user_name**, and **-password**, then complete the rename parameters by supplying the **-from** and **-to** name information.

   Note: If you would like to test the rename job before you execute it, set the **-test** flag to **true**.
5. Save the changes in **RenameUser – Example.bat**
6. Run the **RenameUserTest - Example.bat** script.

The script should log the outcome of the operation, and should also send a report to the instigating user's InBox in D2. The reports can also be found in the `/System/SysAdmin/Reports` folder in the repository.

Note: The script might log a warning that the D2 lockbox cannot be found. This can be ignored. D2 lockbox is not required in order to run the script on the Documentum Server.

After successfully renaming a user, make sure:

- The user can still log in using their original user ID and password (the user login name, or user ID, is not updated by this process).
- The new user name is shown in the D2 main window.

- The user can continue to navigate the same folders and documents in the repository with the same roles and permissions.
- The user's InBox works as before, and any in-flight workflow tasks assigned to the user are preserved.
- Any documents that were checked-out to the user prior to the rename operation are now locked under the new user name, and the user is able check these in as normal.

Chapter 11

Auditing and Monitoring D2

Configuring Documentum Audit

You can configure specific audit events for Documentum audit.

1. Navigate to **Tools** > **Documentum audit** from the menu bar.
2. Select **D2 connection audit** to log an audit event whenever a user connects to D2.
3. Use the list controls to select document types. D2 logs an audit event whenever content of the selected types is deleted.
4. Click **Save**.

Related Topics —

Configuring D2 Audit, page 155
Monitoring D2, page 158
Configuring D2 Audit, page 155

Configuring D2 Audit

Configure the audited D2 events and properties. The *OpenText Documentum Server System Object Reference* contains further information on auditing non-D2 events.

1. Navigate to **Go to** > **Audit** from the menu bar.
2. Click **New** to create an audit template.

   If you want to create a child audit template that inherits the properties of an existing audit template, select an audit template and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this audit template applies. For example, adding the **QA** application would cause the audit template to only apply to matching quality assurance cases.

4. Use the list controls to configure the list of **Audited events** and **Displayed events**.

   The Audit widget only shows events in the **Displayed events** list.

   If you place events in the **Displayed events** list, D2 only shows the listed events in the Audit widget.

   Select **Limit the display to D2 events** if you want to remove non-D2 events from the events lists.

   Select **Extended display** if you want to use extended messages to describe event information in the D2 Client Audit widget in place of standard Documentum columns.

5. Use the list controls to configure the list of **Audited properties**:

   a. Select **Display previous and new value** if you want D2 to display the value change.

   b. For a repeating property, select **Display only changes** if you want D2 to omit events that resulted in no change.

6. Click **Save**.

Related Topics —

Configuring Documentum Audit, page 155
Monitoring D2, page 158
Configuring Documentum Audit, page 155

D2 Audit Event Reference

Documentum Server Audit Event	Comparable D2 Audit Event(s)
dm_acquire	d2_workflow_acquired_task
dm_addnote	d2_workflow_added_note
dm_addrendition	d2_rendition_import, d2_rendition_request
dm_assemble	d2_vd_convert_to_vd
dm_bp_attach	d2_change_state
dm_checkin	d2_checkin
dm_checkout	d2_checkout
dm_delegatedworkitem	d2_workflow_delegated_task
dm_destroy	d2_destroy
dm_disassemble	d2_vd_convert_to_simple_doc
dm_freeze	d2_vd_create_snapshot
dm_getfile	d2_view, d2_export
dm_insertpart	d2_vd_add_component
dm_lock	d2_edit
dm_removepart	d2_vd_remove_component
dm_removerendition	d2_rendition_destroy
dm_save	d2_create, d2_save_properties

Documentum Server Audit Event	Comparable D2 Audit Event(s)
dm_signoff	d2_workflow_signoff
dm_startworkflow	d2_workflow_started
dm_unlock	d2_cancel_checkout
dm_updatepart	d2_vd_move_component

Full List of D2 Audit Events	
c2_controled_print	d2_rendition_request
c2_controlled_print_recall	d2_security
d2_add_inherited_component	d2_send_mail
d2_annotate	d2_set_template
d2_autolink	d2_thumbnail_get
d2_bin_restore_antecedant	d2_vd_add_component
d2_bin_restore_rendition	d2_vd_binding_component
d2_bin_restore_version	d2_vd_convert_to_simple_doc
d2_cancel_checkout	d2_vd_convert_to_vd
d2_change_state	d2_vd_create_snapshot
d2_change_state_failed	d2_vd_move_component
d2_change_state_signoff	d2_vd_remove_component
d2_change_state_success	d2_view
d2_checkin	d2_view_inline
d2_checkout	d2_workflow_aborted
d2_create	d2_workflow_acquired_task
d2_delegation_delegated_task	d2_workflow_added_note
d2_delegation_undo_delegated_task	d2_workflow_added_pseudo_task
d2_destroy	d2_workflow_auto_aborted
d2_destroy_failed	d2_workflow_auto_acquired_task
d2_distribution_accept	d2_workflow_auto_delegated_task
d2_distribution_accept_signoff	d2_workflow_auto_forwarded_task
d2_distribution_launch	d2_workflow_auto_rejected_task
d2_distribution_prepare	d2_workflow_auto_sent_mail
d2_distribution_reject	d2_workflow_delegated_task
d2_distribution_reject_signoff	d2_workflow_forwarded_task
d2_distribution_sendmail	d2_workflow_received_mail
d2_distribution_stop	d2_workflow_rejected_task
d2_distribution_update	d2_workflow_removed_pseudo_task

Full List of D2 Audit Events	
d2_edit	d2_workflow_scheduled
d2_export	d2_workflow_send_mail_failed
d2_import	d2_workflow_sent_mail
d2_mass_update	d2_workflow_signoff
d2_mass_update_signoff	d2_workflow_started
d2_print	o2_apply
d2_properties_save	
d2_properties_save_signoff	
d2_properties_view	
d2_relation_create	
d2_relation_destroy	
d2_rendition_destroy	
d2_rendition_import	

Monitoring D2

You can access the D2 monitoring information by navigation to **Help** > **Monitoring** from the menu bar. This opens the **Monitoring** dialog box. The following table describes the information presented in the tabs:

Tab	Description
D2 reloading	Shows the state of D2 on application servers and checks that the URL is responsive.
Summary	Shows information about the JVM executing D2 on the operating system.
VM	Shows information about the JVM executing D2 on the virtual machine.
Memory	Shows information about the memory status for the JVM executing D2.
Threads	Shows information about the threads for the JVM executing D2.
Classes	Shows information about the classes for the JVM executing D2.
Documentum	Shows information about active sessions and Documentum resources.

Tab	Description
D2 Cache	Shows the number of caches in use along with all statistical information.
ACS/BOCS	Shows the URL status of ACS and BOCS configured in Documentum Administrator.

Click **Refresh** to update all monitored information.

Related Topics —

Configuring Documentum Audit, page 155
Configuring D2 Audit, page 155

Chapter 12

Using D2 Config Configurations

Understanding D2 Configurations

You can back up all configurations in D2 for the repository for backup purposes as well as to transfer configurations through the importing feature. The actions you can take regarding configurations are:

- Backup
- Restore
- Export
- Import

You can view the version of the current configuration by navigating to About > D2 Solution > Configuration.

Related Topics —

Backing Up a D2 Configuration, page 161
Restoring a D2 Configuration, page 162
Exporting a D2 Configuration, page 163
Importing a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168
Resetting the D2 Configuration, page 169

Backing Up a D2 Configuration

1. To create a new configuration object:
   a. Navigate to **File** > **Save configuration** > **Check in as new object** from the menu bar.
   b. Select an application or select **All applications** to define the scope of the configurations you want to save.
   c. Type a name and description of the configuration.
   d. Click **OK**.
2. To save a configuration as a new version of an existing configuration object:
   a. Navigate to **File** > **Save configuration** > **Check in configuration base** from the menu bar.
   b. Select and edit a name.
   c. Select the version.
   d. Type a description.
   e. Click **OK**.

Related Topics —

Understanding D2 Configurations, page 161
Restoring a D2 Configuration, page 162
Exporting a D2 Configuration, page 163
Importing a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168
Resetting the D2 Configuration, page 169

Restoring a D2 Configuration

1. Navigate to **File** > **Restore configuration** from the menu bar.
2. Select a configuration.
3. Select the version you want to use.
4. Click **OK**.
5. Select options as described in the following table:

Option	Description
Full import with current config reset	Import the entire configuration and erase the current configuration.
Full import without actual config reset	Import the entire configuration without erasing the current configuration. New contexts are placed between the lowest-priority context and the default context. Existing contexts keep their position.
Include imported modules relative to matrix switches	Import the toggled status of the configuration matrix.
Overwrite existing elements	Replace existing configurations with the imported configuration.
Do not overwrite the autonaming values in the new configuration	Keep existing values of autonaming counters.
Do not overwrite the cache URLs	Keep the cache URLs.
Do not overwrite the mail server configuration	Keep the mail server URLs.

6. Select a context from **Import the context before this context** to select the relative context when importing contexts to the configuration matrix.
7. Select all modules you want to import.
8. Click **OK**.

Related Topics —

Understanding D2 Configurations, page 161
Backing Up a D2 Configuration, page 161
Exporting a D2 Configuration, page 163

Importing a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168
Resetting the D2 Configuration, page 169

Exporting a D2 Configuration

You can export a D2 Configuration as a .zip archive or a single .xml file. The .zip archive method allows you to export all of the D2 Property Configurations and select individual property configurations for export. The XML method exports all of the D2 Property Configurations, but does not allow you to select individual property configurations.

Note: The XML configuration import/export does not support Business DocApp packages. Configuration Components specific to D2 version 3.1 and earlier are not in the XML file export.

1. Navigate to **File** > **Export configuration** to export as .zip, or **File** > **Export XML configuration** from the menu bar.
2. Select an application or select **All elements** to define the scope of the configurations you want to export. To export all configurations, select **Full config export**. If you are exporting to .zip archive, you are also permitted to select individual property configurations. A suggested file name will be populated and will include a timestamp based on the App server local time.
3. Click **OK**.

Related Topics —

Understanding D2 Configurations, page 161
Backing Up a D2 Configuration, page 161
Restoring a D2 Configuration, page 162
Importing a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168
Resetting the D2 Configuration, page 169

Importing a D2 Configuration

You can import both .zip archive and .xml file configurations.

Note: The XML configuration import/export does not support Business DocApp packages. Configurations from D2 version 3.1 and earlier are not supported in the XML file import.

1. Navigate to **File** > **Import configuration** to import a .zip file, or **File** > **Import XML configuration** from the menu bar.
2. Select the configuration Zip or XML file you want to import.
3. Click **Open**.
4. Select options as described in the following table:

Option	Description
Full import with current config reset	Import the entire configuration and erase the current configuration
Full import without actual config reset	Import the entire configuration without erasing the current configuration. New contexts are placed between the lowest-priority context and the default context. Existing contexts keep their position.
Include imported modules relative to matrix switches	Import the toggled status of the configuration matrix.
Overwrite existing elements	Replace existing configurations with the imported configuration.
Do not overwrite the autonaming values in the new configuration	Keep existing values of autonaming counters.
Do not overwrite the cache URLs	Keep the cache URLs.
Do not overwrite the mail server configuration	Keep the mail server URLs.

5. Select a context from **Import the context before this context** to select the relative context when importing contexts to the configuration matrix.
6. Select all modules you want to import.
7. If you are importing updates to existing configurations, select **Report extension configuration warnings** to generate a PDF report that lists the configurations that were changed.
8. Click **OK**.
9. After the configuration is imported, navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Note: `D2_documentset` (also known as Contexts) config types feature the attribute `order_no` which determines the position from left to right where the context appears in D2 Config. In some scenarios, the same `document_set` might have a different `order_no` between merging configurations, and the merged `order_no` might overlap an already imported `d2_documentset` during the import process. In this scenario, the second `d2_documentset` would be pushed to the end of the context list.

Related Topics —

Understanding D2 Configurations, page 161
Backing Up a D2 Configuration, page 161
Restoring a D2 Configuration, page 162
Exporting a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168
Resetting the D2 Configuration, page 169

Running a Report on a Single XML Configuration

You can run a report that shows the details of D2's current XML configuration or a separate XML configuration file that can be imported.

1. Navigate to **File** > **Generate XML specification**.
2. Select the configuration you want to report on. **Current Configuration** or **Import Configuration**. If you select **Import Configuration**, browse to the location of the specification XML file.
3. Click **OK**.

An XML Specification HTML report is generated. To browse through the report, click any of the configuration elements in the report's table of contents to drill down for more detail.

Running a Report on Multiple XML Configurations for Delta or Merge

You can run a report that shows the deltas between two exported XML configuration files, three configuration files with a common ancestor, or D2's current configuration and exported XML configurations. For example, with a three-way compare you could run a report on the current configuration, an original baseline, and a new baseline to determine the differences between the three. You can also optionally create a merged file that can help you create a new configuration.

Note: The delta/merge utility is available for use with XML configurations from Documentum D2 version 4.7 and higher.

1. Navigate to **File** > **Generate XML configuration delta**.
2. Select the configurations you want to compare by choosing a first, second, or third configuration. Select **Current Configuration** or **Import Configuration** and browse to the exported XML configuration file(s).

   Note: If you select a third configuration to compare, you must designate one of the three configurations as a **Common Ancestor**. Select that file from the drop-down at the bottom of the dialog.
3. Select your desired **Output Mode** for the report: **Differences** or **Merge**.
4. Click **OK** to generate your chosen report.
5. Save the file, then open it in your browser for review.

   The **Configuration Diff** report lists all the deltas between your chosen configurations. It only shows items that have been modified between configurations, or only show up in certain configurations. Differences will be indicated with a small colored box next to modified/added attributes and XML content, representing which configuration these items appear in. The ancestor configuration is indicated as a blue box, the edit1 configuration is indicated by a green box, and the edit2 configuration is indicated by a yellow box. You can navigate through the report table of contents, or by clicking the **Next** and **Previous** buttons which will rotate through the modified configurations. Only one configuration will be shown at a time, and it will appear at the bottom of the page.

The **Configuration Merge** report looks very similar to the diff report, except it only includes the configurations that require manual conflict resolution. If the configurations are able to auto merge completely, nothing will be shown in the report table of contents. The **Next Conflict** button scrolls through all of the conflicts that require resolution, and the **Apply Changes** button generates the final merged configuration for saving. If conflicts have not been resolved, the **Apply Changes** action notifies the user and jumps to the next unresolved conflict. As with the diff report, the user can see which configurations each change belongs to by the color box indicators. The merge report might display a scenario where a single radio button pair will be shown. Selecting one or the other will change the content to be merged in the final merged configuration.

Both reports might highlight a scenario where a control has moved within the configuration. These moved controls are highlighted with a red name. To resolve these conflicts, select to remove at least one of the sibling pairs by hovering over the control and clicking the red Remove button.

Note: The user-settings xml config records the date and date-time format as numerical pattern keys, which appear in the delta xml files. For example:

In the configuration type **`d2_user_preferences_config`**, subtype **`d2c_preferences`**, the following pattern might be observed:

`dateformat_datetime`:

Merge Value	D2 Config Value
1	Jun 12, 2017 2:17:03 PM
2	Monday, June 12, 2017, 2:17:03 PM BST

`dateformat_date`:

Merge Value	D2 Config Value
1	Jun 12, 2017
2	2017-06-12

Additionally, there are some cases in the XML export where a Default Value is listed as a blank/empty string where the string is defined as something specific to the config. For example, for **Facets** in **Search** config **Blank** refers to frequency:

`d2_search_config`:

Attribute	Default Value in Merge	Default Value EN
`facet_sort`	BLANK	Frequency

Running configuration management scripts

Three command line utilities are available that allow you to automate configuration management activities on the server where D2 Config has been deployed:

- **`D2ExportConfigXmlUtil`**: Exports configurations in XML format.
- **`D2ImportConfigXmlUtil`**: Imports XML format configurations.

- **D2DeltaConfigXmlUtil**: Reports on the deltas between multiple XML format configuration exports.
- **D2XmlSpecificationUtil**: Creates a configuration export report.

Note: The following import commands are not supported in the **D2ImportConfigXmlUtil** tool:

- Include imported modules' relative matrix switches
- Report extension configuration warning
- Import context before selected context.

1. In a command shell, navigate to the directory where the D2 Config web application has been deployed, and then to the `d2configxml` subdirectory.
2. Run the desired utility:
   - In Windows: **D2xxxConfigXmlUtil.cmd**
   - In Linux: **D2xxxConfigXmlUti.sh**
3. See below for example usage with required and optional parameters. Running a utility with no arguments displays usage help:

Example 12-1. Commands

D2ExportConfigXmlUtil.cmd [-login `superUserLoginName`] [-password `password`] [-docbase `docbase`] [-file_path `filepath`]

```
Required Parameters:
  -login: docbase superuser loginname.
  -password: docbase password for superuser.
  -docbase: docbase name.
  -file_path: pathname of output file

Optional Parameters:
  -app: name of desired application, NONE for no application (default: ALL).
  -noAppEl: include configuration elements that do not have applications,
 T or F (default: T).
  -type: names of desired configuration type elements each separated by a
';' and surrounded by double quotes ex: "x3_widget_config;x3_space_config"
(default: all configuration elements).
```

D2ImportConfigXmlUtil.cmd [-login `superUserLoginName`] [-password `password`] [-docbase `docbase`] [-file_path `filepath`] [-full_import `true|false`] [-reset `true|false`]

```
Required Parameters:
  -login: docbase superuser loginname.
  -password: docbase password for superuser.
  -docbase: docbase name.
  -file_path: pathname of import D2 configuration file
  -full_import: full or custom import - Boolean
  -reset: reset the existing configuration - Boolean (default: false)

Optional Parameters:
  -overwrite: Overwrite the existing configuration - Boolean (default: false).
  -keep_naming_counter: Keep autonaming counters - Boolean (default: false).
  -keep_url_cache: Keep cache URL values - Boolean (default: false).
  -keep_mail_server: Keep mail server URL values - Boolean (default: false).

Module List:
For a custom import, inquire the list of module type which must be imported
followed by the list of module config names.
-module_type "module config name": The module config name have to be between
```

```
quote. A list of name can be put separate by the character '|'.
Example:
-d2_documentset "documentSet name" -d2_workflow_config
"workflow config name 1|workflow config name 2|workflow config name 3"
```

D2DeltaConfigXmlUtil.cmd [-login USERNAME][-password PASSWORD][-docbase DOCBASE][-first FIRST_CONFIG][-second SECOND_CONFIG] [-result RESULT_OUTPUT_PATH]

```
Required Parameters:
  -login: docbase superuser loginname.
  -password: docbase password for superuser.
  -docbase: docbase name.
  -first: First D2 Config XML file Path. Provide string 'current' for current
repo configuration to be used
  -second: Second D2 Config XML file Path.
  -third: Third D2 Config XML file Path
  -ancestor: Common ancestor file for three-way compare file Path
  -result: Result file path
Optional Parameters:
  -locale: The desired language output messages.
  -merge: IS_MERGE_MODE (true/false)
```

D2XmlSpecificationUtil.cmd [-login USERNAME][-password PASSWORD][-docbase DOCBASE][-config CONFIG_PATH][-result RESULT_OUTPUT_PATH]

```
optional params: [-locale LOCALE_STRING]
```

Importing a D2 Configuration Zip Using a Command Line

1. Open a DOS or Linux console.
2. Type the following line:

   java —cp [classpath] com.emc.d2.api.config.batch.D2ConfigImport [-login login_name] [-password password] [-docbase docbase_name] [-config_file file_config_path] [-full_import true|false] [optional parameters] [modules list]

   The following table describes the parameters:

Parameter	Description
classpath	Classpaths contain D2 libraries, DFC libraries, D2-Config\WEB-INF\lib*, and the **dfc.properties** file.
login	Repository connection login
password	Repository connection password
docbase	Repository name
config_file	Configuration file
full_import	Full or custom import based on true or false, respectively
reset	Reset of existing configuration

Parameter	Description
overwrite	Overwrite the existing configuration (default: false)
keep_naming_counter	Keep autonaming counters (default: false)
keep_url_cache	Keep cache URL values (default: false)
keep_mail_server	Keep mail server URL values (default: false)
help	Show a help message with a list of parameters

Related Topics —

Understanding D2 Configurations, page 161
Backing Up a D2 Configuration, page 161
Restoring a D2 Configuration, page 162
Exporting a D2 Configuration, page 163
Importing a D2 Configuration, page 163
Resetting the D2 Configuration, page 169

Resetting the D2 Configuration

You can erase the current configuration and revert to default settings.

1. Navigate to **File** > **Reset configuration** from the menu bar.
2. Click **OK**.

Related Topics —

Understanding D2 Configurations, page 161
Backing Up a D2 Configuration, page 161
Restoring a D2 Configuration, page 162
Exporting a D2 Configuration, page 163
Importing a D2 Configuration, page 163
Importing a D2 Configuration Zip Using a Command Line, page 168

Chapter 13

Configuring D2 Client

Configuring a Gadget Server for D2 Client Widgets

You can configure the a gadgets server for external widgets. For example, Apache Shindig (http://shindig.apache.org) functions as a gadget server.

1. Make sure you have a gadget server installed and configured.
2. Navigate to **Widget view** > **Options** from the menu bar.
3. Type the server URL of the gadget server in **Gadget server url**.
4. Click **Save**.

Related Topics —

Configuring an External Widget, page 187

Configuring a D2 Client Workspace

1. Navigate to **Widget view** > **Workspace** from the menu bar.
2. Click **New** to create a workspace.

   If you want to create a child workspace that inherits the properties of an existing workspace, select a workspace and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this workspace applies. For example, adding the **QA** application would cause the workspace to only apply to matching quality assurance cases.
Label `<language>`	Type a label.
Description `<language>`	Type a description.

Field	Description
Workspace structure file	Select the workspace XML to use as this template configuration.
Preview file	Select the preview image, if any, to use as a thumbnail so the end user has an idea of what the workspace looks like. If you do not select or import a thumbnail, D2 automatically generates a thumbnail.
Default theme	Select the default color theme used for the workspace. You must select a theme. Define the default theme in the global registry docbase so that it is applied to the login screen and workspace gallery. Initially, the docbase settings are not retrieved and the theme does not display (please verify if this is correct). Ensure that the default theme is specified both for the global registry docbase setting and for retrieval. If multiple themes are checked in the default column in D2-Config, the theme from the first row is applied, by default.

4. Select whether the workspace uses multiple views. If you select **Multiple view**, use the list controls to add, remove, or reorder workspace views. For each view:
   a. Type the label for the view in **View <*language*>**.
   b. Click **Browse**, select a workspace XML, then click **OK**.
   c. Click **View** to preview the workspace template.
5. Select **Lock workspace layout** to prevent end users from modifying the widgets contained in a workspace. Select this option to prevent end users from removing widgets that are necessary for context-sensitive widget operations. For example, you can configure the Locate widget so that when an end user selects content within the Locate widget, D2 makes the Doclist widget visible.
6. To configure one or more events that cause D2 to set a workspace view to active:
   a. Use the list controls for **Add focus events for the selected workspace view** to add, remove, or reorder D2 actions and events. List of Widget Communication Channels contains a list and description of the events, actions, and their parameters.
   b. Select an event to configure its **Additional event parameters**.

      For example, if you add and select the event **`D2_EVENT_WIDGET_FOCUS`** to the **`TasksWidget`**, you can type the parameter **`widgetType==BrowserWidget`**. When the end user selects the Document browser widget, D2 makes the selected workspace view visible and active, then sets focus to the Document browser widget if it is found in the new view.

      You can also type the parameter **`config==`** and set the value to the **Name** of the widget. You can use this parameter to differentiate between instances of the same widget. For example, you can create a Document browser widget with the name **`Word document browser`** and another Documentum browser widget with the name **`PDF document browser`**. If you use

widgetType==BrowserWidget D2 triggers the focus event for both widgets. If you use **config==”Word document browser”** you can specify the specified widget.

7. Click **Save**.

Related Topics —

Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178
Configuring a D2 Client Theme, page 179
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198
Configuring Icons and Text Color for Content Properties in List Widgets, page 200
Refreshing and Reloading D2, page 206
Configuring Access to Administration Widgets in D2 Client, page 205

Designing a D2 Client Workspace

There is no user interface to create a workspace layout. It must be done directly by editing a user-created XML file.

The workspace XML must contain the following object:

```
<?xml version="1.0" encoding="UTF-8"?>

<root xsi:noNameSpaceSchemaLocation="SpaceSchema.xsd" xmlns:xsi="http:/
/www.w3.org/2001/XMLSchema-instance">

<space>

<border-layout-container>

</space>

</root>
```

There must only be one **<root>** tag at the beginning of the file, which contains one **<space>** tag.

The **<space>** tag requires at least one **<border-layout-container>**.

All containers may contain itself, other containers, or widgets. The following table lists the available containers and possible sub components:

Container	Subcomponents
Border layout container	Containers and widgets
Tab container	Widgets

Container	Subcomponents
Accordion container	Widgets
Vertical and horizontal containers	Containers and widgets

Related Topics —

Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178
Configuring a D2 Client Workspace, page 171
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178

Understanding the Border Layout Container

The border layout container is the main frame of the workspace. Border layout containers are composed of data nodes and content nodes.

Data nodes are exclusive to border layout containers and define the location and size of container elements. The following table describes the attributes you can use:

Attribute	Description
layoutregion	Defines the location of a container element. • **NORTH** for north (top of the container) • **SOUTH** for south (bottom of the container) • **EAST** for east (right of the container) • **WEST** for west (left of the container) • **CENTER** for center (middle of the container).
size	Defines the default container size. You can define sizes in two ways, and D2 automatically detects the type. If you type a value greater than 1, the value is considered an absolute size in pixels. For example, D2 considers **100** to be 100 pixels. If you type a value less than 1, the value is considered a relative size. For example, D2 considers **0.5** to be 50%, or half the size of the window. **Note:** The **maxSize** and **minSize** attributes are no longer applicable during resizing the container.
split	Determines enabling or disabling of resizing of the container. Set **split** to **TRUE** to enable resizing of the container. Set **split** to **FALSE** (default value) to disable resizing of the container.

There must be a content node for each data node, and they define the elements used in a container. If the element is a widget, you must specify the name of the widget. If the element is a container, you must specify the name of the container. The number of elements that can be defined is limited to 5 for display reasons.

The following image contains an example code of a border layout container with data and content nodes:

```
<?xml version="1.0" encoding="UTF-8"?>
- <root xsi:noNamespaceSchemaLocation="SpaceSchema.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  - <space>
    - <border-layout-container>
      - <data>
          <border-layout-data split="true" layoutregion="CENTER" />
          <border-layout-data split="true" layoutregion="EAST" size="480"/>
          <border-layout-data split="true" layoutregion="WEST" size="260"/>
        </data>
      - <content>
        - <tab-container>
          - <content>
              <widget config="doclist"/>
              <widget config="docgallery"/>
            </content>
          </tab-container>
        - <border-layout-container>
          - <data>
              <border-layout-data split="false" layoutregion="NORTH" size="100"/>
              <border-layout-data split="false" layoutregion="CENTER"/>
            </data>
          - <content>
              <widget config="quicksearch"/>
            - <accordion-container>
              - <content>
                  <widget config="locations"/>
                  <widget config="versions"/>
                  <widget config="renditions"/>
                  <widget config="relations"/>
                  <widget config="audits"/>
                </content>
              </accordion-container>
            </content>
          </border-layout-container>
          <widget config="browser"/>
        </content>
      </border-layout-container>
  </space>
</root>
```

Related Topics —

Designing a D2 Client Workspace, page 173
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177

Understanding the Horizontal and Vertical Containers, page 178
Configuring a D2 Client Workspace, page 171
Designing a D2 Client Workspace, page 173
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178

Understanding the Tab Container

The tab container is a type of horizontal layout with tab items organized horizontally.

Tab containers contain a single content node. Add a widget to the layout by entering the name of the widget in the **<widget config>** tag. There is no limit to the number of widgets you can put in a tab container. You do not need to define a size, as the tab container uses the size as determined by its parent container.

The following image contains an example of a tab container:

```
- <tab-container>
    - <content>
          <widget config="doclist"/>
          <widget config="docgallery"/>
      </content>
  </tab-container>
```

Related Topics —

Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178
Configuring a D2 Client Workspace, page 171
Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Accordion Container, page 177
Understanding the Horizontal and Vertical Containers, page 178

Understanding the Accordion Container

The accordion container is a type of vertical layout with tab items organized vertically.

Accordion containers contain a single content node. Add a widget to the layout by entering the name of the widget in the **<widget config>** tag. There is no limit to the number of widgets you can put in an accordion container. You do not need to define a size, as the accordion container uses the size as determined by its parent container.

The following image contains an example of a accordion container:

```
- <accordion-container>
    - <content>
        <widget config="locations"/>
        <widget config="versions"/>
        <widget config="renditions"/>
        <widget config="relations"/>
        <widget config="audits"/>
      </content>
  </accordion-container>
</content>
```

Related Topics —

Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Horizontal and Vertical Containers, page 178
Configuring a D2 Client Workspace, page 171
Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Horizontal and Vertical Containers, page 178

Understanding the Horizontal and Vertical Containers

Use horizontal and vertical containers to organize elements horizontally and vertically, respectively.

Horizontal and vertical containers can contain containers and widgets, which are placed in a content node. Resizing is disabled for horizontal and vertical containers.

The following image contains an example of a horizontal container:

```
- <horizontal-container>
    - <content>
        <widget config="browser"/>
        <widget config="doclist"/>
      </content>
  </horizontal-container>
```

The following image contains an example of a vertical container:

```
- <vertical-container>
    - <content>
        <widget config="taskfolders"/>
        <widget config="tasks"/>
      </content>
  </vertical-container>
```

Related Topics —

Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177
Configuring a D2 Client Workspace, page 171
Designing a D2 Client Workspace, page 173
Understanding the Border Layout Container, page 174
Understanding the Tab Container, page 177
Understanding the Accordion Container, page 177

Configuring a D2 Client Theme

You can configure color themes that end users can select and use on their D2 Client workspaces. You can define the colors of the background, logo, borders, and so on.

This feature is especially useful in a multi-environment (development/testing/production). You can create three themes, one for each environment. For example, the development environment can be red based, testing can be green based, and production can be D2 default based; all within a single D2 Config. This allows for deploying the same application to all environments, and then simply choosing the appropriate theme for the environment, instead of deploying the application and then editing it for each environment.

1. Navigate to **Widget view** > **Theme** from the menu bar.
2. Click **New** to create a theme.

   If you want to create a child theme that inherits the properties of an existing theme, select a theme and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this theme applies. For example, adding the **QA** application would cause the theme to only apply to matching quality assurance cases.
Label `<language>`	Type a label.

4. Configure the application header as described in the following table:

Field	Description
Logo	Select a logo from the list box. If you want to import a new logo, click **Browse** and fill out the **Import** dialog box. Use an image with a maximum dimension of 250 pixels width by 50 pixels height.
Background	Select a background color using the **Color selection** dialog box.
Normal	Select a color for the menu icons, labels, and buttons in the normal state using the **Color selection** dialog box.
Hover	Select a color for the menu icons, labels, and buttons for when an end user mouses over the menu using the **Color selection** dialog box.

5. Configure the workspace tabs as described in the following table:

Field	Description
Tab label	Select a color for the workspace tab label and workspace menu button using the **Color selection** dialog box.
Border	Select a color for the horizontal border below the workspace tabs using the **Color selection** dialog box.

6. Configure the widget tabs, borders, and item selection as described in the following table:

Field	Description
Tab label - Active	Select a color for the tab label, menu button, and button label for an active widget using the **Color selection** dialog box.
Tab label - Inactive	Select a color for the tab label and menu button for an inactive widget using the **Color selection** dialog box.
Tab background - Active	Select a color for the tab background and buttons for an active widget using the **Color selection** dialog box.
Tab background - Inactive	Select a color for the tab background for an inactive widget using the **Color selection** dialog box.
Use transparent tab background	Select this option to alter the theme to use transparent widget tabs and a larger tab font.

Field	Description
Selected Item - Active	Select a background color for a selected item in a grid, menu, list, and tree for an active widget using the **Color selection** dialog box. This color does not apply to the text color of the selected item. Depending on the color selected, D2 sets the text color to black or white for visibility.
Selected Item - Inactive	Select a background color for a selected item in a grid, menu, list, and tree for an inactive widget using the **Color selection** dialog box. This color does not apply to the text color of the selected item. Depending on the color selected, D2 sets the text color to black or white for visibility.
Border - Active	Select a color for the panel border for an active widget using the **Color selection** dialog box.

7. Configure the application background (workspace and application frame) as described in the following table:

Field	Description
Single color	Select this option to use a solid color background. Select a color using the **Color selection** dialog box.
Gradient	Select this option to use a gradient color background. Select a **Start color** and an **End color** for the gradient using the **Color selection** dialog box.
Image	Select this option to use a background image. Select a background image from the list box. If you want to import a new background image, click **Browse** and fill out the **Import** dialog box.
Use white dialog background	Select this option if you want dialog boxes to use a white background. If you do not select this option, dialog boxes use the application background.

8. Click **Save**.

Related Topics —

Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198
Configuring Icons and Text Color for Content Properties in List Widgets, page 200

Configuring an Internal Widget

Internal widgets are user interface components used to display internal repository information.

1. Navigate to **Widget view** > **Widget** from the menu bar.
2. Click **New** to create a widget.

   If you want to create a child widget that inherits the properties of an existing widget, select a widget and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this widget applies. For example, adding the **QA** application would cause the widget to only apply to matching quality assurance cases.
Label `<language>`	Type a label.
Description `<language>`	Type a description.
Widget type	Select the widget type from the list box containing internal widgets. List of Widgets contains more information about the widgets.
Preview file	Select the preview image to use as a thumbnail preview. If you do not select or import a thumbnail, D2 uses a default image.

4. You can configure a customized set of default columns for a selected widget.

   Note: You can only configure the widgets that allow users to customize column preferences in the D2 Client. This includes all content widgets such as Document List, Favorites, Checkout, Recycle Bin, Locations, Versions, Renditions, Relations, Virtual Document, Virtual Document Snapshot, Publication, Workflow Task List, Task Attachment, and Thumbnails Gallery widgets. Rest of the widgets do not allow column configuration.

   a. Select the **Customize default widget columns** to change the standard column configuration.

b. Select the **Type** to list all the properties of the selected document type.

c. Use the list controls to add, remove, or reorder the properties of the default columns.

You can click the **Restore Default Columns** button to reset the column configuration to the original configuration for the selected widget type.

d. Select the **Apply default repository content assistance columns from this widget** to show the columns from the selected widget in the content assistance dialog.

Note: Workflow document and attachment picker will honor doclist column selection only if **Apply default repository content assistance columns from this widget** is checked in the widget configuration. If more than one widgets with this checkbox checked are mapped in the configuration matrix, only the first widget in the matrix will be used to show the columns in the content assistance dialog.

Note: The administrator should also add these default column properties to the **Display Configuration** to avoid any issues during column customization in the D2 Client. For example, if a user removes a column that is not part of the **Display Configuration**, that column cannot be restored.

To update the column types for a list of preferences object, with or without default recreation, run **`D2JobPreferencesUpdate`** job. For more information, refer to Default Column Preferences for D2 Client, page 204.

5. You can add and configure events that cause D2 to set a widget to active:

a. Use the list controls for **Add focus events** to add, remove, or reorder D2 actions and events. List of Widget Communication Channels contains a list and description of the events, actions, and their parameters.

b. Select an event to configure its **Additional event parameters**.

For example, you can add and select the event **`D2_EVENT_WIDGET_FOCUS`** to a **`TasksWidget`** and set the parameter and value **`widgetType==TaskFoldersWidget`**. When the end user selects the Tasks browser widget, D2 makes the Workflow tasks widget visible if the widget exists in the current workspace view.

To differentiate between instances of the same widget, use the parameter **`config==`** and set the value to the **Name** of the widget. For example, you can create a Document browser widget with the name **`Word document browser`** and another Documentum browser widget with the name **`PDF document browser`**. If you use **`widgetType==BrowserWidget`** D2 triggers the focus event for both widgets. If you use **`config=="Word document browser"`** you can specify the specified widget.

6. To configure a search query form widget, select a configured query form from the **Query form** list box.

Each instance of the search query form widget can only pertain to a single type of query form. Use a naming convention that makes it clear to both administrators and end users that the widget is configured for a specific query form. For example, you can use the widget name **`SQF QA General Documents`** to indicate that the widget uses the QA General Documents query form.

7. If you are configuring a **`ThumbnailsWidget`** or a **`DoclistWidget`**, fill out the **Parameters** fields are described in the following table:

Field	Description
Enable breadcrumb	Select to show a container path breadcrumb at the top of the widget. **Note:** If a workspace does not include the **`repository browser widget`**, use a **`DoclistWidget`** with **Enable breadcrumb** option.
Do not display search bar	Select to hide search toolbar from the Doclist, DocGallery, and SearchWidget widgets.
Content type	Select **DQL** to configure the widget to show a list of content based on a DQL query.

Field	Description
DQL Query	Type the DQL query the widget uses for retrieving its list of content. You can use the **$value** wildcards: • **$value(r_object_id)**: Add the selected content. • **$value(all)**: Add filtered content. You can use **$value(all)** when the widget shares a context with a filter configuration that is set to show all versions. D2 then finds and replaces **$value(all)** with **(all)** at runtime. Therefore, you must place **$value(all)** after the type in the DQL query. For example: **from <type> $value(all)** • **$value(default_attributes)**: Add the attributes you want shown as columns. • **$value(preferences_attributes)**: Add user preference attributes. The DQL generated by **$value (preferences_attributes)** includes a preceding comma, for example **,object_name,a_status,r_modify _date,r_modifier** As a result, **$value(preferences _attributes)** must never: • Be the only attribute in the D2 DQL query. • Be the first attribute in the D2 DQL query. • Have a comma between the preceding attribute and itself in the D2 DQL query. If the DQL query is invalid, D2 ignores the query and does not show an error message to indicate a problem with the query. The widget shows an empty list of content. **Note:** If you use the custom attribute in the query, it is mandatory to use **r_object_type** in DQL select query. **Note:** If you want DQL search results in a Query form on a Doclist to engage with other widgets, you will need to add **r_object_id** to the query in DQL for Query form or check **Add mandatory attributes in hidden mode**.

Field	Description
Override event subscribe	Select to override the events for which the widget refreshes.
Subscription events	Use the list controls to add or remove the events that trigger the widget to refresh.
Override event publish	Select to override the events for which the widget outputs information.
Loading events	Use the list controls to add or remove the events that trigger when the widget loads.
Select events	Use the list controls to add or remove the events that trigger when the end user selects content. Make sure the event matches the content type being shown by the widget. For example, if you configure the widget to show folders, you must use **D2_EVENT_SELECT_FOLDER** or the widget shows an error. If you configure the widget to show a mix of content, use **D2_EVENT_SELECT_OBJECT** or create a custom event to work with the widget.
Double-click events	Use the list controls to add or remove the events that trigger when the end user double-clicks content.

8. If you are configuring a **BrowserWidget**, type the path to a cabinet or folder in the **Starting path** field. The end user can only browse the entered cabinet or folder when using the widget.
9. If you are configuring a **PropertiesWidget**:
   a. To open properties in edit mode instead of view mode, select **Enable auto edit**.
   b. To broadcast a **D2_ACTION_REFRESH_DOCUMENT** event, select **Enable refresh**. Widgets that listen to the refresh event do not automatically change locations even if D2 moves the content to a different folder based on the updated property values input by the end user.

      If you do not select this option, the widget broadcasts the more resource-consuming **D2_ACTION_LOCATE_OBJECT** event. If D2 moves the content to a different folder based on the updated property values input by the end user, widgets that listen to the locate event automatically move to the new location of the content.
10. If you are configuring a **FavoritesWidget**, define the **Folder selection** and **Double-click on folder** parameters by selecting the desired behavior for each:
    - **Open Folder**: Opens the target folder.
    - **Locate Folder**: Sends a locate event for other widgets to act on.
    - **Open and Locate Folder**: Opens the target folder and sends a locate event.
11. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198
Configuring Icons and Text Color for Content Properties in List Widgets, page 200

Configuring an External Widget

External widgets are user interface components used to display external web information using a third-party web application. You can configure external widgets to communicate with content properties.

1. Navigate to **Widget view** > **Widget** from the menu bar.
2. Click **New** to create a widget.

   If you want to create a child widget that inherits the properties of an existing widget, select a widget and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Make sure a gadget server is configured in the Widget View options. Configuring a Gadget Server for D2 Client Widgets contains further instructions.
4. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description for the widget in D2 Config.
Applications	Add or remove the applications to which this widget applies. For example, adding the **QA** application would cause the widget to only apply to matching quality assurance cases.
Label `<language>`	Type a label.
Description `<language>`	Type a description for the widget to appear in the D2 Client Widget Gallery.
Widget type	Select **ExternalWidget**.

Field	Description
Widget url	Type either a static or dynamic URL. You can use **$GADGET_SERVER** as a keyword for the gadget server URL set in widget options. For example, **$GADGET_SERVER/gadgets/ifr?url=http://www.labpixies.com/campaigns/weather/weather.xml/**
Bidirectional communication	Select if the widget communicates with the portal using an Open Ajax Hub. **Note:** : Ensure that you specify the full URL for the external widget to work on any browser.
Communication channel	Use the list controls to select a communication channel for transmitting information between widgets and repositories. List of Widget Communications Channels contains further information.
Preview file	Select the preview image, if any, to use as a thumbnail so the end user has an idea of what the widget looks like. If you do not select or import a thumbnail, D2 uses a default image.
Unload Protect	Users can set or clear unload protect attribute in D2-Config. If you set unload protect attribute to TRUE, then D2 blocks certain operations that unload the IFRAME on external widgets, and loses the state. The region collapse and widget drag or drop options are disabled. The option to drag the tabs is disabled for external widgets. However, you can drag the other tabs in the same container. The option to collapse the border layout is disabled. If the user attempts to collapse a region that contains a widget that is enabled with unload protect, then the region displays “Operation is blocked by an external Widget” error.

5. Click **Save**.

Related Topics —

Configuring a Gadget Server for D2 Client Widgets, page 171
Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171

Configuring an Internal Widget, page 182
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198
Configuring Icons and Text Color for Content Properties in List Widgets, page 200

Understanding the Documentum Content Transfer Framework

The java-free Content Transfer Framework (CTF) has been developed to provide rich content transfer features in D2 without using java applets. The java applet and thin client as content transfer operation modes are still available. The framework is installed with D2 on the application server. A browser-specific extension and the CTF Native Application is installed on end user machines at first login. The available modes are:

- **Java**: sets a java applet as the content transfer plugin.
- **None**: sets a "thin client" as the content transfer plugin. This is limited native functionality that is available through the client browser.
- **CTF**: sets the Documentum Client Manager as the content transfer plugin. This is a customized plugin created for supported client browsers.

You can define which browser modes are available to clients by configuring **`settings.properties`**. See *Configuring D2 Client* in the *Installation Guide* for more information. If you do not define mode(s) in **`settings.properties`**, Java will be the default mode for all clients. On individual clients, you can check which mode is active in **Info** > **User Settings**.

See Documentum Content Transfer Framework supported feature list, page 190 for more information on the content transfer features that are supported in each mode.

Note: Microsoft Internet Explorer browser is supported in Documentum Client Manager mode, but to use it, each client needs to disable **Enable Enhanced Protected Mode** in **Control Panel > Internet Options > Advanced**.

Documentum Content Transfer Framework supported feature list

D2 Action	Java applet behavior	Thin client behavior	Documentum Client Manager browser extension (ctf) behavior
User experience during file edit and check-in	When using the applet, D2 relies upon a pre-set directory for checkout, seamlessly downloads a file to that directory, and opens it for editing. On check-in, D2 looks in the same directory and uploads the file without prompting the user to find it.	D2 uses standard browser file download, so a user is typically prompted to open or save the file. The exact behavior depends on the browser. During check-in, the user is prompted to locate the file before the upload.	Supported in Chrome Supported in Firefox Supported in Internet Explorer Supported in Safari
Folder Export	Supports	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer Supported in Safari
Copy link in clipboard	Supports copying HTTP links to content into the desktop clipboard	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer Supported in Safari
Native annotations	Supported in Chrome Supported in Firefox Supported in Internet Explorer	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer
File comparison for MS Office documents	Supported in Chrome Supported in Firefox Supported in Internet Explorer	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer

D2 Action	Java applet behavior	Thin client behavior	Documentum Client Manager browser extension (ctf) behavior
Folder Import	Imports a folder structure including the folder's content and sub-folders from the local file system into a repository.	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer Supported in Safari
Folder drag-in from desktop	Supports	No support	No support
File drag-in from desktop	Supported using java applet integration with Windows desktop. Since there is no such support for the Mac desktop, however, Safari/Mac OSX is supported through standard HTML5 thin client drag and drop and file upload functionality.	Supported through standard HTML5 thin client drag and drop and file upload functionality.	Supported through standard HTML5 thin client drag and drop and file upload functionality, not through CTF. Browser extensions cannot be used to intercept drop operations on a web page.
File drag-out to desktop	No support	No support	Supported in Internet Explorer (through ActiveX)
File drag-in from MS Outlook (emails, emails with attachments, or just attachments)	Supported in Chrome Supported in Firefox Supported in Internet Explorer Choose the email item, drag the attachment into the D2 application.	No support	Supported in Chrome Supported in Firefox Supported in Internet Explorer Select the email item, click the attachment in the email, then drag the attachment from the email into the D2 application.
File compression during content transfer	Supports	No support for upload. Support for download via D2 app server, but not when transfer uses ACS or BOCS.	No support

D2 Action	Java applet behavior	Thin client behavior	Documentum Client Manager browser extension (ctf) behavior
D2Link for Advanced Publishing	Supports	No support	No support
Parallel Streaming Download from ACS/BOCS	Supports	No support	Supports
Bulk import of files with supporting XML files to populate properties	Supports	No support	Supports

Configuring D2 Client Menus

You can modify the position, label, display conditions, and contents of the menu in D2 Client.

Note: The **Cut**, **Copy**, and **Paste** menus are internally hidden by default and cannot be made visible on the UI. If you need to have **Cut**, **Copy**, and **Paste** menu items visible on the **Main** menu "`Content`" in the D2 Client, you must create these new menu entries and remove the existing ones.

1. Navigate to **Go to** > **Menu D2** from the menu bar to configure the following menus for D2 Client:
   - Menu bar (New, Import, Content, User, Info)
   - Right-click on Location widget
   - Right-click on Publishing Components widget
   - Right-click on Publishing Overlays widget
   - Right-click on Publishing Details widget
   - Right-click on Relation widget
   - Right-click on Rendition widget
   - Right-click on Snapshots widget
   - Right-click on Version widget
   - Right-click on Task detail widget
   - Right-click on a list widget
   - Right-click on Admin Dictionary widget
   - Right-click on Admin Group widget
   - Right-click on Admin Taxonomy widget
   - Right-click on Admin User widget
   - Right-click on Delegation widget

- Right-click on Distribution widget
- Right-click on TOC Editor dialog
- Right-click on Multisearch widget
- Right-click on Publishing Manager widget
- Right-click on Publishing Editor widget
- Right-click on SaveSearch category dialog
- Right-click on Tasks list widget
- Right-click on Task folder widget
- Right-click on Search widget
- Right-click on VD widget
- Right-click on Snapshot in VD widget
- Right-click on Workflow widget
- Right-click on Recycle Bin Admin widget
- Right-click on Recycle Bin widget

2. Click **New** to create a menu.

   If you want to create a child menu that inherits the properties of an existing menu, select a menu and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this menu applies. For example, adding the **QA** application would cause the menu to only apply to matching quality assurance cases.

4. You can add menu buttons as described in the following table:

Action	Description
Add separator	Add a line to partition the menu.
Add menu item	Add a menu entry.
Add sub-menu item	Add a menu as a submenu that an end user can view by expanding the parent menu entry.
Add dynamic menu item	Add a menu entry that executes a Java class. You can only add dynamic menu items to context menus.

5. Configure menu entries:
   a. Configure the appearance of the selected menu entry as described in the following table:

Field	Description
Hide this entry	Select to hide the menu items of the specified application.
Label `<language>`	Type a label.
Shortcut	Select a shortcut key for accessing the menu entry. Make sure to validate shortcuts by testing the key in D2 Client, as D2 Config does not check for conflicting shortcuts.

   b. Configure the actions assigned to the selected menu entry and relevant parameters as described in the following table:

Field	Description
Action	Select a Javascript action for the button to perform. Based on the action selected, a list of associated parameters is populated. You need to select a value for these parameters to perform the selected action. For example, selecting **`Publish event : "$value(event)"`** action populates the **Event** parameter, and you need to select an event (such as **`D2_ACTION_COPY_LINK_IN_CLIPBOARD_LOCATE`**) to perform the selected action.
Message	Type additional parameters to be read by services. This field is only useful for service customizations.
Sub menu	Select a menu to be shown as a submenu. For example, selecting **`MenuContextAdminTaxonomy`** from the submenu list box adds the most recent version of the menu for **Right-click on Admin Taxonomy widget** as a submenu.
Java class	Select the Java class to execute if the menu item is dynamic.

Field	Description
Locate content and refresh state upon action	When you are configuring a Lifecycle action right-click menu, set this flag to control if a locate action is performed along with the user indicated action. Default is **`True`**. Setting this flag (along with **Refresh state** and **Refresh widget** to **`True`**) to **`False`** allows the user to remain in the current location with focus on the last object selected in the doclist. The status of the document also remains unchanged or is not refreshed.
Virtual Document Handling	Select the Virtual Document root and descendant check-in behavior: • **Root**: default behavior where only the root document is checked in. • **Root & Descendants**: automatic check in of the root and all of its descendants without prompting the user. • Both **Root** and **Root & Descendants** checked: Virtual Document check in dialog appears to the user, allowing them to select their preferred check-in flow.

c. Configure the display conditions of the selected menu entry as described in the following table:

Field	Description
Display conditions	Use display conditions to define the rules and scope of D2 shows the menu entry. Click **Browse** to add display conditions. Click **Delete** to remove display conditions. Use the list controls to move conditions up and down the list.
Display disabled instead of hidden	Select whether to show the menu entry as grayed out or hide the menu entry from view.
Invert the condition	Select to invert the condition. For example, you want to have a particular cabinet shown to everyone except for users who have the consumer role. You set the display condition **`user has client capability equals consumer`** and then select to invert. The display condition then changes to **`user has not client capability equals consumer`**

d. If you select a display condition that uses a DQL query, fill out the three fields as described in the following table:

Field	Description
Condition valid on	Select whether the DQL query applies: • If at least one selected content fits the condition. • If all selected content fit the condition.
Property	Select the property for the DQL query.
Value	Type the parts of the DQL query after the **`select`** and **`from`** conditions. The DQL query must use the wildcard **`$value(r_object_id)`** to refer to the selected object or objects. For example: **`dm_document (all) where r_object_id='$value(r_object_id)' and a_status='Draft'`** D2 automatically generates the **`select`** and **`from`** parts of the DQL query.

6. Drag and drop menu items to reorder.
7. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198
Configuring Icons and Text Color for Content Properties in List Widgets, page 200

Dynamic Menu Config Java Class Reference

Java class name(s)	Summary
MenuToolsMassUpdate	Builds up XMLNodes representing each potential item retrieved in the query. When one of the dynamic menu items is selected, **`massUpdate(objectName)`** is executed.
MenuDocumentD2LifeCycleNextStates	Provides a dynamic menu option listing and allows action on next state names, confirmations, dialogs, actions, and events for each next state name derived from the current context.
MenuDocumentD2LifeCycleAttach	Provides dynamic menu items labeled for each Applicable Entry State name. The action attribute is set to perform an **`operationD2LifeCycle`** specifying the transition start config string and the state name.
MenuDocumentD2Workflow	Creates a dynamic menu with entries representing each **`D2WorkflowConfig`** object common to the set of objects represented by the current context. Each menu item is composed of a label representing the object's label attribute (or, if there is no label, an alternate subject or object name is used) and an action attribute that performs **`launchD2Workflow(<current item's object name>)`**
MenuDocumentD2Distribution	Creates a dynamic menu with one child item for each config name that is common to all objects known to the supplied context. Sets the menu item label to the label associated with the config name and sets the action to be performed to **`prepareDistribution(<config name>)`**

Java class name(s)	Summary
MenuDocumentLifeCycleAttach	Queries the **dm_policy** table to select object **name**, **object_id**, **subject**, and **definition_state**. Creates a dynamic menu with one child node per row returned by the query, setting the menu label to the **object_name**, the status to the subject, and the action to **operationLifeCycle('Attach', <object_id>)** unless the definition_state is not equal to 2, in which case, the menu item is marked as disabled.
MenuContextTasksList	Creates a dynamic menu with a single child menu based on a found **IDfQueueItem** in the supplied context. Sets the action and label attributes consistent with discovered workflow actions, either FORWARD or REJECT.
MenuDocumentC2Export MenuDocumentC2Print MenuDocumentC2View	Creates a dynamic menu with child items for each found, valid config menu item from the supplied context, for the specified config type (Export, Print, View). The child menu items have an incrementing ID attribute like **genid_x** and a label attribute derived from the config item's label string. The Action attribute is derived from the relevant action object (Export, Print, View) combined with the config name resulting in an action specific to the config type.

Configuring Custom Icons for Rendition Formats and Content Types

You can configure custom icons for renditions formats and content types in the list and thumbnail widgets. If D2 finds that the configuration for the content type and rendition format conflicts for given content, D2 uses the configuration for the content type.

You can create a custom icon configuration with or without property styling. Configuring Icons and Text Color for Content Properties in List Widgets contains more information on configuring property styles.

1. Navigate to **Widget view** > **Graphics** from the menu bar.
2. Click **New** to create a graphics configuration.

   Note: In the configuration matrix, you can configure graphics only for group or user contexts.

   If you want to create a child graphics configuration that inherits the properties of an existing graphics configuration, select a graphics configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Description	Type a description.
Applications	Add or remove the applications to which this graphics configuration applies. For example, adding the **QA** application would cause the graphics configuration to only apply to matching quality assurance cases.

4. Use the list controls to add, remove, and reorder rendition formats. D2 gives icon priority to lower rows. Fill out the row for each rendition as described in the following table:

Field	Description
Format Name	Select the rendition format from the list box.
List Icons	Select an icon for list widgets from the list box. If you want to import a new icon, click **Browse** and fill out the **Import** dialog box. Use a 16x16 pixel image at 72 DPI.
Thumbnail Icons	Select an icon for thumbnail widgets from the list box. If you want to import a new icon, click **Browse** and fill out the **Import** dialog box. Use a 64x64 pixel image at 72 DPI.

5. Use the list controls to add, remove, and reorder content types. D2 gives icon priority to lower rows. Fill out the row for each content type as described in the following table:

Field	Description
Type Name	Select the type from the list box.
List Icons	Select an icon for list widgets from the list box. If you want to import a new icon, click **Browse** and fill out the **Import** dialog box. Use a 16x16 pixel image at 72 DPI.
Thumbnail Icons	Select an icon for thumbnail widgets from the list box. If you want to import a new icon, click **Browse** and fill out the **Import** dialog box. Use a 64x64 pixel image at 72 DPI.

6. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179

Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Icons and Text Color for Content Properties in List Widgets, page 200

Configuring Icons and Text Color for Content Properties in List Widgets

You can configure an icon and color-coding for content properties in the columns of list widgets. For example, you can add an icon to the document status property and change the text color to show blue for **`Draft`**, green for **`Accepted`**, and red for **`Rejected`**.

You can configure property styling with or without custom icon configurations. Configuring Custom Icons for Rendition Formats and Document Types contains more information on custom icon configurations.

1. Navigate to **Widget view** > **Graphics** from the menu bar.
2. Click **New** to create a property style.

   If you want to create a child property style that inherits the properties of an existing property style, select a property style and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Description	Type a description.
Applications	Add or remove the applications to which this property style applies. For example, adding the **`QA`** application would cause the property style to only apply to matching quality assurance cases.

4. Use the list controls to add and remove properties. Fill out the row for each property as described in the following table:

Field	Description
Property	Type the name of the property.
Value	Type the value of the property. For example, you can type **a_status** in the **Property** and **Draft** in the **Value** to configure a style for when D2 sets the lifecycle state of a document to **Draft**.
Icon	Select an icon from the list box. If you want to import a new icon, click **Browse** and fill out the **Import** dialog box. Use a 16x16 pixel image at 72 DPI. For example, if you configure the **Draft** value to show a pencil icon, the document status column shows the icon followed by the value.
Icon only	Select this option to replace the property value with the icon. For example, if you configure the **Draft** value to show a pencil icon and select **Icon only**, the document status column only shows the icon. The end user can still filter and search content based on the property because the option hides but does not remove the value.
Text Color	Select the color of the property text using the **Color selection** dialog box. You do not need to select a color if you selected **Icon only** because D2 does not show the value.

5. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
Configuring D2 Client Menus, page 192
Configuring D2 Client Column Preferences, page 203
Configuring Display Filters, page 202
Configuring Custom Icons for Rendition Formats and Content Types, page 198

Configuring Display Filters

You can create and configure display filters that end users can select in D2 Client. Display filters affect the content shown in the Document list widget. For example, you can create a quality assurance filter that only shows content labeled with the keyword QA. You can create a quality assurance Draft filter that only shows content labeled with the keyword QA with the status Draft.

Note: The filter configuration is limited to the basic Document list widget and is not fully implemented for other extended Documentation list widgets such as the Favorites, Versions, or Locations widgets.

1. Navigate to **Go to** > **Filter** from the menu bar.
2. Click **New** to create a display filter.

   If you want to create a child display filter that inherits the properties of an existing display filter, select a display filter and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this display filter applies. For example, adding the **QA** application would cause the display filter to only apply to matching quality assurance cases.
Label `<language>`	Type a label.
Default	Select to make the filter the default setting.
All versions	Select if you want to apply the filter to all versions of content. Clear to apply the filter to current versions.
DQL filter	Type the DQL query defining the filter.
Type	Select the content type to which the DQL query is applied.

4. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
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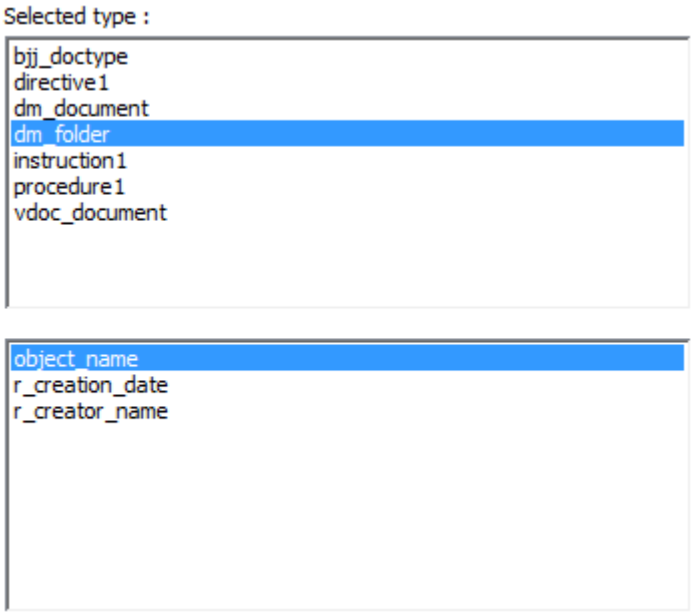
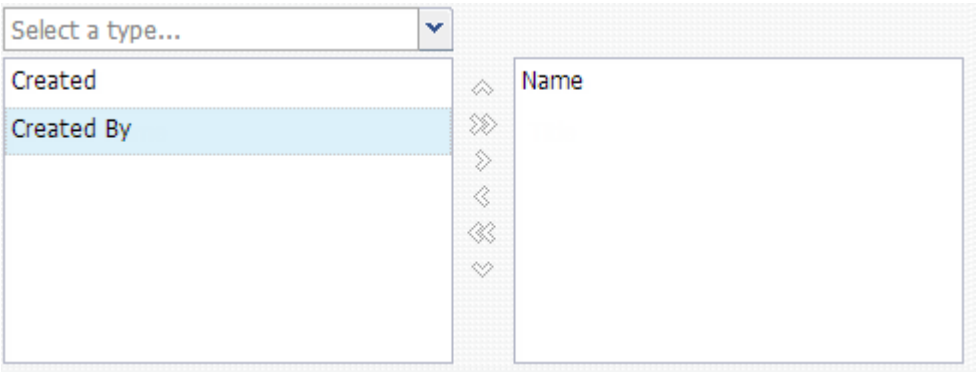
Configuring D2 Client Column Preferences

Default columns in the repository for tables display all properties and types. You can configure column preferences to allow users to select columns that filter the table based on property and type.

For example, the following image is a **dm_folder** content type with its configured properties:



The following image is the resulting column configuration interface in D2 Client as well as the property **Title**, which shows the folder path:



1. Navigate to **Interface** > **Display configuration** from the menu bar.
2. Use the list controls to modify the list of columns that filter based on content type.
3. To add a property filter:
   a. Select a type from **Properties of selected type**.
   b. Use the list controls to modify the list of property filters.

c. For each property, you can select a dictionary and select an alias or language to configure the display of values within the column.

   For example, you can configure a **Status** column to use the English language setting of a dictionary. Depending on dictionary configuration, values in a different language within the column can be translated into English. You can use dictionaries and aliases to universalize column value structure.

4. Click **Save**.

Related Topics —

Configuring a D2 Client Theme, page 179
Configuring a D2 Client Workspace, page 171
Configuring an External Widget, page 187
Configuring an Internal Widget, page 182
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Default Column Preferences for D2 Client

To update the column types for a list of preferences object, with or without default recreation, run **D2JobPreferencesUpdate** job with the following parameters:

Parameter	Description
default **true|false**	Set to **true** to create or destroy the default preferences object and recreate based on the **D2cPreferences.properties** resource file. For example: **-default true** The default value is **false**.
user_names <user_name>, <user_name2>, ...	Specify a list of users on which the preferences object should have the column updated against the **Default** instance. For example: **-user_names dmadmin,user1**

Parameter	Description
group_names <group_name>, <group _name2>, ...	Specify a list of group that is resolved as a user list; on each user, the preferences object should have the column updated against the **Default** instance For example: **-group_names admingroup,docu** **Note:** The administrator can either set user_names or group_names, or a combination of both the parameters, with each value as a unique value or a list of comma-separated values.
col_types <coltype>, <coltype2>, ...	Specify a list of column types to update, if empty or not present, all column types will be restored to **Default**. For example: **-col_types default,detail _location**

Note: If user has already customized the columns, the widget on the client side considers the current user's customization, even if the administrator configures the default columns per widget type. The **D2JobPreferencesUpdate** job reapplies the column preferences to the users after administrator's consideration.

Configuring Access to Administration Widgets in D2 Client

1. Navigate to **Tools** > **Options** from the menu bar.
2. Fill out the form as described in the following table:

   Note: In order for users who do not have superuser or administrator privileges to edit users or groups using the D2 administration widgets, **Access group for users administration** and **Access group for groups administration** must be selected in D2-Config. Users with access to the administration widgets in D2 Client who will be updating user and group properties should be a member of these administration groups if they do not have superuser or administrator privileges.

Field	Description
Access group for administration node	Select the group to enable access to all administration widgets.
Access group for users administration node	Select the group to enable access to the user administration widget.
Access group for groups administration node	Select the group to enable access to the group administration widget.
Group and user administration parent node	Select the group to enable access to user and group administration widgets.

Note: If a field is left blank, all groups have access.

3. Click **Save**.

Related Topics —

Configuring a D2 Client Workspace, page 171
Configuring Access to D2 Client and D2 Config, page 148

Refreshing and Reloading D2

You can refresh and reload certain aspects of D2 using the **Tools** menu in D2 Config, as described in the following table:

Action	Description
Tools > Refresh cache	Run this task to rebuild the cache, which is an operation that is normally run when the server is restarted. This action will refresh the D2-Config caches and send refresh requests to each of the D2 clients in the **Tools > Options... > Clients URL** list.
Tools > Reload D2 options	Run this task to reload D2-Config.properties. You can use this task to load the updated D2-Config.properties settings without restarting your application server.

Related Topics —

Configuring a D2 Client Workspace, page 171

Chapter 14

Troubleshooting Logs

D2 Troubleshooting Logs

D2 uses the following logs for troubleshooting purposes:

- D2-JMS.log: Logs the information related to methods that run on the Methods server (JMS). Examples of such methods are `D2LifeCycleChangeStateMethod` and `D2WFUpdateWorkflowAliasesMethod`.

  An example of an error: If lifecycle changes do not work for documents, refer the D2-JMS.log file for detailed information.

  Note: If you find that the D2-JMS.log is getting too large, which might result in performance degradation and failure of JMS methods, make the following edit to the logback.xml file to institute a size-and-time based policy. The logback file can be found at: `<Install path of Documentum Server>\<JBossversion>\server\DctmServer_MethodServer \deployments\ServerApps.ear\lib\`

  Change:

  `<rollingPolicy class="ch.qos.logback.core.rolling .TimeBasedRollingPolicy">`

  To:

  `<rollingPolicy class="ch.qos.logback.core.rolling .SizeAndTimeBasedRollingPolicy">`

  The following parameters can then be used in the logback file to control size and time (in this example each file would be at most 5MB, 5 days worth of history would be kept, but the total size burden would not exceed 1GB):

  ```
  .log.zip</fileNamePattern>
  <MaxHistory>5</MaxHistory>
  <maxFileSize>5MB</maxFileSize>
  <totalSizeCap>1GB</totalSizeCap>
  </rollingPolicy>
  ```

- D2.log: This log is available at the application server level. Logs in this file provide information about methods that run on the client side of the application server. Examples of such methods are `taskservice` and `browserservice` implementations.

  An example of an error: If the download or checkout of a particular file results in an error, refer D2.log for detailed information.

  Note: On RHEL / Jboss 6.4 with DFC jar version 6.7 SP2, the following error is present in the D2 logs:

Error Caused by: java.lang.NullPointerException: null at java.util.Hashtable.put(Hashtable .java:514) [na:1.7.0_75] at com.documentum.fc.common.impl.preferences.PreferencesManager .readPersistentProperties(PreferencesManager.java:343) [dfc.jar:na]

- D2-Config.log: This log is the least used of the three logs. It logs information related to D2-Config, such as the xml structure, after a configuration is saved.

  An example of an error: If there are any issues related to D2 configurations, such as 'Not able to save a properties page' or 'Not able to create a context', view the D2-Config logs for details.

These log files capture traces for different components of the D2 product. For a particular user action, the different product parts interact together. Therefore, all log files record the related details of the action.

Enabling D2-Client.log in the Debug Mode

1. Navigate to the logback.xml file in the following location:`<Install path of Web Application Server>\webapps\D2\WEB-INF\classes`
2. Change the level from **`info`** and **`warn`** to **`debug`**.
3. Change the value under the <root> tag from **`info`** to **`debug`**.
4. Clear the old logs (after stopping the application server).
5. Start the application server service.

Enabling D2-Config.log in the Debug Mode

1. Navigate to the logback.xml file in the following location:`<Install path of Web Application Server>\webapps\D2-Config\WEB-INF\classes`
2. Change the level from **`info`** and **`warn`** to **`debug`**.
3. Change the value under the <root> tag from **`info`** to **`debug`**.
4. Clear the old logs (after stopping the application server).
5. Start the application server service.

Enabling D2-JMS.log in the Debug Mode

1. Navigate to the logback.xml file in the following location:`<Install path of Documentum Server>\<JBossversion>\server\DctmServer_MethodServer\deploy\ServerApps .ear`
2. Change the level from **`info`** to **`debug`**.
3. Change the value under the <root> tag from **`info`** to **`debug`**.
4. Clear the old logs.

5. Restart the JMS service.

Chapter 15

D2 Config Troubleshooting and Tips

Accessing D2 Config without Opening a New Browser Window

If you do not want to open D2 Config in a new browser window, add the **newWindow** parameter to the D2 Config URL and set it to **false**. For example:

http://<server>:<port>/D2-Config/?newWindow=false

Email Notification Error when Assigning a Workflow Task to the User

Problem

An email notification error occurs when a workflow task is assigned to the user.

Cause

The way D2EventSenderMailMethod works has to adapt to the argument signature of the mailing method in the Documentum Server layer which is changed due to a security fix.

As part of the security fix, the argument structure of the default mail method of the Documentum Server (*dm_event_sender*) was changed wherein, an additional argument *web_server_port* was added. Before the fix, the *web_server_port* information was fused with another argument (web_server) using a pipe (|).

Resolution

The *dm_event_sender* method needs arguments without pipe (|), hence we need to split the *web_server* argument by removing the pipe and adding an additional argument of *web_server_port*.

Add an environment variable `addWebServerPort` and set it to **TRUE** in Documentum Server environment to force the splitting of the *web_server* argument.

Note: Above workaround is applicable only for the users who use latest version of Documentum Server, if Documentum Server is not up-to date, then above configuration not required.

Unable to Receive the Task after Using Update Performer Action

Problem

The next user cannot receive the task after using **Update Performer** action

Cause

The way D2EventSenderMailMethod works has to adapt to the argument signature of the mailing method in the Documentum Server layer which is changed due to a security fix.

As part of the security fix, the argument structure of the default mail method of the Documentum Server (*dm_event_sender*) was changed wherein, an additional argument *web_server_port* was added. Before the fix, the *web_server_port* information was fused with another argument (web_server) using a pipe (|).

Resolution

The *dm_event_sender* method needs arguments without pipe (|), hence we need to split the *web_server* argument by removing the pipe and adding an additional argument of *web_server_port*.

Add an environment variable `addWebServerPort` and set it to **`TRUE`** in Documentum Server environment to force the splitting of the *web_server* argument.

Note: Above workaround is applicable only for the users who use latest version of Documentum Server, if Documentum Server is not up-to date, then above configuration not required.

Chapter 16

Configuring C2

Overview of C2

Use C2 to extend PDF functionality of D2 with regards to adding:

- Extra pages: you can add one or several pages at the beginning, end, or after a given page. These pages can contain content properties or variables.
- PDF layers: you can add headers, footers, or images to all or part of documents.
- Watermarks: you can add image or text watermarks to all or part of documents above or below text and as transparent images.
- Dynamic pages: you can add dynamically-constructed pages, such as signature pages, gradually over the course of the lifecycle of the PDF document. Create dynamic pages in XML format so that tables can be managed based on their size, which are linked according to configurations when the document is viewed, printed, or exported.

Changes are applied to the PDF document according to four configurations: view, print, export, and static conversion. Use static conversion to configure an action that cannot be changed and is carried out once during processing. Static conversions overwrite the current rendition or create a new rendition. Toggle C2 configurations to contexts for end users the same way you configure and enable D2 configuration components. If you enable a C2 View configuration, D2 always uses the C2 view instead of the default D2 view.

You can use C2 to secure and apply controls to PDF documents when they are distributed out of the repository. The main functions are:

- Ensuring only secure versions are provided when viewing, exporting, and printing.
- Controlling printing using print counters and adding the ability to print with the note designating the recipient. D2 audits the controlled prints using the information provided by the end user when submitting the content for printing.
- Controlling PDF security settings, such as setting passwords for opening the file, applying encryption, and removal of save and print functions.

Note: If users have RELATE permission or lower, C2 is invoked when they use the right-click menu item **Export Rendition** to create a rendition of a document. If you have configured this right-click menu to use native content, the document will be produced with all applicable watermarks and overlays. Users with greater than RELATE permissions will get the native or base document.

Related Topics —

Formatting C2 Table of Contents using XSL, page 236
Clearing the dmi_queue_item After Creating a C2 Rendition, page 237
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic View Configuration, page 214

Configuring a Dynamic Print Configuration, page 220
Configuring a Dynamic Export Configuration, page 225
Configuring a Static Configuration, page 231
Configuring C2 Administrator Access, page 237

Configuring a Dynamic View Configuration

1. Navigate to **C2** > **View configuration** from the menu bar.
2. Click **New** to create a view configuration.

   If you want to create a child view configuration that inherits the properties of an existing view configuration, select a view configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a view configuration.
Description	Type a description.
Applications	Add or remove the applications to which this view configuration applies. For example, adding the **QA** application would cause the view configuration to only apply to matching quality assurance cases.
Default configuration	Select to make this configuration the default view configuration. If more than one default configuration is applicable for the end user in a context within the configuration matrix, D2 uses the top-most configuration in the C2 View Configuration page.
Compatibility	Select the oldest compatible version of the PDF viewing software.
Fast Web Compatibility	Select to generate linearized PDFs. **Note:** The generation of fast web-enabled PDFs with C2 should only be enabled when strictly required. Producing linearized PDFs requires the documents to be sent to the Documentum CTS system for processing, increasing output time.
Full compression	If you are using Acrobat 6.0 or later, select the option to compress the view configuration.
Label `<language>`	Type a label.
Input format	Select a rendition to use if no C2 rendition configuration is applied to the content.

4. To configure the list of properties of the content, select the **Properties** tab:
   a. Select a property from **Properties** or from the list of added properties.
   b. If you want to apply a dictionary to the property, select a dictionary from **Dictionaries** and optionally an alias or language.
   c. Click **Insert** to add the property.
5. To configure the security parameters of the content, select the **Protection** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Encryption level	Select to use either 40 or 128 bit encryption levels.
User password	Set a password for opening the PDF.
Password to modify preference	Set a password for modifying the PDF.

   b. Select **Allow printing**, **Allow modify content**, **Allow copy**, or **Allow modify annotations** to allow the user to perform the respective actions.
6. To configure the default viewing settings, select the **Initial View** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Page Layout	Select the page layout.
Display	Select the display mode.
Displayed page on running	Select the page number to show when the content is opened.

   b. Configure the window by selecting or clearing **Resize from init page**, **Center on the screen**, and **Open with fullscreen mode**.
   c. Configure the user interface by selecting or clearing **Hide Tool bar**, **Hide menu bar**, and **Hide Windows UI**.
7. To merge files into the current content:
   a. To insert a table of contents, click **Insert table of content** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Import an XSL for formatting the table of contents XML generated by D2. Formatting C2 Table of Contents using XSL contains further information about the values to map.
Bookmark label	Type a label.

Field	Description
Adopt same size as first page	Select to ensure when the document is published that all pages will output as the same size as the first page.
Table of content's max depth	Select the number of levels used by the table of contents.
Separator type	Select the type of separator used between the title of a section and the page number.

b. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.
Adopt same size as first page	Select to set added pages to the same size as the first page in the document. When the document is printed, all pages will print as expected on the same sized paper.

c. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**. **Note:** This PDF can be created with dynamic field targets so that it can be populated with data from D2. See List of PDF Fields, page 309 for more information on dynamic field usage.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.
Adopt same size as first page	Select to set added pages to the same size as the first page in the document. When the document is printed, all pages will print as expected on the same sized paper.

d. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.
Adopt same size as first page	Select to set added pages to the same size as the first page in the document. When the document is printed, all pages will print as expected on the same sized paper.

e. Use the list controls to reorder merged files.

8. To add stamping to the content:

   a. To add an image watermark, click **Insert image watermark**. Select an image from the list box or click **New** to open a dialog box for adding an image. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

      Click **Properties** to view and edit the properties of the watermark.

   b. To add a text watermark, click **Insert text watermark**. Select a watermark from the list box or click **New** to open the **C2 watermark properties** dialog box. Fill out the form as described in the following table:

      Note: C2 text watermark supports TrueType font (.ttf) only. OpenType font (.otf) is not supported.

Field	Description
Name	Type a name.
Text	Type the text for the watermark. You can use the following variables: • **`$value()`** to use properties and optionally dictionaries. For example, use **`$value(a_status)`** to show the status of content. • **`$dqlvalue()`** to use a DQL query. For example, use **`$dqlvalue("select a_status from dm_document where r_object_id='$value(r_object_id)'")`** to show the status of the specified content. • Pressing Enter within the text box will add a blank vertical space.
Font name	Select a font from the list box.
Font size	Select or type a font size.
Font color	Select a font color.
Horizontal align	Select the horizontal alignment.
Vertical align	Select the vertical alignment.
Opacity	Select the opacity.
Rotation	Select the rotation.

You can click **Properties** to view and edit the properties of the watermark.

c. To add a PDF layer, click **Insert PDF layer**. Select a file from the list box or click **Browse** to open a dialog box for adding a file. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

   You can use a PDF document to add dynamic image watermarking. The PDF document you add as a PDF layer must contain a text field that uses the **`$image()`** variable to refer to an image.

   For example, if you store images named after content status in the **`/System/Images/`** folder, type the following line in the text field:

   `$image(/System/Images/$value(a_status).jpg)`

d. You can click **Preview** to preview the look of the watermark.

   Watermarks that use a PDF layer and a variable do not show up in the preview.

e. Fill out the form as described in the following table:

Field	Description
Applicated on	Select the scope of pages you want to apply the watermarks.
From	Select the first bookmark.
to page	Select the last bookmark.
Apply on top of content	Select to place the watermark over the text. By default, watermarks are placed below the text.

9. To configure the document content:
   a. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

   b. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

   c. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.

Field	Description
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To delete a page, click **Delete a document content page**, then type the page number of the page to delete.

e. Use the list controls to reorder document content.

10. Click **Save**.

11. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Overview of C2, page 213
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic Print Configuration, page 220
Configuring a Dynamic Export Configuration, page 225
Configuring a Static Configuration, page 231
Configuring C2 Administrator Access, page 237

Configuring a Dynamic Print Configuration

1. Navigate to **C2** > **Print configuration** from the menu bar.

2. Click **New** to create a print configuration.

   If you want to create a child print configuration that inherits the properties of an existing print configuration, select a print configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Select a print configuration.
Description	Type a description.
Default configuration	Select to make this configuration the default print configuration. If you enable more than one default configuration in the configuration matrix, D2 prioritizes top-to-bottom among the configurations labeled as default.
Compatibility	Select the oldest compatible version of the PDF viewing software.

Field	Description
Fast Web Compatibility	Select to generate linearized PDFs. **Note:** The generation of fast web-enabled PDFs with C2 should only be enabled when strictly required. Producing linearized PDFs requires the documents to be sent to the Documentum CTS system for processing, increasing output time.
Label `<language>`	Type a label.
Input format (will be used only if there is no C2 rendition configuration applied on document)	Select a file format.

4. Configure the form for end users to fill out as described in the following table:

Field	Description
Field number `<number>`	Select to enable and configure the field in the controlled printing dialog box for D2 Client.
Label `<language>`	Type a label.
Assistance type	Select the input mode for entering the reason for printing. • Free text: the user types the reason. • DQL: type a query to provide the user with a dynamic list of values. • Dictionary: select a dictionary for a static list of values.

End users are required to fill out these fields when they print through C2. The information typed into the field is stored and shown with the D2 audit for the controlled print.

The **Field n°1** field corresponds to the list of recipients. End users can type a list of users in this field during controlled print. The **Recipient** field in the recall print dialog for D2 Client functions as a list box of users entered.

5. To merge files into the current content:

   a. To insert a table of contents, click **Insert table of content** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Import an XSL for formatting the table of contents XML generated by D2. Formatting C2 Table of Contents using XSL contains further information about the values to map.

Field	Description
Bookmark label	Type a label.
Table of content's max depth	Select the number of levels used by the table of contents.
Separator type	Select the type of separator used between the title of a section and the page number.

b. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

c. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

e. Use the list controls to reorder merged files.

6. To add stamping to the content:

a. To add an image watermark, click **Insert image watermark**. Select an image from the list box or click **New** to open a dialog box for adding an image. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

You can click **Properties** to view and edit the properties of the watermark.

b. To add a text watermark, click **Insert text watermark**. Select a watermark from the list box or click **New** to open the **C2 watermark properties** dialog box. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Text	Type the text for the watermark. You can use the following variables: • **`$value()`** to use properties and optionally dictionaries. For example, use **`$value(a_status)`** to show the status of content. • **`$dqlvalue()`** to use a DQL query. For example, use **`$dqlvalue("select a_status from dm_document where r_object_id='$value(r_object_id)'")`** to show the status of the specified content.
Font name	Select a font from the list box.
Font size	Select or type a font size.
Font color	Select a font color.
Horizontal align	Select the horizontal alignment.
Vertical align	Select the vertical alignment.
Opacity	Select the opacity.
Rotation	Select the rotation.

Click **Properties** to view and edit the properties of the watermark.

c. To add a PDF layer, click **Insert PDF layer**. Select a file from the list box or click **Browse** to open a dialog box for adding a file. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

You can use a PDF document to add dynamic image watermarking. The PDF document you add as a PDF layer must contain a text field that uses the **`$image()`** variable to refer to an image.

For example, if you store images named after content status in the **`/System/Images/`** folder, type the following line in the text field:

`$image(/System/Images/$value(a_status).jpg)`

d. You can click **Preview** to preview the look of the watermark.

Watermarks that use a PDF layer and a variable do not show up in the preview.

e. Fill out the form as described in the following table:

Field	Description
Applicated on	Select the scope of pages you want to apply the watermarks.
From	Select the first bookmark.
to page	Select the last bookmark.
Apply on top of content	Select to place the watermark over the text. By default, watermarks are placed below the text.

7. To configure the document content:

a. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

b. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

c. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

Field	Description
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To delete a page, click **Delete a document content page**, then type the page number of the page to delete.

e. Use the list controls to reorder document content.

8. Click **Save**.
9. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Overview of C2, page 213
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic View Configuration, page 214
Configuring a Dynamic Export Configuration, page 225
Configuring a Static Configuration, page 231
Configuring C2 Administrator Access, page 237

Configuring a Dynamic Export Configuration

1. Navigate to **C2** > **Export configuration** from the menu bar.
2. Click **New** to create an export configuration.

   If you want to create a child export configuration that inherits the properties of an existing export configuration, select an export configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	Description
Name	Select a export configuration.
Description	Type a description.
Applications	Add or remove the applications to which this export configuration applies. For example, adding the **QA** application would cause the export configuration to only apply to matching quality assurance cases.

Field	Description
Default configuration	Select to make this configuration the default export configuration. If you enable more than one default configuration in the configuration matrix, D2 prioritizes top-to-bottom among the configurations labeled as default.
Compatibility	Select the oldest compatible version of the PDF viewing software.
Fast Web Compatibility	Select to generate linearized PDFs. **Note:** The generation of fast web-enabled PDFs with C2 should only be enabled when strictly required. Producing linearized PDFs requires the documents to be sent to the Documentum CTS system for processing, increasing output time.
Full compression	This option appears if you are using Acrobat 6.0 or later. Select to compress the export configuration.
Label `<language>`	Type a label that shows in the D2 interface.
Input format	Select the file format used when exporting content.

4. To configure the list of properties of the content, select the **Properties** tab:
   a. Select a property from **Properties** or from the list of added properties.
   b. If you want to apply a dictionary to the property, select a dictionary from **Dictionaries** and optionally an alias or language.
   c. Click **Insert** to add the property.
5. To configure the security parameters of the content, select the **Protection** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Encryption level	Select to use either 40 or 128 bit encryption levels.
User password	Set a password for opening the PDF.
Password to modify preference	Set a password for modifying the PDF.

   b. Select **Allow printing**, **Allow modify content**, **Allow copy**, or **Allow modify annotations** to allow the user to perform the respective actions.
6. To configure the default viewing settings, select the **Initial View** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Page Layout	Select the page layout.
Display	Select the display mode.
Displayed page on running	Select the page number that appears when the content is opened.

b. Configure the window by selecting or clearing **Resize from init page**, **Center on the screen**, and **Open with fullscreen mode**.

c. Configure the user interface by selecting or clearing **Hide Tool bar**, **Hide menu bar**, and **Hide Windows UI**.

7. To merge files into the current content:

a. To insert a table of contents, click **Insert table of content** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Import an XSL for formatting the table of contents XML generated by D2. Formatting C2 Table of Contents using XSL contains further information about the values to map.
Bookmark label	Type a label.
Table of content's max depth	Select the number of levels used by the table of contents.
Separator type	Select the type of separator used between the title of a section and the page number.

b. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

c. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

e. Use the list controls to reorder merged files.

8. To add stamping to the content:

   a. To add an image watermark, click **Insert image watermark**. Select an image from the list box or click **New** to open a dialog box for adding an image. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

      Click **Properties** to view and edit the properties of the watermark.

   b. To add a text watermark, click **Insert text watermark**. Select a watermark from the list box or click **New** to open the **C2 watermark properties** dialog box. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Text	Type the text for the watermark. You can use the following variables: • **`$value()`** to use properties and optionally dictionaries. For example, use **`$value(a_status)`** to show the status of content. • **`$dqlvalue()`** to use a DQL query. For example, use **`$dqlvalue("select a_status from dm_document where r_object_id='$value(r_object_id)'")`** to show the status of the specified content.
Font name	Select a font from the list box.
Font size	Select or type a font size.
Font color	Select a font color.
Horizontal align	Select the horizontal alignment.
Vertical align	Select the vertical alignment.
Opacity	Select the opacity.
Rotation	Select the rotation.

You can click **Properties** to view and edit the properties of the watermark.

c. To add a PDF layer, click **Insert PDF layer**. Select a file from the list box or click **Browse** to open a dialog box for adding a file. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

You can use a PDF document to add dynamic image watermarking. The PDF document you add as a PDF layer must contain a text field that uses the **`$image()`** variable to refer to an image.

For example, if you store images named after content status in the **`/System/Images/`** folder, type the following line in the text field:

```
$image(/System/Images/$value(a_status).jpg)
```

d. You can click **Preview** to preview the look of the watermark.

Watermarks that use a PDF layer and a variable do not show up in the preview.

e. Fill out the form as described in the following table:

Field	Description
Applicated on	Select the scope of pages you want to apply the watermarks.
From	Select the first bookmark.

Field	Description
to page	Select the last bookmark.
Apply on top of content	Select to place the watermark over the text. By default, watermarks are placed below the text.

9. To configure the document content:

   a. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

   b. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

   c. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To delete a page, click **Delete a document content page**, then type the page number of the page to delete.

e. Use the list controls to reorder document content.

10. Click **Save**.

11. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Overview of C2, page 213
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic View Configuration, page 214
Configuring a Dynamic Print Configuration, page 220
Configuring a Static Configuration, page 231
Configuring C2 Administrator Access, page 237

Configuring a Static Configuration

1. Navigate to **C2** > **Rendition configuration** from the menu bar.

2. Click **New** to create a static configuration.

   If you want to create a child static configuration that inherits the properties of an existing static configuration, select a static configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.

3. Fill out the form as described in the following table:

Field	Description
Name	Select a print configuration.
Description	Type a description.
Compatibility	Select the oldest compatible version of the PDF viewing software.
Fast Web Compatibility	Select to generate linearized PDFs. **Note:** The generation of fast web-enabled PDFs with C2 should only be enabled when strictly required. Producing linearized PDFs requires the documents to be sent to the Documentum CTS system for processing, increasing output time.

4. Select an **Input rendition format** and an **Output rendition format** from the list boxes. For example, you can select **`Acrobat PDF`** and **`C2 PDF Rendition`**, respectively, to create a configuration that converts Acrobat PDF to C2 PDF.

5. To configure the list of properties of the content, select the **Properties** tab:

   a. Select a property from **Properties** or from the list of added properties.

   b. If you want to apply a dictionary to the property, select a dictionary from **Dictionaries** and optionally an alias or language.

c. Click **Insert** to add the property.

6. To configure the security parameters of the content, select the **Protection** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Encryption level	Select to use either 40 or 128 bit encryption levels.
User password	Set a password for opening the PDF.
Password to modify preference	Set a password for modifying the PDF.

   b. Select **Allow printing**, **Allow modify content**, **Allow copy**, or **Allow modify annotations** to allow the user to perform the respective actions.

7. To configure the default viewing settings, select the **Initial View** tab:
   a. Fill out the fields as described in the following table:

Field	Description
Page Layout	Select the page layout.
Display	Select the display mode.
Displayed page on running	Select the page number that appears when the content is opened.

   b. Configure the window by selecting or clearing **Resize from init page**, **Center on the screen**, and **Open with fullscreen mode**.

   c. Configure the user interface by selecting or clearing **Hide Tool bar**, **Hide menu bar**, and **Hide Windows UI**.

8. To merge files into the current content:
   a. To insert a table of contents, click **Insert table of content** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Import an XSL for formatting the table of contents XML generated by D2. Formatting C2 Table of Contents using XSL contains further information about the values to map.
Bookmark label	Type a label.
Table of content's max depth	Select the number of levels used by the table of contents.
Separator type	Select the type of separator used between the title of a section and the page number.

   b. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

c. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

e. Use the list controls to reorder merged files.

9. To add stamping to the content:

a. To add an image watermark, click **Insert image watermark**. Select an image from the list box or click **New** to open a dialog box for adding an image. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

You can click **Properties** to view and edit the properties of the watermark.

b. To add a text watermark, click **Insert text watermark**. Select a watermark from the list box or click **New** to open the **C2 watermark properties** dialog box. Fill out the form as described in the following table:

Field	Description
Name	Type a name.
Text	Type the text for the watermark. You can use the following variables: • **`$value()`** to use properties and optionally dictionaries. For example, use **`$value(a_status)`** to show the status of content. • **`$dqlvalue()`** to use a DQL query. For example, use **`$dqlvalue("select a_status from dm_document where r_object_id='$value(r_object_id)'")`** to show the status of the specified content.
Font name	Select a font from the list box.
Font size	Select or type a font size.
Font color	Select a font color.
Horizontal align	Select the horizontal alignment.
Vertical align	Select the vertical alignment.
Opacity	Select the opacity.
Rotation	Select the rotation.

Click **Properties** to view and edit the properties of the watermark.

c. To add a PDF layer, click **Insert PDF layer**. Select a file from the list box or click **Browse** to open a dialog box for adding a file. Type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.

You can use a PDF document to add dynamic image watermarking. The PDF document you add as a PDF layer must contain a text field that uses the **`$image()`** variable to refer to an image.

For example, if you store images named after content status in the **`/System/Images/`** folder, type the following line in the text field:

```
$image(/System/Images/$value(a_status).jpg)
```

d. You can click **Preview** to preview the look of the watermark.

Watermarks that use a PDF layer and a variable do not show up in the preview.

e. Fill out the form as described in the following table:

Field	Description
Applicated on	Select the scope of pages you want to apply the watermarks.
From	Select the first bookmark.

Field	Description
to page	Select the last bookmark.
Apply on top of content	Select to place the watermark over the text. By default, watermarks are placed below the text.

10. To configure the document content:

    a. To insert a blank page, click **Insert blank page** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
Landscape orientation	Select to flip the page to be horizontally oriented.
Only if it's a even page	Select if the page is a blank page that users only view when it falls on an even page.

    b. To insert a PDF file, click **Insert PDF** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

    c. To insert an XSL file, click **Insert XSL** and fill out the form as described in the following table:

Field	Description
Name	Type a name.
File	Select a file from the list box or click **Browse**, type a name for the file, click **Browse** to select a file, then select a **Format** from the list box, and click **OK**.
Bookmark label	Type a label.
Properties	Click to open the **C2 Xsl file property** dialog box. You can add, remove, and reorder DQL queries for modifying the properties of the XSL file.
Include bookmarks contained in the pdf	Select to add the contained bookmarks to the list.

d. To delete a page, click **Delete a document content page**, then type the page number of the page to delete.

e. Use the list controls to reorder document content.

11. Click **Save**.

12. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Overview of C2, page 213
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic View Configuration, page 214
Configuring a Dynamic Print Configuration, page 220
Configuring a Dynamic Export Configuration, page 225
Configuring C2 Administrator Access, page 237

Formatting C2 Table of Contents using XSL

D2 automatically generates an XML containing the elements of the table of contents. Create and import an XSL for formatting the table of contents when viewing, printing, or exporting content in C2.

The XML uses parameters within an **`object`** in the **`root`** as described in the following table:

Parameter	Description
`depth`	The depth is a numeric value indicating the number of indentations preceding the element in the table of contents. For example, **`<depth>0</depth>`** corresponds to 0 indentations, while **`<depth>1</depth>`** corresponds to a single indentation.
`action`	The action indicates the type of link being used by the element in the table of contents. Use **`GOTO`** to have the table of contents send the reader to the element when the link is clicked.
`title`	The title is the label shown for the element in the table of contents.
`page`	The page is the page number.

Related Topics —

Overview of C2, page 213
Clearing the dmi_queue_item After Creating a C2 Rendition, page 237
Overview of C2, page 213
Configuring a Dynamic View Configuration, page 214
Configuring a Dynamic Print Configuration, page 220
Configuring a Dynamic Export Configuration, page 225
Configuring a Static Configuration, page 231

Configuring C2 Administrator Access, page 237

Configuring C2 Administrator Access

You can configure the group of users given access to changing C2 settings using D2 Config.

1. Navigate to **Tools** > **Options** from the menu bar.
2. Click the **C2 Options** tab.
3. Select or type a group to set as the C2 Administrator group.
4. Click **Save**.

Related Topics —

Overview of C2, page 213
Formatting C2 Table of Contents using XSL, page 236
Configuring a Dynamic View Configuration, page 214
Configuring a Dynamic Print Configuration, page 220
Configuring a Dynamic Export Configuration, page 225
Configuring a Static Configuration, page 231

Clearing the dmi_queue_item After Creating a C2 Rendition

The C2 plug-in creates a **c2_rendition** event in the **dmi_queue_item** queue to generate the PDF rendition. After completing the request and generating the PDF, D2 marks the item as dequeued but does not clear the **dmi_queue_item** events.

To remove the queue items you must either:

- Use the queue management tool (dm_QueueMgt job) to remove the queue item.

  The queue management tool is installed out-of-the-box in an inactive state. The *OpenText Documentum Server Administration and Configuration Guide* contains more information about the queue management tool.

- Delete the queue items using the **DELETE...OBJECT** DQL query. For example, to remove all queue objects representing objects that were dequeued before January 1, 2013:

  ```
  DELETE "dmi_queue_item" OBJECTS WHERE "dequeued_date" < DATE('01/01
  /2013') AND "delete_flag" = true
  ```

Related Topics —

Overview of C2, page 213

Formatting C2 Table of Contents using XSL, page 236

Chapter 17

Configuring O2

Configuring the O2 Transfer Configuration in D2

Use O2 to allow management of properties transfer between D2 and Microsoft Office documents as well as between .eml and .msg email messages. The following table describes file format and software version compatibility:

	Office 2007-2016 and Office 365 (Desktop)	**Open Office 3.2**
.doc	Yes, with macro support	Yes
.docx	Yes, with macro support	Yes
.xls	Yes	No
.xlsx	Yes, but cell values must not be empty	No
.ppt	Yes	No
.pptx	Yes	Yes

1. Navigate to **O2** > **Transfer configuration** from the menu bar.
2. Click **New** to create an O2 transfer configuration.

   If you want to create a child O2 transfer configuration that inherits the properties of an existing O2 transfer configuration, select an O2 transfer configuration and click **Create from**. Understanding Parent and Child Configurations contains more information on child configurations.
3. Fill out the form as described in the following table:

Field	**Description**
Name	Type a name to appear in the configuration matrix.
Description	Type a description.
Applications	Add or remove the applications to which this transfer configuration applies. For example, adding the **QA** application would cause the transfer configuration to only apply to matching quality assurance cases.

Field	Description
Format of “date” property type	Type a date format using **dd** for date, **MM** for month, and **yy** for the last two digits of the year.
Trigger events	Use the list controls to add and remove the events that trigger O2 properties transfer.

4. Configure properties to transfer:
   a. Use the list controls to add or remove properties.

      Content imported in D2 Client with an associated O2 configuration inherits the selected properties.

   b. Fill out the form as described in the following table:

Field	Description
Documentum property	Type the Documentum name of the property.
Office property	Type the Microsoft Office name of the property.
Relation direction	Select the direction of the property transfer. Do not use a bidirectional relationship with repeating properties.
Dictionary	Select a dictionary to use a dictionary.
Alias/Locale	Select an alias or locale to specify the dictionary being used.

5. Configure DQL queries to use in the Microsoft Office document:
   a. Use the list controls to add or remove DQL queries.
   b. Fill out the form as described in the following table:

Field	Description
DQL query identifier	Type a name.
DQL query	Type a DQL query.

6. Click **Save**.
7. Navigate to **Tools > Refresh Cache** to ensure that your changes take effect on the client.

Related Topics —

Configuring File Formats Recognized by O2, page 240
Configuring Microsoft Office for O2, page 241

Configuring File Formats Recognized by O2

1. Navigate to **Tools** > **Options** from the menu bar.

2. Click the **O2 Options** tab.
3. Use the list controls to add and remove file formats recognized by O2.
4. Click **Save**.

Related Topics —

Configuring the O2 Transfer Configuration in D2, page 239
Configuring Microsoft Office for O2, page 241

Configuring Microsoft Office for O2

Perform the following steps on all end user machines. Refer to the documentation for the Microsoft Office products for detailed instructions on creating and enabling a macro, setting trusted locations, and adding properties.

Note: A limitation exists in Microsoft Word with the TEXT property in that it cannot exceed 255 characters. This property is defined in Microsoft Word as a char data type with the limitation of 255 characters. This limitation does not exist in Documentum, however when you map a property in O2, whose contents exceeds 255 characters, to a property in Microsoft Word, you will experience a data loss due to the Microsoft Word limitation.

1. Create a macro and enter the following sets of code:

   Microsoft Word only:

```
Sub AutoOpen()

 Dim aStory As Range
 Dim aField As Field

 For Each aStory In ActiveDocument.StoryRanges
  For Each aField In aStory.Fields
   aField.Update
  Next aField
 Next aStory

 ActiveDocument.Saved = True

End Sub
```

   Microsoft Excel only:

```
Private Sub Workbook_Open()

 MsgBox "This Macro will execute when the workbook is opened"

End Sub
```

2. In the Microsoft Office configurations:
   a. Enable the macro.
   b. Add the D2 repository view and checkout folders used by end users to the **Trusted Locations** list.
3. Create the properties in Microsoft Word, Excel, and Powerpoint to allow O2 to transfer property information.

4. To update the values of inserted properties in Microsoft Word, right-click the properties and select **Update fields**.

   If you cannot update the fields, make sure **Update fields** is enabled in the Microsoft Word configurations.

Related Topics —

Configuring the O2 Transfer Configuration in D2, page 239
Configuring File Formats Recognized by O2, page 240

Chapter 18

Using D2 Specs

Configuring D2 Specs Module Descriptions

You can modify the descriptions of D2 modules. D2 Specs uses the descriptions when generating a specification document of your D2 configuration.

1. Navigate to **Tools** > **Modules description** from the menu bar.
2. Type a description for modules used.
3. Click **Save**.

Related Topics —

Generating a Specifications Document, page 243

Generating a Specifications Document

1. Navigate to **Specifications** > **Generate configurations** from the menu bar.
2. Fill out the form as described in the following table:

Field	Description
Applications	Select the application for which the specification is generated.
Display elements without application	Select to display configuration components that are not assigned to applications.
Include dictionaries	Select to include dictionaries.
Include taxonomies	Select to include taxonomies.
Include registered tables	Select to include registered tables.

3. Click **OK**.

Related Topics —

Configuring D2 Specs Module Descriptions, page 243

Chapter 19

Using D2 Retention Policy Services (RPS)

Understanding the D2 RPS Plug-in

The D2 RPS plug-in adds two modules to the configuration matrix to allow you to manage and use retention and markup policies in D2 lifecycles:

- Retention policy configuration: Allows management of the preservation of repository content.
- Retention markup: Allows usage of Documentum RPS markup policies.

To use retention policies in D2, configure policies using Documentum Retention Policy Services. The *OpenText Documentum Records Client Administration and User Guide* contains further information.

In D2, apply the retention or markup policies you create to contexts in the configuration matrix and associate the context with a policy. For instance, to apply a particular RPS policy to a specific type of document when the status is **APPROVED**, create a context configuration that is scoped to the specific document type and attribute value, and associate the context configuration with the retention and/or markup policy in the matrix. If the same document type should have another retention policy associated with it when the document status is **OBSOLETE**, then create another context for that document type and attribute value, and associate the context with the retention and/or markup policy in the matrix. A single context configuration can be associated with one or more RPS policies in the matrix.

When you have the policy configurations and contexts created in the matrix, you can then use the policies in a D2 lifecycle using the **`D2ApplyRetentionMethod`** and **`D2ApplyMarkupMethod`** methods. These methods do not take any parameters or arguments. When a method is invoked by the lifecycle action, D2 applies the RPS policies that are associated with the matching document context configured in the matrix.

Related Topics —

Adding Documentum RPS Policies to the Configuration Matrix, page 245

Adding Documentum RPS Policies to the Configuration Matrix

1. Navigate to:
   - **D2–RPS** > **Retention policy** from the menu bar for retention policies.
   - **D2–RPS** > **Retention markup** from the menu bar for markup policies.
2. Fill out the form as described in the following table:

Field	Description
Name	Select the policy that was configured in Documentum RPS.
Description	Type a description.
Application	Add or remove the applications to which this document link applies. For example, adding the **QA** application would cause the policy to only apply to matching quality assurance cases.

3. Click **Save**.

Related Topics —

Understanding the D2 RPS Plug-in, page 245

Chapter 20

Using D2 with Information Rights Management (IRM) Services

Understanding D2 and IRM

Unlike other product integration opportunities, support for Information Rights Management (IRM) within D2 does not require the addition of a plugin. After installing IRM Server and the IRM Services on the D2 system as outlined in the *D2 Installation Guide*, upon application server startup, D2 will perform a check to see if IRM Services are installed into the repository. Once the **`irm_security`** type has been detected, the following features are automatically enabled within D2:

- When a D2 user moves, copies, or imports content into an IRM profile defined folder, the document gets encrypted and saved into the docbase.
- The **D2-Config Security** configuration screen will allow the admin to define ACLs that include the extended IRM permissions. **`d2_acl_config`** uses a repeating attribute **`application_permit`** where valid IRM permit values are: **`irm_print`**, **`irm_copy`**, **`irm_offline`**, **`irm_activity`**. See the *Configuring Security* section for details.
- Using D2-Config and the matrix, you can assign ACLs automatically via a document-based context. D2 examines/applies the IRM permissions columns to **`dm_acl`** instances.
- The applied IRM permissions can be viewed from the D2 client via the default Content menu Permissions options.

Note: D2-BIN does not support restoring IRM protected documents.

Chapter 21

Using D2-Bin

Configuring D2-Bin

The D2-Bin plug-in adds a recycling-bin approach to managing document removal in D2. If D2-Bin is:

- Not installed, D2 permanently removes content when an end user deletes content.
- Installed, D2 moves deleted content to an electronic recycling bin, which allows end users and functional administrators to view, permanently remove, and restore content.

1. Navigate to **D2-Bin** > **Options** from the menu bar.
2. Fill out the form as described in the following table:

Field	Description
Group allowed to administrate every recycle bin	Select the user group to have administrative privileges for the Recycle Bin widget.
Users can destroy documents located in their own recycle bin	Select to allow users to permanently remove content in their own recycle bin.
Send an email warning when the global size of the recycle bin is more than `<value>` MB	Type megabyte value. When the combined size of all user recycle bins becomes larger than the input size, D2 sends an email warning.
Send an email warning when the size of a user recycle bin is more than `<value>` MB	Type a megabyte value. When the size of any individual user recycle bin becomes larger than the input size, D2 sends an email warning.
Send email warning to	Select the user group to which D2 sends the email warnings.

3. Click **Save**.

Related Topics —

Incorrect Properties for Content in the Recycle Bin, page 250

Incorrect Properties for Content in the Recycle Bin

Due to the way the repository handles content in the recycle bin, D2 shows incorrect values for the following properties:

- **a_content_type**
- **i_chronicle_id**
- **i_contents_id**
- **i_antecendent_id**
- **i_direct_dsc**
- **i_latest_flag**
- **i_vstamp**
- **i_folder_id**
- **r_folder_path**
- **r_version_label** - The value for **r_version_label** shows the correct version but also incorrectly labels the content in the recycle bin as the **CURRENT** version.
- **r_link_cnt**
- **r_modifier**
- **r_modify_date**
- **r_page_cnt**
- **r_content_size**
- **r_full_content_size**
- **r_immutable_flag**

Related Topics —

Configuring D2-Bin, page 249

Chapter 22

Optimizing D2

Optimizing DQL Queries

You should structure queries, especially those with large numbers of attributes or table references, in the following manner:

- Group attributes by the object type table (_s, _r) that contains them, starting with the parent table in the object hierarchy.
- Order attributes in the same order (left-to-right) as in the database table definition.

If you do not structure it as explained, it can result in severe performance issues (minutes versus seconds) when the database contains millions of rows.

Using DollarValue Strings in DQL

Several DollarValue strings are available for use in multiple D2 DQL contexts. See below for examples:

DollarValue String Items	Example Usage
$alias	**$alias(**aliassetname.aliasname**)**
$value	**$value(**att.dico.locale**)** **$value(**att.format**)** (for use with time attribute)
$count	**$count(**att**)**
$dqlvalue	**$dqlvalue(**\"att\"**)**
$note	**$note(**att**)**
$repeatingvalue	**$repeatingvalue(**att**)** **$repeatingvalue(**att.format**)** (for use with time attribute)
$skin	**$skin(**att**)**
$Repeatingskin	**$Repeatingskin[]**
$foreachdoc	**$foreachdoc{}**
$foreachworkflownote	**$foreachworkflownote{}** For example: **$foreachworkflownote{$note(date.dd /MMM/yy)**

Optimizing Content Import

You can configure D2 to execute actions, such as a lifecycle action, during content import. Enabling **Execute actions on start** increases the back-end processing to complete the transaction and the complexity of the actions further impacts the processing time. To prevent unnecessry performance overhead, enable **Execute actions on start** for a configuration only if the actions are required.

Related Topics —

Optimizing Property Pages, page 252
Optimizing Searches, page 253
Optimizing Workspaces, page 254

Optimizing Property Pages

Select **Load asynchronously** when configuring property pages that contain combo or list fields that perform a DQL query. When the option is enabled, D2 executes the DQL when the end user selects the specific property instead of when the property page is loaded. D2 does not need to perform the DQL query when loading a property page because the query is not necessary when the end user is viewing instead of editing. Avoiding unnecessary DQL queries improves the response time for displaying the property page and reduces the load on the Documentum Server and the database.

If you use an asynchronous DQL query:

- Use the **`$value(filter)`** wildcard to enable filtering. If you do not use the wildcard, the query returns all values when an end user selects a list box.

  If you load asynchronously, a DQL query for loading values must include **`as name`**, **`as label`**, and **`$value(filter)`**

For example, **`select user_name as name, user_name as label from dm_user where $value(filter) order by 1`**

- Limit the returned result set by using the **`enable (return_top <number of results>)`** keyword. To use this keyword, set the **`return_top_results_row_based`** parameter in the Documentum Server **`server.ini`** file to **`F`**.
- Set the **Auto load first results** field to load all, a set number, or no results when a user clicks the field in the property page. This allows you to match the behavior of synchronous combo fields in your pages. The field recognizes the following values as triggers:
  - **`-1`**: The default setting for new property pages and upgrades, keeps current behavior intact where the user must click the combo field's down arrow itself.
  - **`0`**: Indicates all of the values in the list will autoload up to the **`maxResultSetSize`** or **`maxListAssistanceResultSetSize`** from `d2fs.properties`. If those settings are not set, then the system defaults are used.
  - **`###`** : indicates some value greater than 0. Regardless of the input value, D2 always honors **`maxResultSetSize`** or **`maxListAssistanceResultSetSize`**.

The response time for loading a property page depends on the number of components on the property page. Take advantage of contexts to create and configure targeted property page definitions instead of a single comprehensive property page.

Related Topics —

Optimizing Content Import, page 252
Optimizing Searches, page 253
Optimizing Workspaces, page 254

Optimizing Searches

Use the following guidelines to optimize performance of searches:

- Use a full-text search engine such as Documentum xPlore in a large-scale environment because by default the search operations use DQL queries, which may be inefficient on large data sets.
- You can create function-based indexes to improve search performance, but it is difficult to predict the attributes that D2 uses for case insensitive searches. Each additional function-based index consumes additional storage and can cause space issues.
- Set the **Maximum results returned by search** to a smaller value in the Global search configuration page to reduce the impact of searches with a large number of results.
- Query form searches do not use the **Maximum results returned by search** value nor the **`dfc.search.max_results`** parameters in **`dfc.properties`**. Make sure to design the DQL query for query forms to be more selected or use the **`enable (return_top <number of results>)`** keyword to limit the returned result set and reduce performance overhead.

Note: You can use the d2c_query_dq object only in D2 versions 3.x. In 4.x versions, you must use query forms to perform a search operation. In the 4.5 version, you can also use a DQL Intelligent URL to run a query and get multiple results in a doclist.

Asynchronous Searches for D2 3.1

Asynchronous searches can cause high memory strain on the web application server because they are saved to memory. Use the following guidelines to optimize saved asynchronous searches:

- Limit DQL queries by adding the parameter **`enable (RETURN_TOP 100)`**
- Set **Maximum number of asynchronous searches in a user session** to limit the maximum number of asynchronous searches that end users can perform.

Related Topics

Related Topics —

Optimizing Content Import, page 252
Optimizing Property Pages, page 252
Optimizing Workspaces, page 254

Optimizing Workspaces

The number of widgets displayed on a web page can affect response time, particularly in WAN conditions with low latency. Construct workspaces focused on specific tasks instead of a comprehensive workspace for all possible scenarios.

When configuring a workspace, note that widgets on a workspace do not share query results. For example, if a workspace contains both a Doclist widget and a Searches widget, running an Advanced Search with facets triggers the same full-text query twice: one to update the result list in the Doclist widget and one to update the facet tree in the Searches widget. In a high workload scenario, this uses more search engine resources.

Related Topics —

Optimizing Content Import, page 252
Optimizing Property Pages, page 252
Optimizing Searches, page 253

Parallel Streaming Configuration

Parallel streaming enables faster downloads. The file is divided into smaller segments and transferred or downloaded in multiple concurrent threads.

Note: Network latency and bandwidth restrictions have an impact on parallel streaming.

Parallel streaming is controlled using the parameters defined in the `X3Applet.properties` file. Administrator can edit the `X3Applet.properties` file located at `<webapp location>\D2\applet\X3Applet.properties`.

Following table describes the parameters of `X3Applet.properties`:

Parameter	Description	Values
download.useParallel	Enables or disables parallel streaming.	`True`: to enable parallel streaming `False`: to disable parallel streaming
download .maxNumberParallelDownloadStreams	Indicates the maximum number of concurrent threads required to download the content. **Note:** Administrator can set **download .maxNumberParallelDownloadStreams** to the required maximum value, provided the settings match the ACS or BOCS server settings.	Integer
bocs.url.prefix	Indicates the prefix for the BOCS URL configured in the repository.	`/bocs/servlet/ACS`
acs.url.prefix	Indicates the prefix for the ACS URL configured in the repository.	`/ACS/servlet/ACS`
download.forceParallelSizeInMB	Indicates the size in megabyte that forces parallel streaming to begin the download. Any file size greater than this value, triggers parallel streaming.	Integer

The `X3Applet.properties` file gets downloaded to `{User Home}\ Documentum\D2\ X3Applet.properties` when the user accesses D2 for the first time.

Note: If the user modified any of the settings in the D2 Base App `/applet/X3Applet.properties`, they will have to delete the `X3Applet.properties` file downloaded to `@<USER_HOME> /Documentum/D2`.

Example:

download.useParallel = truedownload.maxNumberParallelDownloadStreams = 15bocs.url.prefix=/bocs/servlet/ACSacs.url.prefix=/acs/servlet/ACSdownload.forceParallelSizeInMB = 500

In this example, parallel streaming is enabled (download.useParallel = true). A file of size greater than 500 MB, initiates download using 15 concurrent threads.

Chapter 23

Configuring D2 for Webtop users

Use Case: Configuring D2 as Basic Content Library

Users from various user communities use the Documentum repository as a content library or repository of records. If you are new to the D2 Documentum client or migrating from another Documentum client such as, Webtop, we recommend that you implement the following D2 configuration steps:

Note: Ensure that D2 is installed and you have a D2 user account to access D2-Config.

1. Create a dictionary to map the key value for your document type to the equivalent language. Example: Use the key **doc** and map it to English as **Generic Document**. For more information, refer to Configuring a Dictionary.
2. Create a property page for your documents. If the document types have shared attributes, you can create one property page for multiple document types or create multiple property pages for each document type. For more information, refer to Configuring a Property Page.
3. Create a creation profile and perform the following:
   a. Choose your dictionary.
   b. Select the key value from the dictionary.
   c. Map the key value to a document type.
   d. Map the key value to your property page.

   For more information, refer to Configuring Creation Profiles.
4. Create the following widgets to interact with the content:
   a. Doclist
   b. Repository Browser
   c. Property Page
   d. Renditions
   e. Relations
   f. Versions
   g. Favorites
   h. Searches
   i. Facets

      Note: To use the Facets widget, an xPlore server is required.

For more information, refer to List of Widgets.

5. To contain the widgets, create a workspace. for more information, refer to Configuring a D2 Client Workspace.
6. Create a context. In the context, you can define the permissions for a group of users to use the property page, widgets, and workspace configurations. For more information, refer to Configuring Contexts.
7. In the matrix, place a checkbox at the intersection of the group context and property page. For more information, refer to Organizing the Configuration Matrix.

To configure an advanced Content Library, perform the following additional steps:

1. Create a context specific to a document type rather than for a group of users. For example, a Procedure Document.
2. Add a auto link configuration to place the defined document type in a particular location.
3. Add a security configuration to define a set of permission for the document created.
4. Add a lifecycle configuration for documents to transition from `Draft` to `Released`.
5. Design a workflow in Workflow Manager or Process Designer and add a D2 workflow configuration that utilizes it.

Chapter 24

Formatting Date and Time

Understanding Date Formats

Date and time in D2 is displayed using the time zone of the D2 client that performs a create/update/delete action on an item. Daylight savings time is also considered (relative to the current time of the client machine).

Note: In Documentum Server, all date and time information is stored in UTC format.

You can configure date and time formats by changing their pattern strings. D2 interprets unquoted letters from A to Z and a to z as patterns representing the components of a date or time string. You can surround text in single quotes to avoid interpretation. The following table describes the defined letters:

Letter	Component	Presentation	Example
G	Era designator	Text	AD
y	Year	Year	1996 or 96
Y	Week year	Number	3
M	Month in year	Month	July or Jul or 07
w	Week in year	Number	27
W	Week in month	Number	2
D	Day in year	Number	189
d	Day in month	Number	10
F	Day of week in month	Number	2
E	Day in week	Text	Tuesday or Tue
a	AM/PM marker	Text	PM
H	Hour in day (0–23)	Number	0
k	Hour in day (1–24)	Number	24
K	Hour in AM/PM (0–11)	Number	0
h	Hour in AM/PM (1–12)	Number	12
m	Minute in hour	Number	30
s	Second in minute	Number	55
S	Millisecond	Number	978
z	Time zone	General time zone	Pacific Standard Time or PST or GMT-08:00
Z	Time zone	RFC 822 time zone	–0800

All other characters from A to Z and a to z are reserved.

Make use of rules for presentations to determine formatting. The following table describes how different string contexts affect a presentation:

Presentation	**Rule**
Text	If the number of pattern letters is 4 or more, the full form is used. Otherwise a short form is used if available. For parsing, both forms are accepted independent of the number of pattern letters.
Number	The number of pattern letters is the minimum number of digits required. If there are not enough numbers, the amount is zero-padded. For parsing, the number of pattern letters is ignored unless needed to separate adjacent fields.
Year	If the number of pattern letters is 2, the year is truncated to 2 digits. Otherwise the year is treated as a number. For parsing with the abbreviated year pattern (y or yy), the year is abbreviated relative to the century. The date is adjusted to be between 80 years before and 20 years after the creation of the SimpleDateFormat instance. For example, if a date using the format MM/dd/yy is created January 1, 1997, the string **`0/11/12`** is treated as January 11, 2012. The string **`05/04/64`** is treated as May 4, 1964. Note that a string must consist of exactly two digits as defined by **`Character.isDigit(char)`** to be parsed into the default century. Other numeric strings, such as a single-digit string, are parsed literally. For example, **`01/02/3`** is treated as January 2, 3 AD.
Month	If the number of pattern letters is 3 or more, the month is treated as text. Otherwise the month is treated as a number.

Presentation	Rule
General time zone	If the time zone has a name, it is treated as text. If the time zone represents a GMT offset value, the following syntax is used: **`GMTOffsetTimeZone: GMT Sign Hours: Minutes`** Where `Sign` is + or –, `Hours` is between 0 and 23, and `Minutes` is between 0 and 59. For parsing take digits from the Basic Latin block of the Unicode standard. The locale is independent. RFC 822 time zones are accepted for parsing.
RFC 822 time zone	For formatting use the following syntax: **`RFC822TimeZone: Sign TwoDigitHours Minutes`** Where `Sign` is + or –, `TwoDigitHours` is between 00 and 23, and `Minutes` is between 0 and 59.

Use the following table for examples of how D2 interprets date and time pattern strings:

Date and Time Pattern	Result
yyyy.MM.dd G 'at' HH:mm:ss z	2001.07.04 AD at 12:08:56 PDT
EEE, MMM d, ''yy	Wed, Jul 4, '01
h:mm a	12:08 PM
hh 'o''clock' a, zzzz	12 o'clock PM, Pacific Daylight Time
K:mm a, z	0:08 PM, PDT
yyyyy.MMMMM.dd GGG hh:mm aaa	02001.July.04 AD 12:08 PM
EEE, d MMM yyyy HH:mm:ss Z	Wed, 4 Jul 2001 12:08:56 –0700
yyMMddHHmmssZ	010704120856–0700

Chapter 25

Widgets Reference

List of Widgets

Any change to widget configurations in D2-Config requires Tools > Refresh Cache to be performed to purge cached data in D2 AppServer.

Use internal repository navigation widgets as described in the following table:

Name in D2 Config	Name in D2 Client	Description
BrowserWidget	Browser	Displays cabinets and folders. Enables uncluttered browsing of a repository tree. Required for use in a workspace when an IntelligentURL locateID is used to locate a document or folder object.
DoclistWidget	Document list	Displays content and virtual documents. Enables full browsing and content-seeking capabilities. Use this widget to access the content context menu. Displays results from Quick search and Predefined search widgets.
DocgalleryWidget	Thumbnail	Enables thumbnail previews for browsing content. You must set up a thumbnail server to show and customize thumbnails.

Name in D2 Config	Name in D2 Client	Description
PDFViewerWidget	PDF Viewer	Displays the PDF rendition of selected content. The widget displays a message if a PDF rendition is not found for selected content. The widget downloads the file from the application server even if you install and enable a BOCS server. **Note:** You can publish a message containing the ID of a dm_document (oam_id) from an external widget on the D2_EVENT_SELECT_OBJECT channel and trigger an associated internal widget such as the PDFViewerWidget on the D2_SELECT_EVENT _CHANNEL to render the PDF. The message must include icon parameter that contains dm_document to display the PDF rendition.
FavoritesWidget	Favorites	Displays a list of content marked as favorite.
CheckoutDocumentWidget	Checkout	Displays a list of checked-out content with user name and time of checkout.
CenterStageWidget	CenterStage browser	Enables browsing of CenterStage spaces. Only displays the Collaboration folder.
CommentsWidget	Comments	Enables viewing, creating, deleting, and replying to comments about content.
RecycleBinWidget	Recycle Bin	Enables managing and restoring deleted content. If you have administrator privileges, you can access the recycle bins of other users.

Use search widgets as described in the following table:

Name in D2 Config	Name in D2 Client	Description
QuickSearchWidget	Quick search	Enables full-text searches.
SearchFormWidget	Search query form	Enables using pre-configured query form searches. Administrators configure an instance of the search query form widget for each query form option. Select the widget instance that matches the query form search you want to use.
SearchWidget	Searches	Enables viewing, editing, and running past and saved searches.
FacetsWidget	Facets	Displays facet categories based on the search results along with the facet values for each category. The facet selection will also be displayed in the doclist breadbox. The breadbox displays the facets selection in the order you added or modified the facets. Add the focus event **D2_EVENT_SEARCH_RUN** to automatically focus on the facet widget while doing a search operation. **Note:** If the user has multiple workspaces open, the facets widget for only the workspace they are currently viewing is refreshed after a search is executed. In a workspace with multiple views, facets may refresh across all views in the workspace.

Use internal content properties widgets as described in the following table:

Name in D2 Config	Name in D2 Client	Description
PropertiesWidget	Properties	Displays properties of the selected content.
DetailsLocationsWidget	Locations	Displays a list of directory locations in which the selected content is found.

Name in D2 Config	Name in D2 Client	Description
DetailsVersionsWidget	Versions	Displays a list of the versions of the selected content.
DetailsRenditionsWidget	Renditions	Displays a list of renditions of the selected content.
DetailsRelationsWidget	Relations	Displays a list of what is linked to the selected content. This widget manages content distribution by allowing you to start distributions, edit the list of recipients, and generate reports.
DistributionWidget	Distribution	Displays a list of distributions sent to the user. This widget allows you to accept, reject, and stop distribution tasks.
DetailsAuditWidget	Audit	Displays a list of audited actions for the selected content.
ThumbnailWidget	Preview	Displays the selected content as a slideshow. You must set up an ADTS rendition server to render previews and storyboards.
VirtualDocumentWidget	Virtual document	Displays virtual document structure.
	Snapshots	Displays a list of virtual document snapshots for a virtual document selected in a Doclist or Virtual document widget.
DetailsRetentionsWidget	Retentions	Displays retention policies applied to the selected content.
DetailsMarkupsWidget	Markups	Displays markup policies for the selected content.

Use internal workflow widgets as described in the following table:

Name in D2 Config	Name in D2 Client	Description
TaskFoldersWidget	Tasks browser	Displays a list of tasks sorted by category that have been assigned to you. Use this widget to refresh the Workflow task list widget.
WorkflowOverviewWidget	Workflow history	Displays a list of past and current events to show workflow progress. You must have at least queue manager permission to access this widget.
WorkflowPreviewWidget	Graphical workflow	Displays a graphical view of the workflow. Use this widget to quickly determine the current status of a task in a workflow and the upcoming steps.
TasksWidget	Workflow task list	Displays a list of tasks that have been assigned to you. Use this widget to access the workflow context menu.
TaskOverviewWidget	Task overview	Aggregates information from other task widgets into one widget for easy access. Includes a toolbar that allows the user to perform common actions on tasks, a Details panel containing summary and instruction content, a Note panel for annotating tasks, and full access to task reference documents.
TaskDetailsWidget	Task details	Displays the subject and message of selected task.
TaskNotesWidget	Task notes	Displays a list of accompanying notes to the selected workflow.
TaskAttachmentWidget	Task attachment	Displays a list of content attached to the selected task.
TaskPerformersWidget	Workflow performers	Displays a list of users organized by groups assigned to the workflow.

Use administration widgets as described in the following table:

Name in D2 Config	Name in D2 Client	Description
AdminUsersWidget	User	Displays a list of users for the repository. Use this widget to add, edit, and remove user accounts and to change group memberships.
AdminGroupsWidget	Group	Displays a list of user groups for the repository. Use this widget to add or edit user groups.
AdminDictionariesWidget	Dictionaries	Displays a list of repository dictionaries. Use this widget to view, export, and configure dictionaries and values. **Note:** AdminDictionariesWidget is very slow with large dictionaries (300+ entries).
AdminTaxonomiesWidget	Taxonomies	Displays a list of repository taxonomies. Use this widget to view, export, and configure taxonomies and values.

Chapter 26

Jobs Reference

List of D2 Jobs

Jobs are repository objects that automate method object execution. Methods associated with jobs are executed automatically on a user-defined schedule. The properties of a job define the execution schedule and turn execution on or off.

D2 installs the Documentum jobs to the repository during installation. You can configure jobs in an external software, such as Documentum Administrator, to perform scheduled tasks. The following table describes the jobs available to D2.

Name: D2CreateRendition **Description**: Request rendition of content and its components. **Frequency**: Once per hour **Default state**: Inactive	**Parameters** • **`id`**: The content ID.

Name: D2ImportDictionary **Description**: Import or update dictionaries from Excel or .csv documents. **Frequency**: Once per day **Default state**: Inactive	**Parameters** • **`folder`**: Path of folders containing the files separated by comma. • **`separator`**: Defines the separating character for .csv documents. • **`overwrite`**: Enables erasing the dictionary. • **`sorted`**: Enables sorting the dictionary. • **`update`**: Enables updating autolinking with the imported dictionary.

Name: D2JobBocsPreCache **Description**: The job will pre-cache documents on all BOCS servers using the BOCS Pre-Cache mechanism. The documents that are pre-cached are based on the D2 BOCS Cache configurations and Document Contexts applied to them within the D2-Config matrix. For example, if a BOCS Cache configuration has been created with a network location, then that configuration on the matrix is checkmarked against a Context for documents which have a published status. **Frequency**: Daily **Default state**: Inactive	**Parameters** None.

Name: D2JobClean **Description**: Delete unused **dm_acl** objects and annotations. **Frequency**: Once per day **Default state**: Active	**Parameters** • **clean_native_note**: By default, enables cleaning of annotations. Set false to ignore annotations. • **clean_hyperlink**: Set to true to clean the d2_link orphan objects. Default is false.

Name: D2JobCore **Description**: Re-apply configurations to existing objects. **Frequency**: Once per day **Default state**: Inactive	**Parameters** • **dql_filter select r_object_id from dm_document**: Set a DQL filter to select objects related to the job. • **create**: By default, does not apply the job to content during creation. Set true to apply during creation. • **naming**: If create is true, by default apply naming during creation. Set false to avoid applying naming. • **autolink**: By default, applies autolink for property regeneration. Set false to avoid property regeneration. • **security**: By default, applies security to the job. Set false to avoid applying security. • **apply_for_vd**: By default, does not apply the job to child content. Set true to apply to child content.

Name: D2JobCoreDeQueue **Description**: Apply D2CoreMethod on content located in **d2c_mass_create_queue**. **Frequency**: Once per day **Default state**: Active	**Parameters** • **scan_queue**: By default, executes a scan on the queue. Set false to prevent the scan. • **naming**: By default, apply naming after the queue is scanned. Set false to apply naming when properties are regenerated. • **create**: Executes naming by simulating content creation.

Name: D2JobDelegation **Description**: Delegate all pending tasks for a user. **Frequency**: Once per hour **Default state**: Active	**Parameters** None.

Name: D2JobDocbaseUpdate **Description**: Update autolinking after a dictionary modification. Update requests are posted in the **d2_update_docbase_queue** **Frequency**: Once per day **Default state**: Active	**Parameters** None.

Name: D2JobImportMassCreate **Description**: Import and fill content with Documentum properties based on XML files linked to each file. XML files must be composed of a root element, document attribute files, and repeating attributes listed under the value tag. `filename`-meta.xml enables import of XML content as well as metadata. **Frequency**: Once per day **Default state**: Inactive	**Parameters** • **`folder`**: Path of folders containing the files separated by comma. • **`imported_file_folder`**: Optional parameter for defining the folder to place successfully imported files. The default setting creates a folder within the source folder. • **`createconfig`**: Optional parameter for setting the **`object_name`** of the creation profile to use. Default setting uses the **`r_object_type`** found in the XML file. *Documentum Server Fundamentals* contains further information about **`r_object_type`**. • **`args`**: Sets the document type to use for values. The parameter is only required when you set a **`createconfig`**. • **`async`**: Use asynchronous creation. Default setting is false. This parameter is no longer used due to the usage of **D2JobCoreDeQueue**. • **`naming`**: By default, apply naming during the creation process. Set false to apply naming when properties are regenerated. • **`unicity`**: By default, control is deactivated after naming. Set true to activate control.

Name: D2JobImportTaxonomy **Description**: Import or update taxonomies from Excel or .csv documents. **Frequency**: Once per day **Default state**: Inactive	**Parameters** • **`folder`**: Path of folders containing the files separated by comma. • **`separator`**: Defines the separating character for .csv documents.

Name: D2JobLifecycleBatch **Description**: Change the lifecycle state of content based on context. **Frequency**: Once per day **Default state**: Active	**Parameters** None.

Name: D2JobMailing **Description**: Send mail based on context. **Frequency**: Once per day **Default state**: Active	**Parameters** None.

Name: D2JobRemoveEmptyFolder **Description**: Remove empty folders from the repository. **Frequency**: Once per day **Default state**: Inactive	**Parameters** • **`paths`**: List of paths in the repository to scan separated by a comma. • **`parameters`**: Specifies the **`dm_folder`** subtype to delete. Default setting is **`dm_folder`**.

Name: D2JobSubscription **Description**: Process items from d2_subscription_queue to send notifications for events. **Frequency**: Every 5 minutes **Default state**: Active	**Parameters** None.

Name: D2JobSubscriptionSendMail **Description**: Process items from **`d2_subscription_queue`** to send notifications for events if notification differed is selected in the subscription component. **Frequency**: Every 5 minutes **Default state**: Active	**Parameters** None.

Name: D2JobWFCleanerWorkflows **Description**: Clean the data of groups and aliases created dynamically by workflows when the workflow has ended. **`d2_workflow_tracker`** changes to the ended state. **Frequency**: Once per day **Default state**: Active	**Parameters** None.

Name: D2JobWFCleanPopHistory **Description**: Clean email history table **d2_wf_pop** and alert administrators of possible bugs in reject and accept messages. Specific to Domino server. **Frequency**: On demand, or once per month. **Default state**: Active	**Parameters** • **month_offset**: Sets the number of months to clean. • **full_purge**: By default, deletes all mails flagged as a potential problem. Set to **false** to prevent full purge.

Name: D2JobWFLaunchScheduledWorkflows **Description**: Scan all **d2_workflow_tracker** states for waiting and launches workflows. **d2_workflow_tracker** changes to the ongoing state. **Frequency**: Once per day **Default state**: Active	**Parameters** None.

Name: D2JobWFReceiveTaskMail **Description**: Scan email accounts, recover messages, and extract job identification of tasks. Receive responses from external tasks by mail. **Frequency**: Every 15 minutes **Default state**: Active	**Parameters** None.

Name: D2JobWFSendTaskMail **Description**: Scan email accounts, recover messages, and extract job identification of tasks. Send external tasks by mail. **Frequency**: Every 15 minutes **Default state**: Active	**Parameters** None.

Name: D2JobWFWorkflowsNotifications **Description**: Send notification if workflow has not ended after the planned end date. **Frequency**: Once per day **Default state**: Active	**Parameters** • **pause**: Sets an interval in milliseconds between each mail sent to reduce overload.

OpenText Documentum Administrator User Guide provides details about creating and using jobs.

List of C2 Jobs

Name: C2JobRendition **Description**: Create a C2 static rendition if a C2 method does not create the file. Launching the job adds a static rendition request to the queue. **Frequency**: Once per hour **Default state**: Active	**Parameters** None.

Chapter 27

Custom Actions Reference (For D2 Client 3.1 only)

List of Custom Actions

You can use custom actions when configuring GUI buttons. The following table describes the actions available for use:

Action	Parameters	Parameter description
launchIE	sType: select the window mode to use.	Set modal, modeless, or window.
	sURL: type the URL to be opened in a new window.	Add to the URL docbase (current repository name), adminlogin (Documentum administrator name), adminticket (administrator connection ticket), login (current user login), ticket (current user ticket), domain (domain name), and id (list of IDs separated by a comma).
	sFeatures: specify the features of the opened window.	For modal or modeless windows: • dialogHeight: set the height in pixels. • dialogLeft: set the left position relative to the top-left corner. • dialogTop: set the top position relative to the top-left corner. • dialogWidth: set the width in pixels. • center: yes, no, 1, 0, on, or off to specify whether to center the window or not. Default setting is yes. For window mode: • directories: yes or no to show navigation buttons. • location: yes or no to show the address bar. • menubar: yes or no to show the menu bar. • resizable: yes or no to enable modification of the window size. • scrollbars: yes or no to show scroll bar. • status: yes or no to show status bar. • toolbar: yes or no to shown

Action	Parameters	Parameter description
launchApp: for security reasons, you can only use the function if canUseAdminInLaunchApp is enabled in D2-Client.properties .	sPath: set the path of the executable of the app you want to run.	Use \ \ instead of \ in the path. For example c:\ \Documentum \ \Checkout\ \Laborantum\ \Copy_Struct.exe
	bIsBlocking: indicate if the executable blocks D2.	Boolean.
	bUseAdmin: indicate if the administrator's session must be used.	Boolean.
	bNeedOtherSelection: enable opening of a document browser to set a second selection in the repository.	Boolean.
launchMethod: launch a method once on all Documentum content. The list of content IDs is in the parameter selectedIds.	sMethodName: set the name of the method to launch.	Type the method name.
	bRefresh: set whether to refresh D2-Client after method launch.	Boolean.
	sParameters: define the list of parameters.	For example, parameter1 =xxx&parameter2=yyy
	bLaunchAsync: set whether to use an asynchronous launch.	Boolean.
launchMethodOnEachIds: launch a method on each selected Documentum content. The content ID is the parameter id.	sMethodName: the name of the method to launch.	Type the method name.
	bRefresh: refresh D2-Client after the method is run.	Boolean.
	sParameters: define the list of parameters.	For example, parameter1 =xxx&parameter2=yyy
	bLaunchAsync: set whether to use an asynchronous launch.	Boolean.

Parameters starting with an **s** are strings and must be enclosed in single quotes. Parameters beginning with a **b** are Boolean and can be set as **true** or **false**.

Chapter 28

Widget Communication Channel Reference

List of Widget Communications Channels

Widgets use communication channels to send messages. The messages contain strings of information that dictate interaction between widgets and repositories. There are two types of communication channels:

- **Event Channels**: These channels are used to communicate about an event that has already occurred. Several widgets can send a message in the same channel. Sometimes the content of the message can be slightly different, with few or more parameters. Every message has data filled in its built-in parameters.
- **Action Channels**: These channels are used to request certain actions from the portal. Several widgets can send a message to the same channel and sometimes the content of the message can be slightly different, with few or more parameters. Almost every message has data filled in its built-in parameters.

Select a communication channel when creating and configuring external widgets as described in the following table:

Channel name	Event it communicates	Parameters
D2_EVENT_CUSTOM	Uses an external widget. D2 uses the event to communicate between widgets.	Parameters depend on the custom event and should be added to allow subscribers to identify specific events.
D2_EVENT_DM_TICKET _GENERATED	A message has been sent using **`D2_ACTION_DM_TICKET _GENERATE`**.	**`ticket`**: Documentum ticket. **`ticket_timeout`**: Documentum ticket timeout in milliseconds. **`ticket_time_generated`**: Time of ticket generation in posix time. **`ticket_time_expiration`**: Time of ticket expiration in posix time.

Channel name	Event it communicates	Parameters
D2_EVENT_SELECT_OBJECT	An object (folder or document) has been selected.	**parentId**: ID of the parent object. **parentType**: Type of the parent object.
D2_EVENT_SELECT _OBJECTS	Multiple objects have been selected.	**oam_id**: List of object IDs separated by **SEPARATOR_VALUE**.
D2_EVENT_LOCATED _OBJECT	An object (folder or document) has been located.	**oam_id**: ID of the object. **locationType**: Location type, such as the widget type in which the content is shown. **locateId**: ID of the object to locate. **locateName**: Name of the object to locate. **version**: Version of the object to locate. **chronicleId**: ChronicleID of the object to locate. **collapseId**: List of IDs of the folders to reload.
D2_EVENT_LOCATED _SEARCH	A search has been located.	**oam_id**: ID of the object.
D2_EVENT_LOCATED_TASK	A task has been located.	**oam_id**: ID of the object.
D2_EVENT_OBJECT _DESTROYED	An object has been destroyed. It can be a folder, a document, a relation, and so on.	**oam_id**: List of object IDs separated by **SEPARATOR_VALUE**.
D2_EVENT_OBJECT _CREATED	An object has been created. It can be a folder, a document, and so on.	The channel only applies to the Doclist widget. **oam_id**: ID of the folder. **pathId**: Path ID of the object. For example, **/reponame /0c0d04e580000105 /0b0d04e580055dd8**
D2_EVENT_COMMENT _ADDED	Creates a comment.	The channel only applies to the Comments widget. **comment**: ID of the comment.

Channel name	Event it communicates	Parameters
D2_EVENT_FILTER _CHANGED	The global filter of the workspace has been changed.	
D2_EVENT_CHECKOUT _STATE_CHANGED	Changes content checkout state.	
D2_EVENT_PREFERENCES _CHANGED	The preferences of the user have been changed.	
D2_EVENT_PREFERENCES _LOADED	The preferences of the user have been loaded.	
D2_EVENT_WIDGET_GET _FOCUS	A widget gets the focus.	
D2_EVENT_WIDGET_FOCUS	A widget has been set to active.	**`config`**: Widget configuration name. **`widgetType`**: set the value to the widget type. If you want to set a specific instance of a widget, use **`config`** and set the value to the widget name.
D2_EVENT_WIDGET _DISPLAYED	A widget is displayed.	**`config`**: Widget configuration name. **`widgetType`**: Widget type of the event source.
D2_EVENT_WIDGET _HIDDEN	A widget is hidden.	**`config`**: Widget configuration name. **`widgetType`**: Widget type of the event source.
D2_EVENT_SEARCH_RUN	A search has been run.	The channel only applies to the Searches widget and the Doclist widget. **`oam_id`**: ID of the search.. **`searched_type`**: Search type.
D2_EVENT_SEARCH_SAVED	A search has been saved.	The channel only applies to the Searches widget. **`oam_id`**: ID of the search.. **`is_public`**: Set to **`true`** if the search is public or shared.
D2_EVENT_SEARCH _CATEGORY_CREATED	A search category has been created.	The channel only applies to the Searches widget.

Channel name	Event it communicates	Parameters
D2_EVENT_WORKFLOW _ABORTED	A workflow has been aborted.	The channel only applies to the Searches widget. **oam_id**: List of object IDs separated by **SEPARATOR_VALUE**. **widgetType**: set the value to the widget type associated with the event.
D2_EVENT_SELECT_TASK	A task has been selected.	**oam_id**: ID of the task.
D2_EVENT_SELECT_TASK _FOLDER	A task folder has been selected in the task manager widget.	The channel activates task details, task attachments, and task notes. **oam_id**: ID of the task folder.
D2_EVENT_SELECT_TASK _NOTE	A task note has been selected.	The channel only applies when communicating from the Task browser widget to the Task list widget. **oam_id**: ID of the task note.
D2_EVENT_SELECT_TASK _PERFORMER	A task performer has been selected in the task performers widget.	**oam_id**: ID of the task performed. The following are copied from the selected item: **icon** **id** **locked** **style** **thumbnail** **version** **immutable**: D2 sets this to **true** if the item is immutable.
D2_EVENT_TASK_READ _STATE_CHANGED	The read state of a task changed.	**oam_id**: ID of the task. **locateId**: ID of the task to locate. **parentId**: ID of the parent task.

Channel name	Event it communicates	Parameters
D2_EVENT_TASK_PRIORITY _CHANGED	The priority of a task changed.	**oam_id**: ID of the task. **parentId**: ID of the parent task.
D2_EVENT_TASK _PROCESSED	A task has been forwarded or rejected.	**oam_id**: ID of the task.
D2_EVENT_WIDGET _INITIALIZED	A widget has been initialized.	
D2_EVENT_WORKSPACE _CLOSED	A workspace has been closed.	**oam_cuid**: Uid of the workspace tab that was closed.

Channel name	Event it communicates	Parameters
D2_EVENT_THEME _CHANGED	The theme has been changed. The theme data is included within the message.	**oam_cuid**: Uid of the container. The following are copied from the theme: **background_color** **background_color_type** **background_color _gradient_end** **background_color _gradient_start** **background_color _texture_name** **header_color** **label**: Theme label. **name**: Theme name. **selection_blur_color** **selection_color** **border_color** **title_color** **tab_active_color** **tab_border_color** **tab_inactive_color** **dialog_background _white**: D2 sets this to **true** if the dialog background is white. **tab_colored_text**: Boolean for whether the tabs use colored text.
D2_EVENT_RENDITION _ADDED	A rendition has been added to a document.	The channel only applies to the Renditions widget. **oam_id**: ID of the content.

Channel name	Event it communicates	Parameters
D2_EVENT_IFRAME_ACTIVE	An iframe has been activated.	**oam_value**: Boolean to indiciate if the iframe is activated or deactivated.
D2_EVENT_IFRAME_INIT	An iframe has been opened.	**channels**: List of events. **D2_EVENT_THEME_CHANGED** contains information about the iframe theme.
D2_EVENT_SELECT _TAXONOMY	A taxonomy has been selected.	The channel only applies to the Properties widget. **oam_id**: ID of the taxonomy. The event copies the taxonomy item attributes.
D2_EVENT_SELECT _DICTIONARY	A dictionary has been selected.	The channel only applies to the Properties widget. **oam_id**: ID of the dictionary. The event copies the dictionary item attributes.
D2_EVENT_SELECT_USER	A user has been selected.	The channel only applies to the Properties widget. **oam_id**: ID of the user. The event copies the user item attributes.
D2_EVENT_USER_CREATED	A user has been created.	The channel only applies to the Users widget. **oam_id**: ID of the user.
D2_EVENT_SELECT_GROUP	A group has been selected.	The channel only applies to the Properties widget. **oam_id**: ID of the group. The event copies the group item attributes.
D2_EVENT_GROUP _CREATED	A group has been selected.	The channel only applies to the Groups widget. **oam_id**: ID of the group.

Channel name	Event it communicates	Parameters
D2_EVENT_SELECT _RELATION	A relation has been selected.	The channel only applies to the Relations widget. **oam_id**: ID of the relation. The event copies the relation item attributes.
D2_EVENT_SELECT _RENDITION	A rendition has been selected.	The channel only applies to the Renditions widget. **oam_id**: ID of the rendition. The event copies the rendition item attributes.
D2_EVENT_SELECT _RETENTION	A retention policy has been selected.	The channel only applies to the Retentions widget. **oam_id**: ID of the retention policy. The event copies the retention policy item attributes.
D2_EVENT_SELECT _MARKUP	A markup policy has been selected.	**oam_id**: ID of the markup policy. The event copies the markup policy item attributes.
D2_EVENT_SELECT _SEARCH	A search has been selected.	The channel only applies to the Doclist widget. **oam_id**: ID of the search. The event copies the search item attributes.
D2_EVENT_SELECT_FACET	A facet has been selected.	The channel only applies to the Doclist widget. **oam_id**: ID of the facet. The event copies the facet item attributes.
D2_EVENT_SELECT _QUERYFORM	A query form has been selected.	The channel only applies to the Doclist widget. **oam_id**: ID of the query form search. The event copies the query form search item attributes.

Channel name	Event it communicates	Parameters
D2_EVENT_SELECT _DISTRIBUTION	A distribution configuration has been selected.	**oam_id**: ID of the distribution. The event copies the distribution item attributes.
D2_EVENT_SELECT _WORKFLOWTRACKER	A workflow tracker has been selected.	**oam_id**: ID of the workflow overview. The event copies the workflow overview item attributes.
D2_EVENT_SELECT _WORKFLOW_ACTIVITY	A workflow activity has been selected.	**oam_id**: ID of the workflow activity. The event copies the workflow activity item attributes.
D2_EVENT_SELECT_AUDIT	An audit event has been selected.	**oam_id**: ID of the audit. The event copies the audit item attributes.
D2_EVENT_SELECT _SNAPSHOT	A virtual document snapshot has been selected.	The channel only applies to the Snapshots widget. **oam_id**: ID of the virtual document snapshot. The event copies the virtual document snapshot item attributes.
D2_EVENT_VD_TEMPLATE _SELECTED	A virtual document template form has been selected.	The channel only applies to the Snapshots widget. **oam_id**: ID of the virtual document template. The event copies the virtual document template item attributes.
D2_EVENT_DRAG_DROP _STARTED	A drag and drop event started.	**oam_id**: List of content IDs.
D2_EVENT_DRAG_DROP _ENDED	A drag and drop event stopped.	**oam_id**: List of content IDs.

Channel name	Event it communicates	Parameters
D2_EVENT_IMPORTED _FROM_URL	Content from a URL has been imported.	**oam_id**: View position (0 if none). **cancelReason**: Reason for cancellation if the operation is canceled. **result**: Contains the result if the operation is completed. **error**: Contains the error if the operation fails.
D2_EVENT_EXPORTED _FROM_URL	Content from a URL has been exported.	**oam_id**: View position (0 if none). **cancelReason**: Reason for cancellation if the operation is canceled. **result**: Contains the result if the operation is completed. **error**: Contains the error if the operation fails.
D2_EVENT_DOWNLOAD _URLS_RECEIVED	The **D2_ACTION_DOWNLOAD _URLS_REQUEST** has been published.	**urls**: Contains a concatenated string of URLs.

Send messages through channels to provide information about an action to be performed on content as described in the following table:

Note: The CLIPBOARD_SERVLET_VIEW actions listed below require the user to copy URLs from a pop-up dialog. Non-SERVLET actions do not feature a pop-up.

Channel name	Requests that D2	Parameters
D2_ACTION_OPEN_FOLDER	Opens a folder in the portal.	The channel only applies to the Doclist widget. **oam_id**: ID of the folder to open. **collapseId**: List of IDs of the folders to reload. **pathId**: Path ID of the object. For example, **/reponame /0c0d04e580000105 /0b0d04e580055dd8**
D2_ACTION_OPEN_URL	Opens a URL in a new browser window.	**url**: the URL to open.

Channel name	Requests that D2	Parameters
D2_ACTION_OPEN_VD	Opens a virtual document in the portal.	The channel only applies to the Virtual Documens widget. **oam_id**: ID of the virtual document to open.
D2_ACTION_OPEN _SNAPSHOT	Opens a virtual document snapshot.	The channel only applies to the Snapshots widget.
D2_ACTION_LOCATE _OBJECT	Locates an object in the portal.	The channel only applies to the Locations widget. **oam_id**: ID of the object to locate.
D2_ACTION_LOCATE_TASK	Locates a task in the portal.	The channel only applies to the Locations widget. **oam_id**: ID of the task to locate.
D2_ACTION_LOCATE _SEARCH	Locates a saved search in the portal.	The channel only applies to the Locations widget. **oam_id**: ID of the task to locate.
D2_ACTION_REFRESH _DOCUMENT	Refreshes the widget where the document is displayed.	**oam_id**: ID of the document. **import**: Present if the refresh is related to an import.
D2_ACTION_COPY_LINK_IN _CLIPBOARD	Copies the smartlink to the object in the clipboard.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK_IN _CLIPBOARD_LOCATE	Copies the smartlink to the object in the clipboard.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK_IN _CLIPBOARD_VIEW	Views the document.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK_IN _CLIPBOARD_VIEW_NATIVE	Views the document without renditions or metadata.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK_IN _CLIPBOARD_VIEW_WITH _NATIVE_ANNOTATION	Views the document with native annotations.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK _IN_CLIPBOARD_SERVLET _VIEW	Views the document in the servlet view. **Note:** The servlet view opens the file and performs the action without login to the D2 and without having to go through the D2 user interface.	**oam_id**: ID of the object to locate.

Channel name	Requests that D2	Parameters
D2_ACTION_COPY_LINK _IN_CLIPBOARD_SERVLET _VIEW_NATIVE	Views the document in the servlet view without renditions or metadata.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK _IN_CLIPBOARD_SERVLET _VIEW_CURRENT	Views the current version of the document in the servlet view.	**oam_id**: ID of the object to locate.
D2_ACTION_COPY_LINK _IN_CLIPBOARD_SERVLET _VIEW_NATIVE_CURRENT	Views the current version of the document with native content in the servlet view.	**oam_id**: ID of the object to locate.
D2_ACTION_DUMP	Displays a dump of the object.	**oam_id**: ID of the object to dump.
D2_ACTION_CONTENT _CHECKIN	Checks in a document.	**oam_id**: ID of the document to check in.
D2_ACTION_CONTENT _IMPORT_AS_VERSION	Imports a new version of a document.	**oam_id**: ID of the document.
D2_ACTION_CONTENT _CHECKIN_NATIVE _ANNOTATION	Checks in the native annotation of a document.	**oam_id**: ID of the document.
D2_ACTION_CONTENT _PRINT	Prints a document.	**oam_id**: ID of the document.
D2_ACTION_CONTENT _COMPARE	Compares two documents.	**oam_id**: IDs of the documents to compare.
D2_ACTION_CONTENT _EXPORT	Exports a document.	**oam_id**: ID of the document to export. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _EXPORT_NATIVE	Exports a document without including renditions or metadata.	**oam_id**: ID of the document. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _EXPORT_FOLDER	Exports a folder.	**oam_id**: ID of the folder. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _EXPORT_FOLDER_NATIVE	Exports a folder without including renditions or metadata.	**oam_id**: ID of the folder. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _VIEW	Views a document.	**oam_id**: ID of the document to view. **DOWNLOAD_LOCATION**: Location for download.

Channel name	Requests that D2	Parameters
D2_ACTION_CONTENT _VIEW_NATIVE	Views a document without renditions or metadata.	**oam_id**: ID of the document to view. **DOWNLOAD_LOCATION**: Location for download. **Note:** : The minimum permission required for D2_ACTION_CONTENT _VIEW_NATIVE to work is version.
D2_ACTION_CONTENT _EDIT	Edits a document.	**oam_id**: ID of the document. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _CHECKOUT	Checks out a document.	The channel only applies to the Checkout widget. **oam_id**: ID of the document to check out. **DOWNLOAD_LOCATION**: Location for download.
D2_ACTION_CONTENT _CANCEL_CHECKOUT	Cancels the check out of a document.	**oam_id**: ID of the document. **locateAndRefresh**: Boolean to determine if the location and refresh occurred. **refreshCheckoutState**: Boolean to determine if the checkout state is refreshed.
D2_ACTION_CONTENT _EDIT_WITH_NATIVE _ANNOTATION	Edits a document with native annotations.	**oam_id**: ID of the document.
D2_ACTION_CONTENT _VIEW_WITH_NATIVE _ANNOTATION	Views a document with native annotations.	**oam_id**: ID of the document.
D2_ACTION_CONTENT _EDIT_NATIVE _ANNOTATION	Edits the native annotations of a document.	**oam_id**: ID of the document.

Channel name	Requests that D2	Parameters
D2_ACTION_COMMENT	Shows the comment creation dialog box. Set **parentCommentId** as the parent comment.	The channel only applies to the Comments widget. **oam_id**: ID of the document. **parentCommendId**: ID of the parent comment. **id**: ID of the comment. **editor**: Richtext body of the comment.
D2_ACTION_CONTENT _CREATE	Shows the content creation dialog box. Set **parentId** as the parent folder as the content location if no autolink is set.	**oam_id**: ID of the base document used for inheritance. **parentId**: ID of the parent folder. D2 creates content inside the specified folder if no autolink is set.
D2_ACTION_CONTENT _IMPORT	Shows the content import dialog box. Set **parentId** as the parent folder. This folder is used to create the document inside it if no autolink is set.	**oam_id**: ID of the base document used for properties inheritance. **parentId**: ID of the parent folder. D2 creates content inside the specified folder if no autolink is set. **files**: list of files on the client machine.
D2_ACTION_FOLDER _CREATE	Shows the folder creation dialog box. Set the **root_object_type** to **dm_folder** or **dm_cabinet**.	**oam_id**: ID of the folder in which the new folder is being created. **root_object**: set to **dm_folder** or **dm_cabinet** to specify the folder type.
D2_ACTION_OBJECT _DESTROY	Shows the content destruction dialog box. Set **parentId** as the id of the parent of the object.	**oam_id**: ID of the object to destroy.
D2_ACTION_PERMISSIONS _SHOW	Shows the permissions dialog box.	**oam_id**: ID of the object.
D2_ACTION_RENDITION _ADD	Shows the add rendition dialog box.	**oam_id**: ID of the content.

Channel name	Requests that D2	Parameters
D2_ACTION_RENDITION _REQUEST	Requests a rendition.	**oam_id**: ID of the content.
D2_ACTION_RELATION _CREATE	Shows the relationship creation dialog box.	**oam_id**: ID of the content.
D2_ACTION_RELATION _DESTROY	Shows the relationship destruction dialog box. Set **associate_id** as the ID of the relation to destroy.	**oam_id**: ID of the content. **associate_id**: ID of the relation.
D2_ACTION_MASS_UPDATE	Runs a mass update configuration. Set **config_name** as the name of the mass update configuration.	**oam_id**: ID of the content. **config_name**: name of the mass update configuration.
D2_ACTION_SYNCPLICITY	Shows the Syncplicity dialog box.	**oam_id**: ID of the content.
D2_ACTION_CUT	Performs a cut operation.	**oam_id**: ID of the content. **parentId**: ID of the parent content.
D2_ACTION_COPY	Performs a copy operation.	**oam_id**: ID of the content. **parentId**: ID of the parent content.
D2_ACTION_PASTE	Performs a paste operation.	**parentId**: ID of the parent content.
D2_ACTION_PASTE_LINK	Pastes a link of the clipboard content.	**parentId**: ID of the parent content.
D2_ACTION_CLIPBOARD _GET	Retrieves the clipboard content. This action triggers **D2_ACTION _CLIPBOARD_CONTENT**.	
D2_ACTION_CLIPBOARD _CONTENT	Performs an operation on the clipboard content.	**clipboard-operation**: Operation performed from the clipboard. **clipboard-contentId**: ID of the clipboard content. **clipboard-value**: Value of the clipboard content.

Channel name	Requests that D2	Parameters
D2_ACTION_DOWNLOAD _URLS_REQUEST	Requests a list of document URLs for content.	**oam_id**: ID of the content. **format**: Format of the content. **pageModifier**: Page modifier. **pagenumber**: Page number.
D2_ACTION_IMPORT_FROM _URL	Imports content from a URL.	**oam_id**: ID of the content. **url**: URL of the content. **isModel**: Set to **true** to make the content modal.
D2_ACTION_EXPORT_FROM _URL	Exports content from a URL.	**oam_id**: ID of the content. **url**: URL of the export location.. **useViewLocation**: Set to **true** to use the view location, otherwise the export opens the application selection dialog box. **hasDataPost**: Boolean to indicate whether the export operation has information in the **dataPost** parameter. **dataPost**: The values to post.
D2_ACTION_SENDMAIL	Sends mail.	**oam_id**: ID to send. You do not need to use **oam_id** if you used **id**. **id**: ID to send. **type**: Object type. **parentType**: Parent content type. Optional.
D2_ACTION_FAVORITE _ADD	Adds content to the list of favorites.	**oam_id**: ID of the content.
D2_ACTION_FAVORITE _REMOVE	Removes content from the list of favorites.	**oam_id**: ID of the content.

Channel name	Requests that D2	Parameters
D2_ACTION_ACROBAT _ANNOTATION_OPEN	Opens an Adobe Acrobat annotation.	**oam_id**: ID of the content.
D2_ACTION_DM_TICKET _GENERATE	Generates a Documentum ticket.	

Send messages through channels to perform interface actions as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_DISPLAY _DIALOG	Shows a dialog box.	**oam_id**: ID of the dialog box. **raw**: A boolean that retrieves the raw **oam_id** content when set to **true**. Optional. **DIALOG_NAME**: Dialog box name. **MANAGER**: Manager class name. Optional. **parentType**: Parent object type. Optional. **mode**: Create, edit, or import mode of the dialog box. Optional.
D2_ACTION_EXECUTE _MANAGER	Executes a manager class for a dialog box.	**oam_id**: ID of the dialog box. **raw**: A boolean that retrieves the raw **oam_id** content when set to **true**. Optional. **DIALOG_NAME**: Dialog box name. **MANAGER**: Manager class name.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_EXECUTE	Executes an action.	**`rId`**: Returned ID. By default, this is set to the message ID. **`rType`**: Returned type (JS, NATIVE, or EVENT). By default, this does nothing. **`rAction`**: Returned action (inline Javascript, native function name, or event name). By default, this does nothing. **`eMode`**: Entry mode (set as SINGLE to call the action for one ID, MONO to call the action once for each ID, or MULTI to call the action once with a list of all provided IDs). By default, this is set to MULTI. **`eCall`**: Entry call for when eMode is set to **`MONO`** (set as SEQUENTIAL to call the actions one at a time by waiting for each service call to return or PARALLEL to call the actions at the same time). By default, this is set to SEQUENTIAL. **`eMethod`**: Name of the entry method. This is only required for D2FS services in conjunction with the eService parameter. **`eService`**: Name of the plug-in interface service without the **`I`** prefix and **`Service`** suffix.
D2_ACTION_REFRESH_WIDGET	Refreshes the widget.	**`oam_id`**: ID of the widget. **`oam_target_type`**: Widget type.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_RELOAD _WORKSPACE	Refreshes the active workspace.	**oam_id**: ID of the workspace. **option_same_repository**: Determines if the workspace is in the same repository.
D2_ACTION_WIDGET _FULLSCREEN	Sets the widget to fullscreen view.	**original_widget**: Original widget ID. **original_event**: Original event ID. **original_cuid**: Original cuid. **original_global**: Original global ID. **url**: URL of the widget.

Send messages through channels to provide information about an action to be performed on distributions as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_DISTIBUTION _ACCEPT	Accepts the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.
D2_ACTION_DISTRIBUTION _REJECT	Rejects the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.
D2_ACTION_DISTRIBUTION _PREPARE	Prepares the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.
D2_ACTION_DISTRIBUTION _LAUNCH	Launches the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_DISTRIBUTION_STOP	Stops the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.
D2_ACTION_DISTRIBUTION_REPORT	Reports the distribution. Set **config_name** as the distribution configuration name.	**oam_id**: ID of the content. **config_name**: name of the distribution.
D2_ACTION_SUBSCRIBE	Subscribes to a distribution.	**oam_id**: ID of the distribution.

Send messages through channels to provide information about an action to be performed on searches as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_SEARCH_DOCUMENT	Searches the repository for content.	**oam_id**: ID of the search. **locateId**: ID of the object to search. **searched_type**: Search type name. **facet_attr_name**: Facet attribute name. **facet_attr_value**: Facet attribute value. **reset_facet_attr_name**: Reset the facet attribute name.
D2_ACTION_SEARCH_HIGHLIGHT_TERMS	Highlight search terms.	**oam_value**: Binary value for whether to highlight search terms (0 or 1).
D2_ACTION_ADVANCED_SEARCH	Shows the advanced search dialog box.	**oam_id**: ID of the search. If you set this to **null**, the action prompts the user to create a new advanced search.
D2_ACTION_SEARCH_CATEGORY_DIALOG	Shows the advanced search category dialog box.	
D2_ACTION_PREFERENCES_SHOW	Shows the user preferences dialog box.	

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_QUERYFORM _SHOW	Shows the query form search dialog box.	**oam_id**: ID of the query form.
D2_ACTION_QUERY _CATEGORY_DIALOG	Shows the query form search category dialog box.	

Send messages through channels to provide information about an action to be performed on virtual documents as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_CONVERT_VD	Converts a document to a virtual document.	**oam_id**: ID of the content.
D2_ACTION_CONVERT _DOC	Converts a virtual document to a simple document.	**oam_id**: ID of the virtual document.
D2_ACTION_SNAPSHOT _CREATE	Creates a virtual document snapshot.	The channel applies only to the Snapshots widget. **oam_id**: ID of the virtual document.
D2_ACTION_VD_ADD _CHILD_SELECTED	Shows the add child dialog box for the currently selected item in the VD widget.	
D2_ACTION_VD_REMOVED _CHILD_SELECTED	Shows the remove child dialog box for the currently selected item in the VD widget.	
D2_ACTION_VD_SET_CHILD _BINDING_VERSION	Shows the binding version dialog box to set the binding version of the currently selected item in the VD widget.	
D2_ACTION_VD_INSERT _INHERITED_COMPONENT	Shows the insert inherited component dialog box for the currently selected item in the VD widget.	
D2_ACTION_VD_CLEAR_VD	Clears a virtual document of elements.	

Send messages through channels to provide information about an action to be performed on lifecycles and workflows as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_LIFECYCLE _DCTM	Runs a lifecycle operation on a Documentum lifecycle.	**oam_id**: ID of the content. **operation**: the operation to perform. **policyId**: the policy to use.
D2_ACTION_LIFECYCLE_D2	Runs a lifecycle operation on a D2 lifecycle.	**oam_id**: ID of the content. **operation**: the operation to perform. **policyId**: the policy to use.
D2_ACTION_WORKFLOW _LAUNCH	Launches a workflow for a document.	**oam_id**: ID of the document. **config**: name of the workflow configuration.
D2_ACTION_WORKFLOW _LAUNCH_SCHEDULED	Launches a scheduled workflow for a document.	**oam_id**: ID of the **queue_item**.
D2_ACTION_WORKFLOW _UPDATE_PERFORMERS	Shows the update performers dialog box.	**oam_id**: ID of the **queue_item**. **workflowTrackerId**: ID of the workflow tracker used if **oam_id** is not an **ID2cWorkfowTracker** or **IDfQueueItemworkflow**. Optional.
D2_ACTION_WORKFLOW _ABORT	Shows the abort workflow dialog box.	**oam_id**: ID of the workflow tracker.
D2_ACTION_TASK _ACQUIRE	Sets the task as acquired.	**oam_id**: ID of the task. **parentId**: ID of the parent task. **forceAcquire**: set to **true** for force acquisition. **forceRead**: set to **true** for force reading.
D2_ACTION_TASK_READ	Toggles the read or unread status of the task.	**oam_id**: ID of the task. **parentId**: ID of the parent task. **read**: set to **true** or **false**.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_TASK _PRIORITY	Sets the task priority.	**oam_id**: ID of the task. **parentId**: ID of the parent task. **priority**: set to the priority integer.
D2_ACTION_TASK _FORWARD	Shows the task forward dialog box.	**oam_id**: ID of the task.
D2_ACTION_TASK_REJECT	Shows the task rejection dialog box.	**oam_id**: ID of the task.
D2_ACTION_TASK _DELEGATE	Shows the task delegation dialog box.	**oam_id**: ID of the task. **source**: set to **tracker** or **task**.
D2_ACTION_TASK_NOTE	Shows the task note dialog box.	The channel only applies to the Task notes widget. **oam_id**: ID of the task.
D2_ACTION_TASK_PROCESS	Shows the task processing dialog box. Set **operation** as the operation to perform.	**oam_id**: ID of the task. **operation**: the operation to perform.
D2_ACTION_WORKFLOW _MANAGE_ATTACHMENTS	Shows the Manage Workflow Attachment dialog box for a workflow, which is used to add a new document to the running workflow.	**oam_id**: the queue item ID for the attachment. **Note:** Documents are not directly related to the queue item but to the running workflow.

Send messages through channels to provide information about an action to be performed on taxonomies and dictionaries as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_TAXONOMY _EXPORT	Shows the taxonomy export dialog box.	**oam_id**: ID of the taxonomy.
D2_ACTION_TAXONOMY _IMPORT	Shows the taxonomy import dialog box.	**oam_id**: ID of the taxonomy.
D2_ACTION_TAXONOMY _CHECKIN	Shows the taxonomy checkin dialog box.	**oam_id**: ID of the taxonomy.
D2_ACTION_TAXONOMY _SAVE	Shows the taxonomy save dialog box.	**oam_id**: ID of the taxonomy.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_TAXONOMY _PROPERTIES	Shows the taxonomy properties dialog box.	**oam_id**: ID of the taxonomy.
D2_ACTION_TAXONOMY _LOCATE	Searches for the taxonomy.	The channel only applies to the Locate widget. **oam_id**: ID of the taxonomy.
D2_ACTION_TAXONOMY _RESTORE	Shows the taxonomy restoration dialog box.	**oam_id**: ID of the taxonomy.
D2_ACTION_DICTIONARY _EXPORT	Shows the dictionary export dialog box.	**oam_id**: ID of the dictionary.
D2_ACTION_DICTIONARY _IMPORT	Shows the dictionary import dialog box.	**oam_id**: ID of the dictionary.
D2_ACTION_DICTIONARY _SAVE	Shows the dictionary save dialog box.	**oam_id**: ID of the dictionary.
D2_ACTION_DICTIONARY _RESTORE	Shows the dictionary restoration dialog box.	**oam_id**: ID of the dictionary.
D2_ACTION_DICTIONARY _UPDATE	Shows the dictionary update dialog box.	**oam_id**: ID of the dictionary.
D2_ACTION_DICTIONARY _PROPERTIES	Shows the dictionary properties dialog box.	**oam_id**: ID of the dictionary.

Send messages through channels to provide information about an action to be performed on users and groups as described in the following table:

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_OPEN_GROUP	Opens a group	**oam_id**: ID of the group.
D2_ACTION_GROUP _CREATE	Creates a group.	The channel only applies to the Groups widget.
D2_ACTION_GROUP _PROPERTIES	Sets the properties of a group.	The channel only applies to the Properties widget. **oam_id**: ID of the group.

Channel name	Requests that D2	Parameters and notes for focus events
D2_ACTION_USER_CREATE	Creates a user.	The channel only applies to the Users widget. **`oam_id`**: ID of the user.
D2_ACTION_USER _PROPERTIES	Sets the properties of a user.	The channel only applies to the Properties widget. **`oam_id`**: ID of the user.

Chapter 29

Reserved Words

List of Reserved Words in D2 when Using Documentum Application Builder

Do not use the following words when defining objects and relations in Documentum Application Builder or Documentum Composer, as they conflict with the D2 property page component:

• abstract	• instanceof
• boolean	• int
• break	• long
• byte	• native
• case	• new
• catch	• null
• char	• package
• class	• private
• const	• protected
• continue	• public
• default	• return
• delete	• short
• do	• static
• double	• super
• else	• switch
• export	• synchronized
• extends	• this
• false	• throw
• final	• throws
• finally	• transient
• float	• true
• for	• try
• function	• typeof
• goto	• var
• if	• void
• implements	• while
• import	• with
• in	

Chapter 30

PDF Fields Reference

List of PDF Fields

PDFs can be created in C2 with dynamic field targets so that they can be populated with data from D2. See Configuring a Dynamic View Configuration, page 214 for more information on PDF configuration.

Field	Description
#page	Current page
#page_count	Number of pages
#chapter	Chapter name
#datetime	Date and time of the client host **Note:** The PDF fields containing the client date (keyword #datetime) do not use the date format set in the PDF fields, and instead follow the simple format **`d MMMMM yyyy h:m:s a`**
#username	Current user
#controled_username	Name of the user printing the content
#controled_username_count	Number of controlled prints by the current user
#controled_count	Total number of controlled prints
#reason	Reason for printing
#folder_path	First path of the document
#complete_name	First path of the document and name
#server_datetime	Server date and time
#docbase	Repository name
#version	Version number of the content
	Volume auto-link
`Property name` (for example, object_name)	Documentum single-value attribute
`Property name.dictionary name .language or alias name` (for example, object_name.dico1.fr)	Dictionary mapping
`Property name` (for example, keywords)	Comma-separated Documentum repeating -value attribute
`Property name`[index] (for example, keywords[0])	Repeating-value attribute

Field	Description
`Property name.dictionary name .language or alias name`[index] (for example, keyword[0].dico1.fr)	Dictionary mapping
`ID.Property name` (for example, dqlkey.object_name)	All recorded comma-separated values
`ID.Property name`[index] (for example, dqlkey.object_name[0])	Recorded value
`ID.Property name.dictionary name.language or alias name`[index] (for example, keyword[0].dico1.fr)	Dictionary mapping