User Guide

User Guide for View Editor Version 3.4.0

View Editor (VE) enables users to interact with SysML models on the web. It implements the MMS REST API to provide a web environment to create, read, and update model elements, including Documents and Views.

MMS is a version control system for structured data. It exposes model information through RESTful web services that can be used for CRUD operations, branching, and tagging of the model repository.

See Section 1 for more information.

This guide is introduces View Editor features.

*Please check **your** specific project modeling practices with regard to tasks, groups, etc.*

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1 About View Editor

View Editor (VE) is a web-based environment for interacting with a systems model. It provides a document oriented view of model elements, which are stored in MMS.

View Editor provides real and true data through the web so that users may interact with actual model elements without having to open modeling software (e.g. MagicDraw). This allows users of all levels, including non-modelers, to view or modify live documents and values of a singular source of truth.

Authors can use model data, and share content across View Editor, in documents by **cross referencing** (see Section 4.3.5.4)

Document View Panes

- Section 3.1 - Shows context of center pane (current project, branch, etc), allows management of branches and tags and provides global search and helpful links
- Section 3.2 - Shows the project/document hierarchies
- Section 3.4 - Shows Document/View content, provides editing capabilities and export options
- Section 3.3 - Shows detailed information of the selected element, element history and more advanced features of View Editor

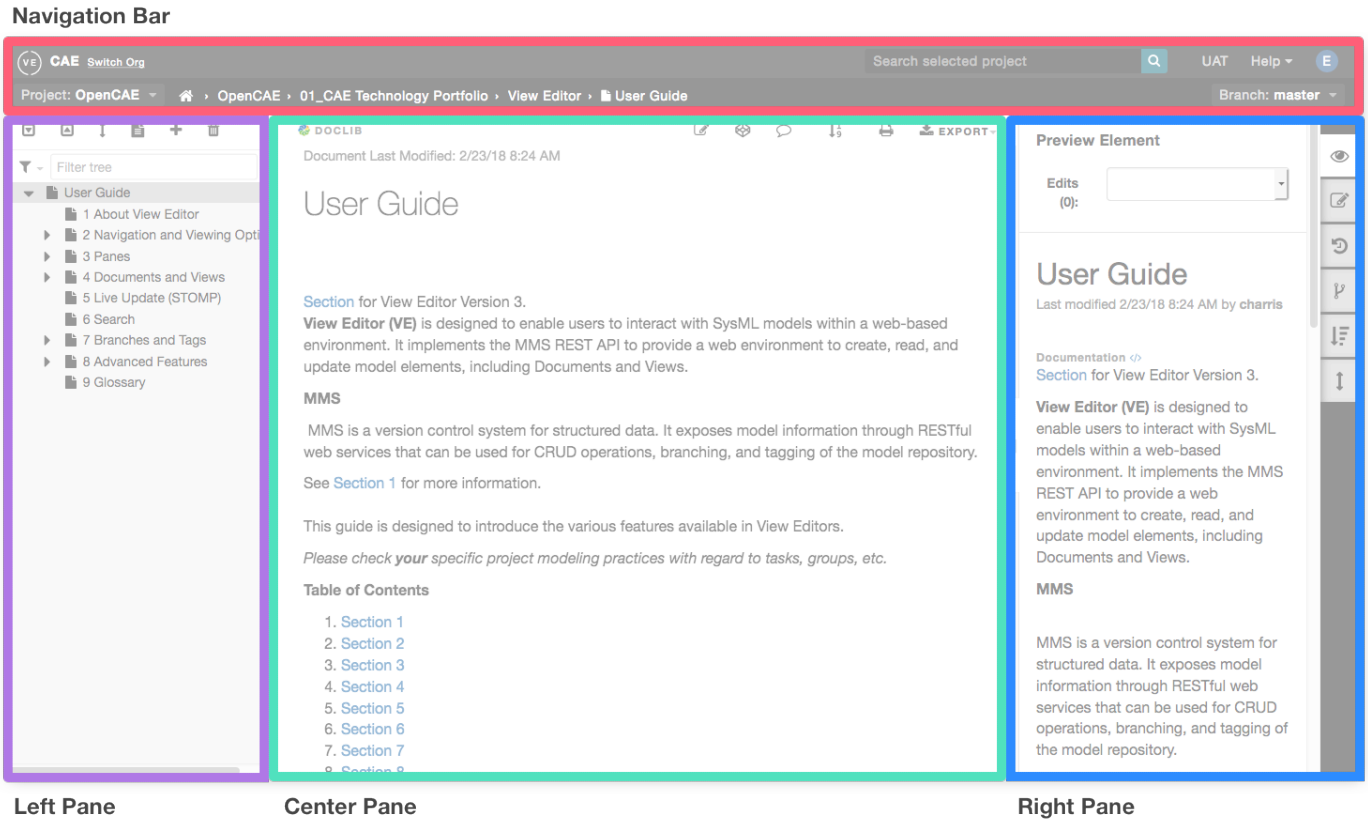


Figure 1. VE Sections

2 Navigation and Viewing

2.1 Navigate To A Project

Orgs are a configuration-managed collection of projects.

Projects are collections of Documents and Views and their related elements. They correspond to SysML models.

1) Login using JPL credentials

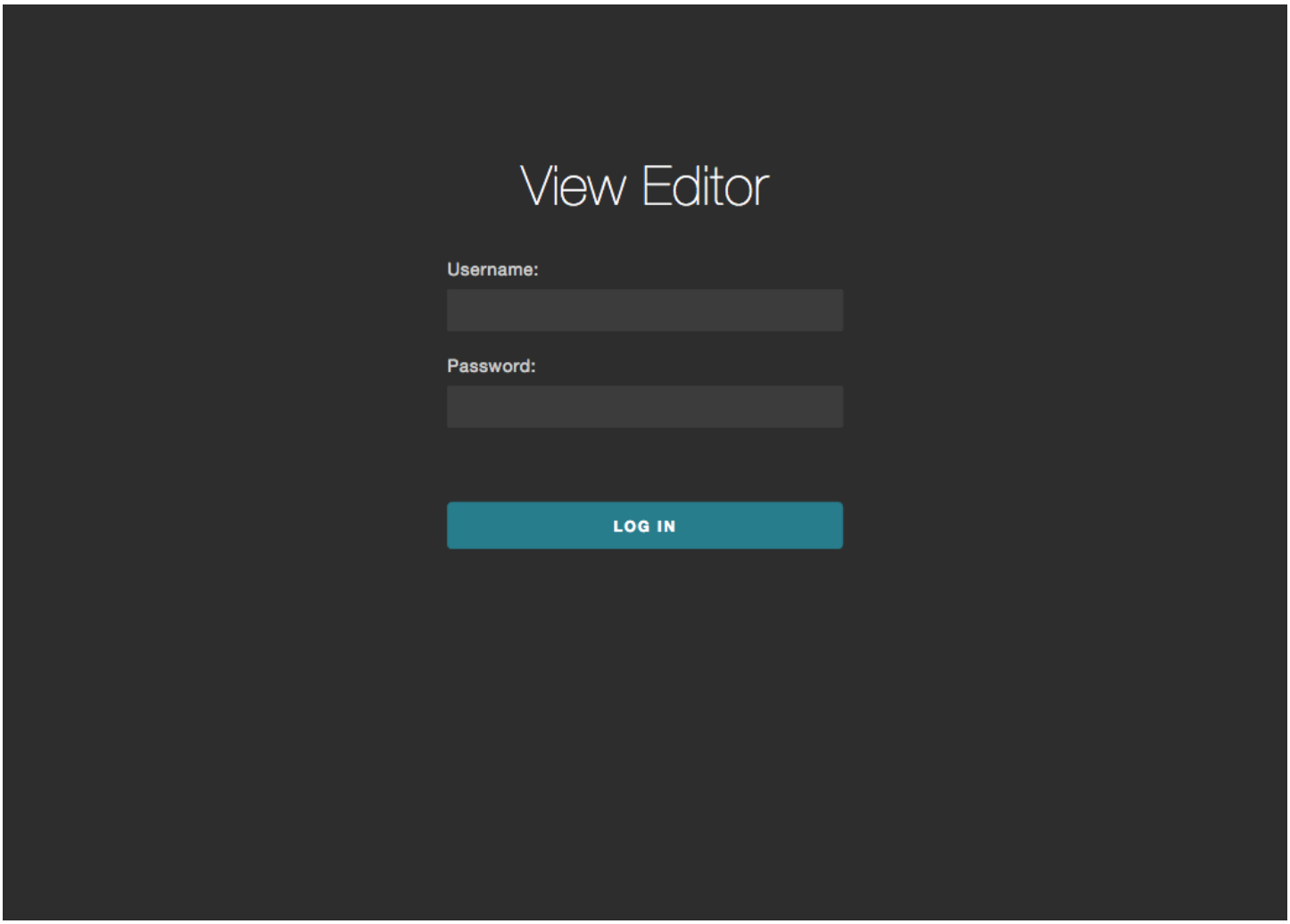


Figure 2. login

2) Choose Org. and Project

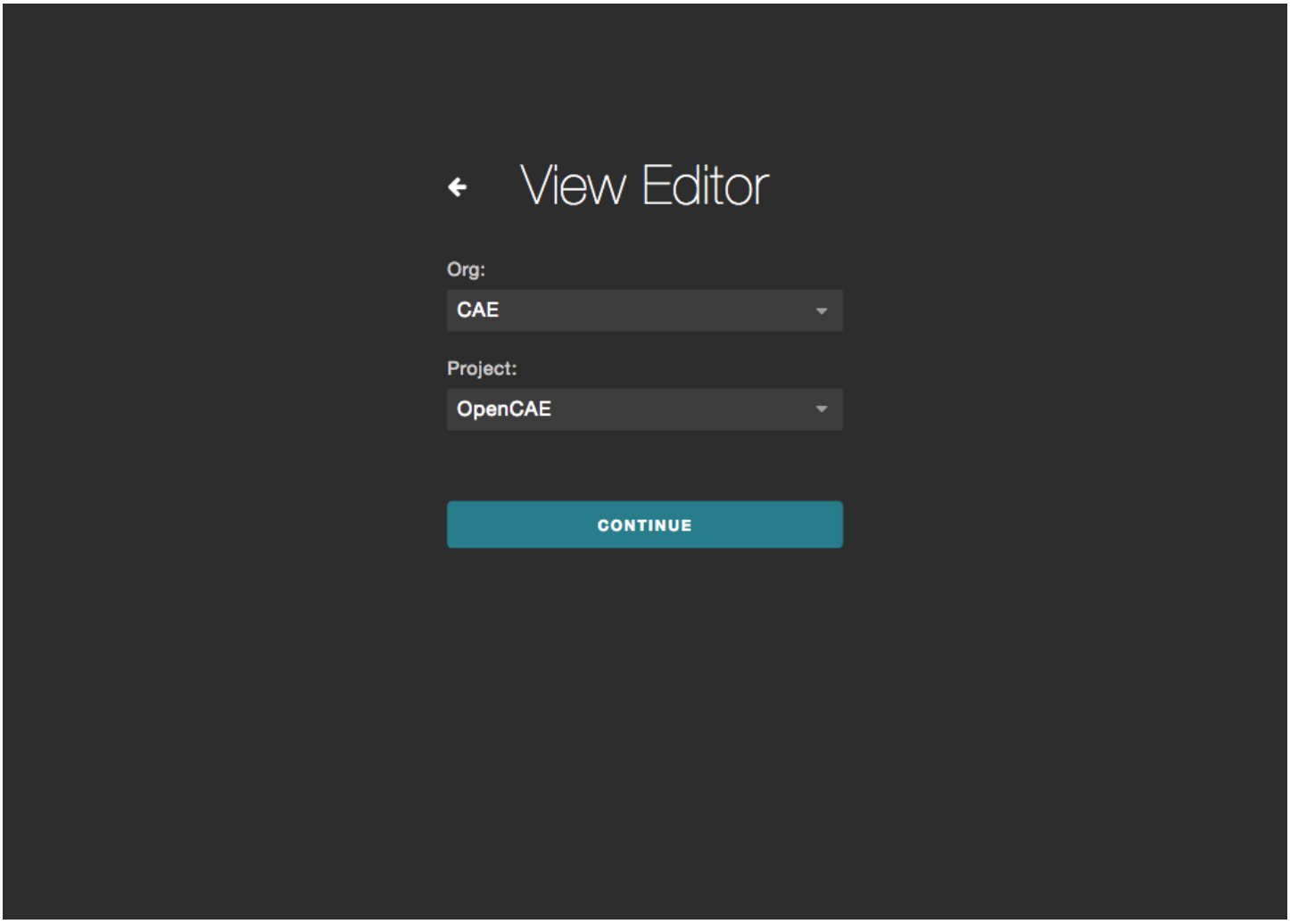


Figure 3. select project/org

3) You are now in your selected project

- You can still switch projects from the dropdown or switch org from the top navigation bar
- Click arrow to expand the directory to view documents that exists on the currently selected project:
- Groups are specified by a folder icon and used for document organization in View Editor.

2.2 Navigate To A Document

1) If you are not already in the correct project, in the upper left, navigate to the project that contains the document.

Figure 4. choose project

2) Select your document in the left pane. You can filter and expand the tree to find it.

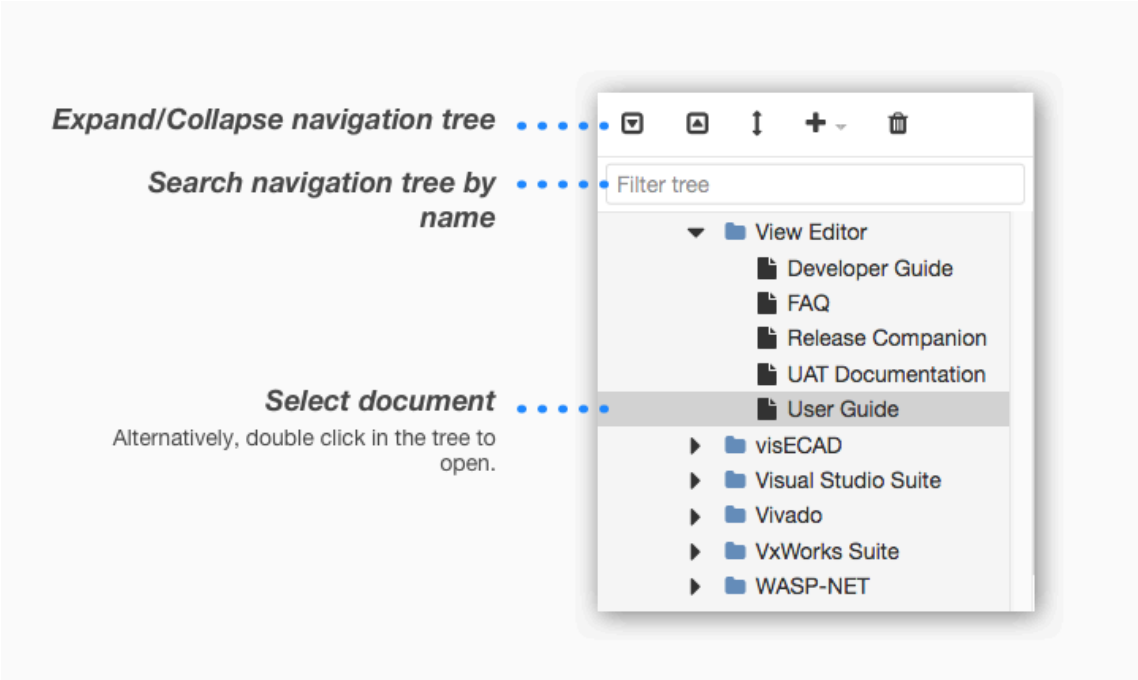


Figure 5. tree

3) This opens the document's cover page, which describes the contents of the document

4) Click on the document title or "Open Document" button on the center pane. Alternatively, double click on the document in the left pane

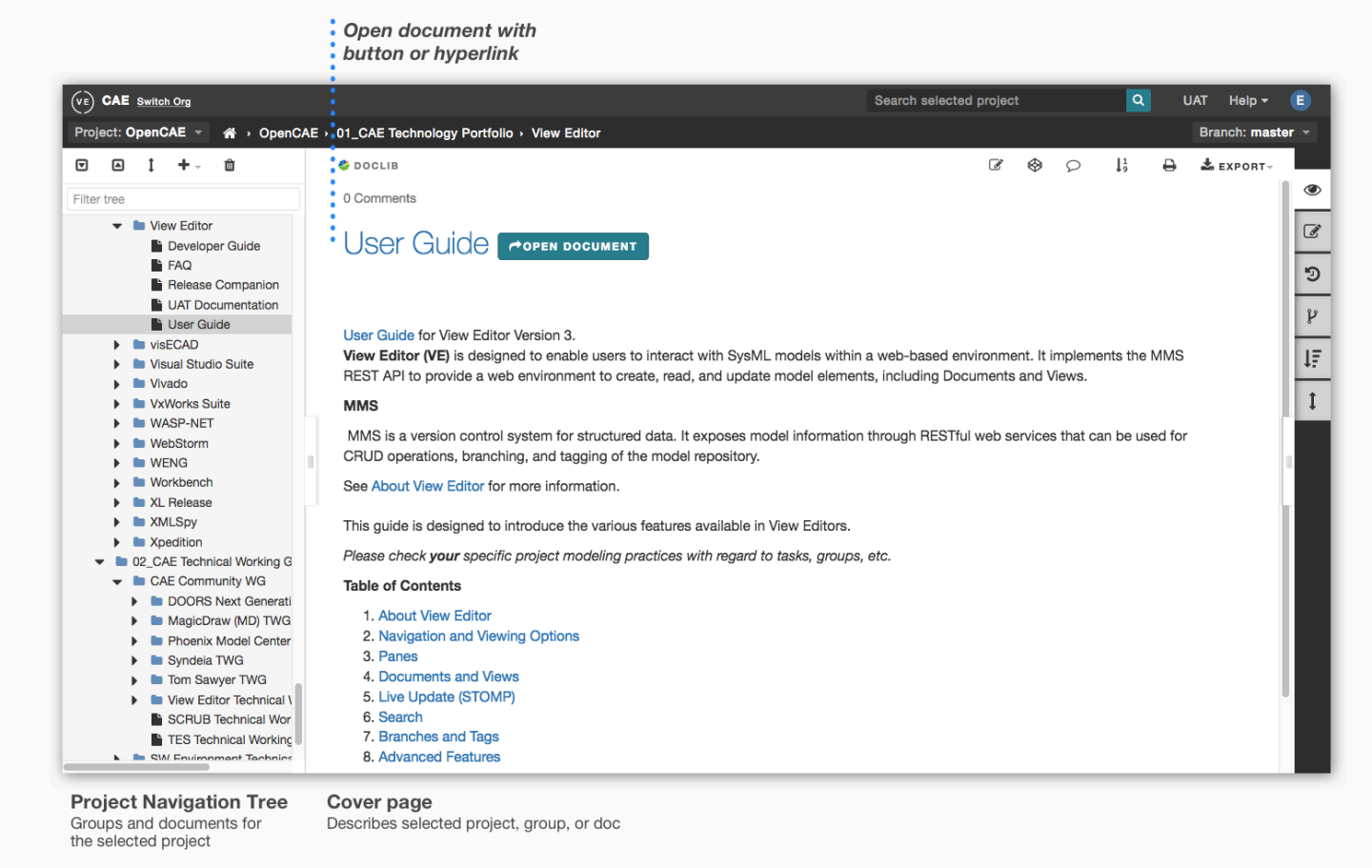


Figure 6. open document

5) To return back to project navigation, use the document breadcrumbs:

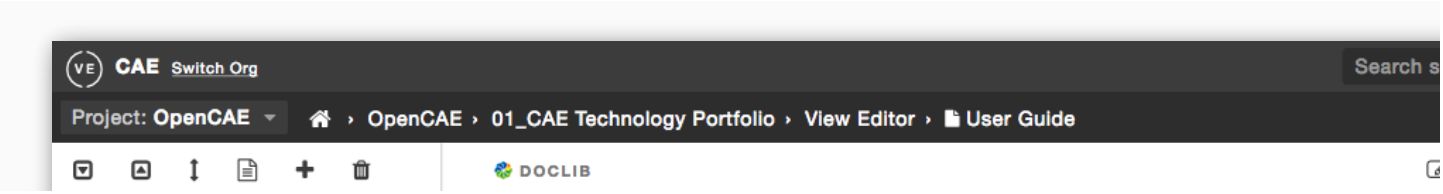


Figure 7. breadcrumbs

Documents are the key to interacting with the system model. More information can be found at: Section 4.2.

2.3 Navigate Within A Document

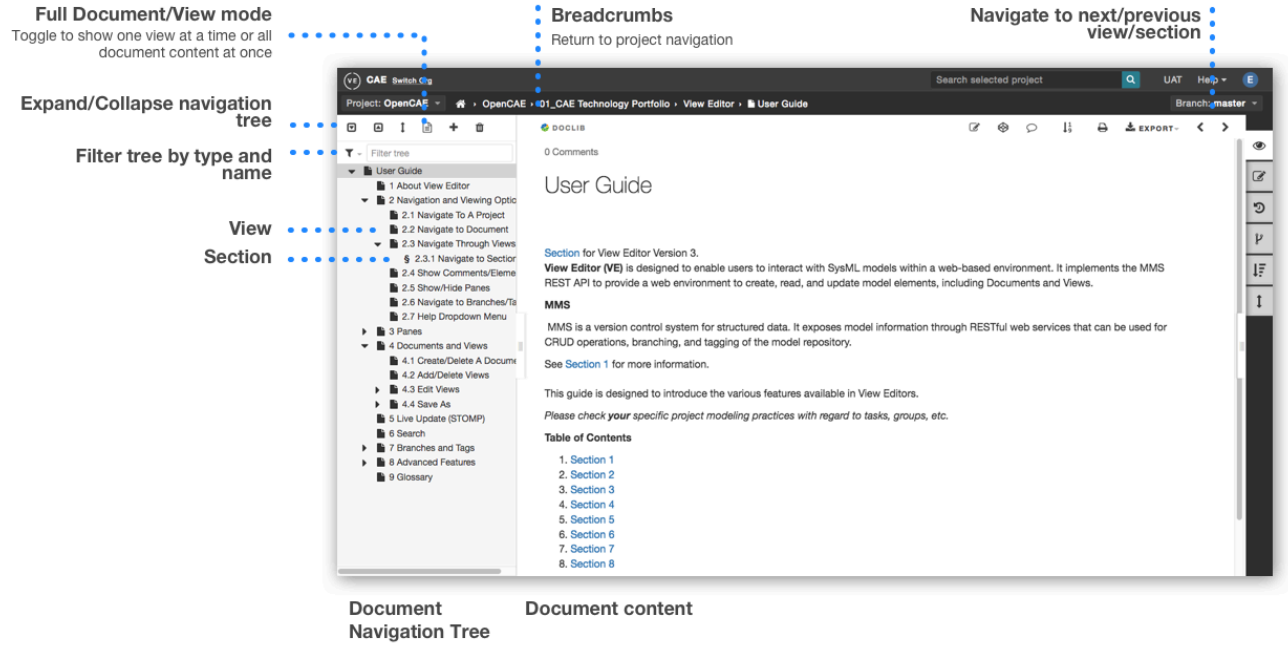


Figure 8. Document Navigation diagram

Navigate in the Left Pane

- **Views** are individual parts of a document. They can be specialized to have their own content and layout.
- **§ Sections** are subsections of Views. They are similar to views in the sense that they provide a specific amount of information, contain presentation elements, and can be cross referenced.
- To filter by type and display **tables** , **images**, and **equations** in the tree, use the **tree filter**

View Modes

Toggle **Full document/View mode** in the upper left

- In **View mode**, one view and its sections are shown at a time
  - Use the **arrows in the upper right tool bar** to navigate through views and sections.
- In **Full Document mode**, the entire contents of a document are shown at once

For more information on adding, editing, and saving views, refer to Section 4.

For more information on Sections, see Section 4.3.5.1.

2.4 Show Comments/Elements

Comments:

View Editor Comments are hidden by default.

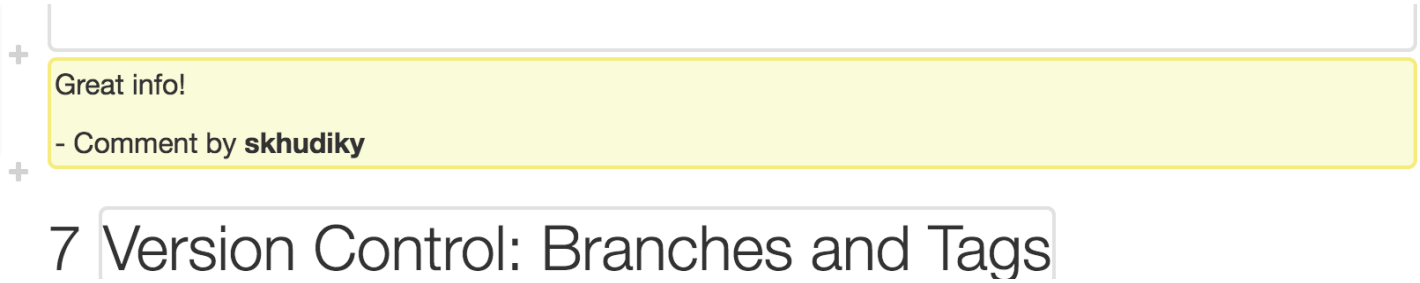
Example:

1 Comment, Last Commented 2/21/16 11:55 AM by mpiette

Click the dialog balloon,  to display comments

(see  on top right)

The comments will appear as follows:



These comments are stored in the model as documentation of the view itself.
To **hide the comments**, click the dialog balloon again.

(See Section 4.3.5.1 for creating a comment, a type of presentation element.)

Elements:

Click on the "Show Elements" icon  to display outlines of all presentation components.
See Section 3.3 for more information.

2.5 Show/Hide Panes

Show/hide the Left and Right panes by clicking or dragging the **pane tab**

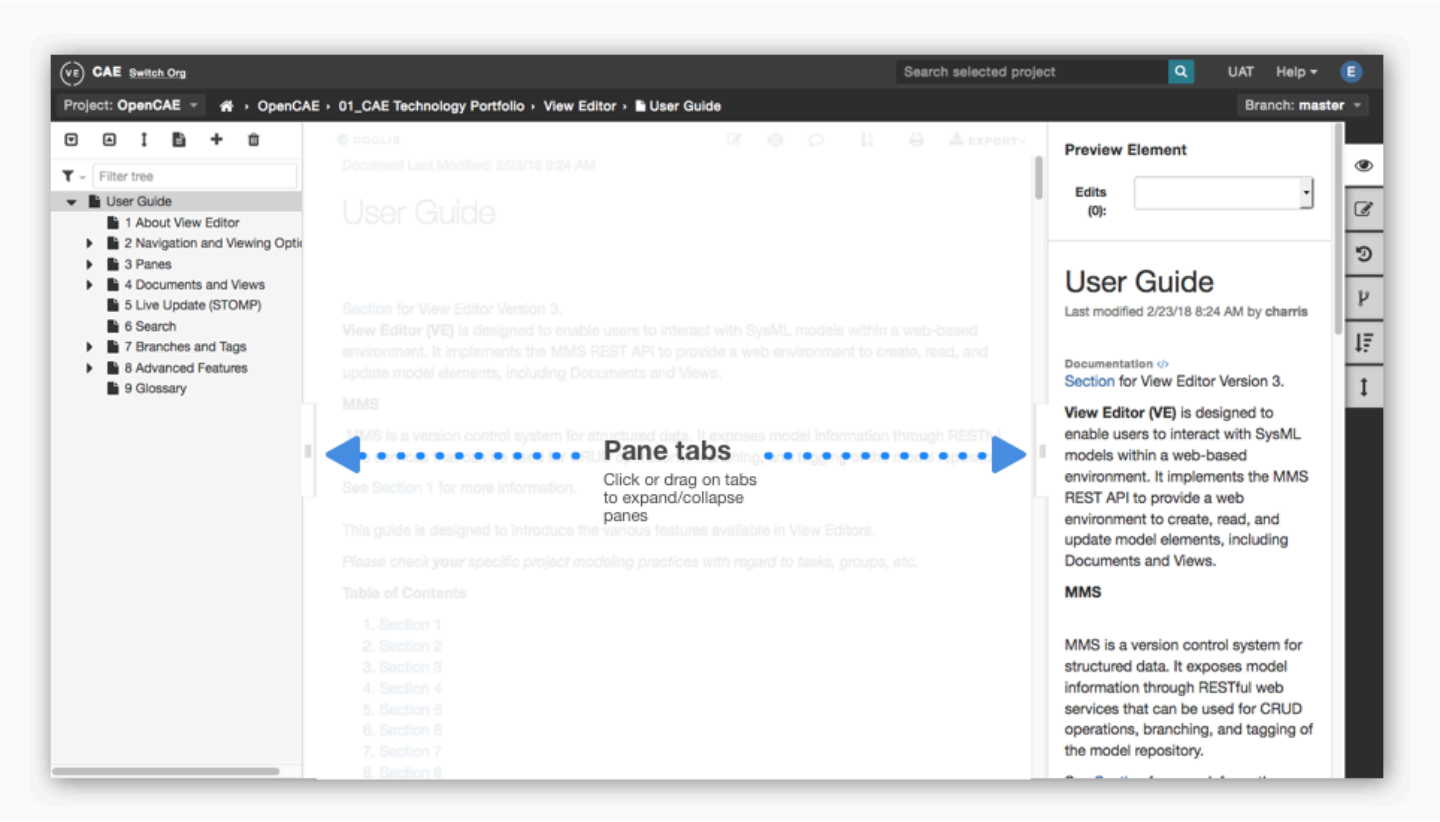


Figure 9. Pane tabs image

For more information about the Left Pane, refer to Section 3.2.

For more information about the Right Pane, refer to Section 3.3.

2.6 Branch/Tag (Version) Navigation

Use Branches/Tags menu to navigate to different versions of the selected project. More information can be found in Section 7.

1) Go to the dropdown labeled "Branch" or "Tag" in the upper right

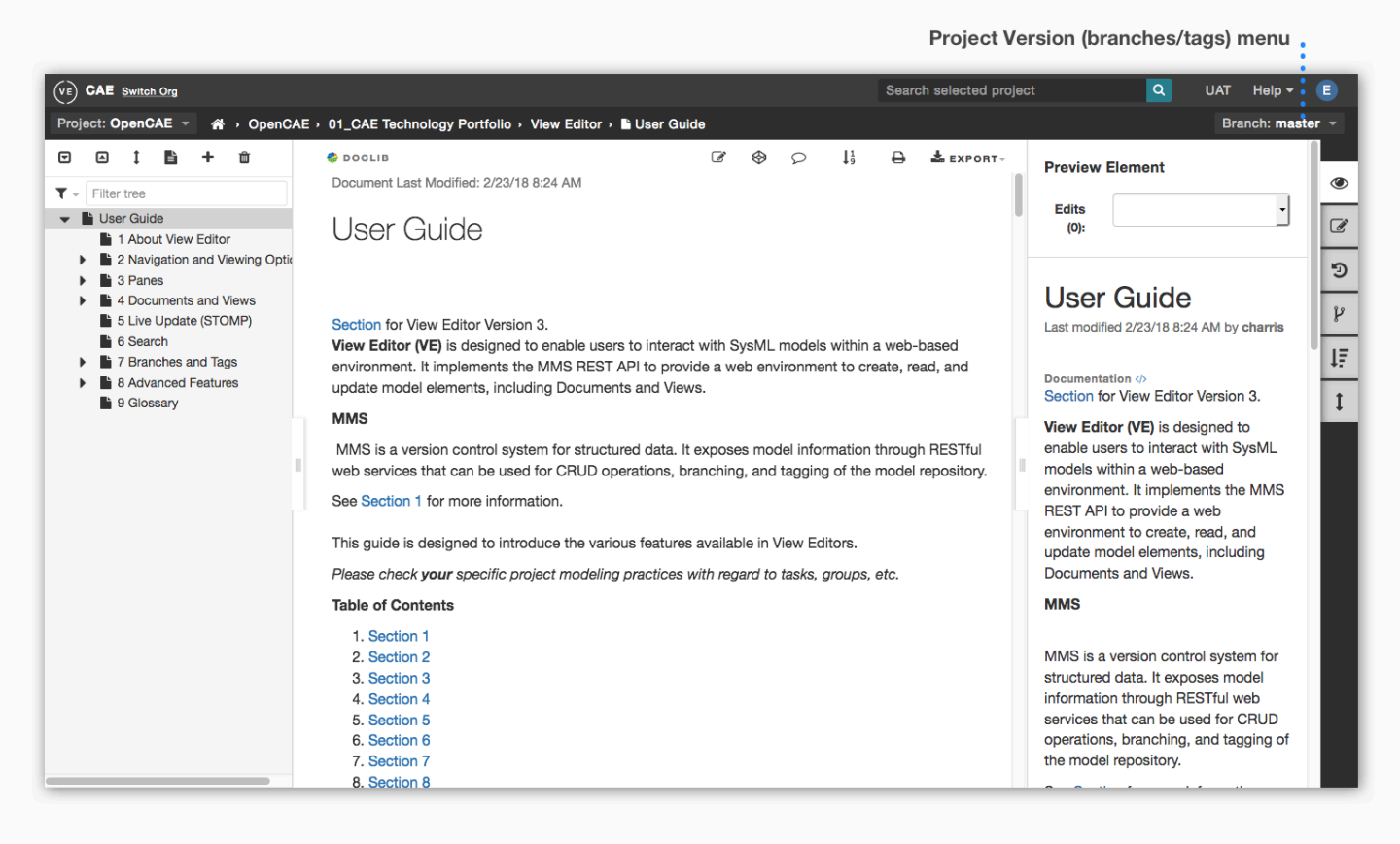


Figure 10. branches and tags menu

2) Select a branch or tag in the menu. This will load that version of your selected project

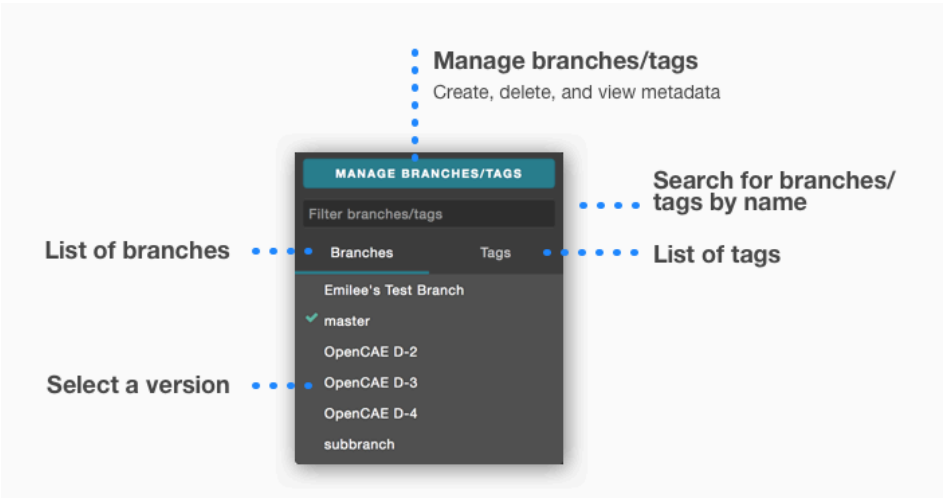


Figure 11. manage-dropdown

To navigate to the Branches/Tags manager:

3) After opening the Branches/tags dropdown, click "the Manage Branches/Tags" button

4) Here, you can

- Navigate to project branches/tags
- Create and delete branches/tags
- View branch/tag metadata

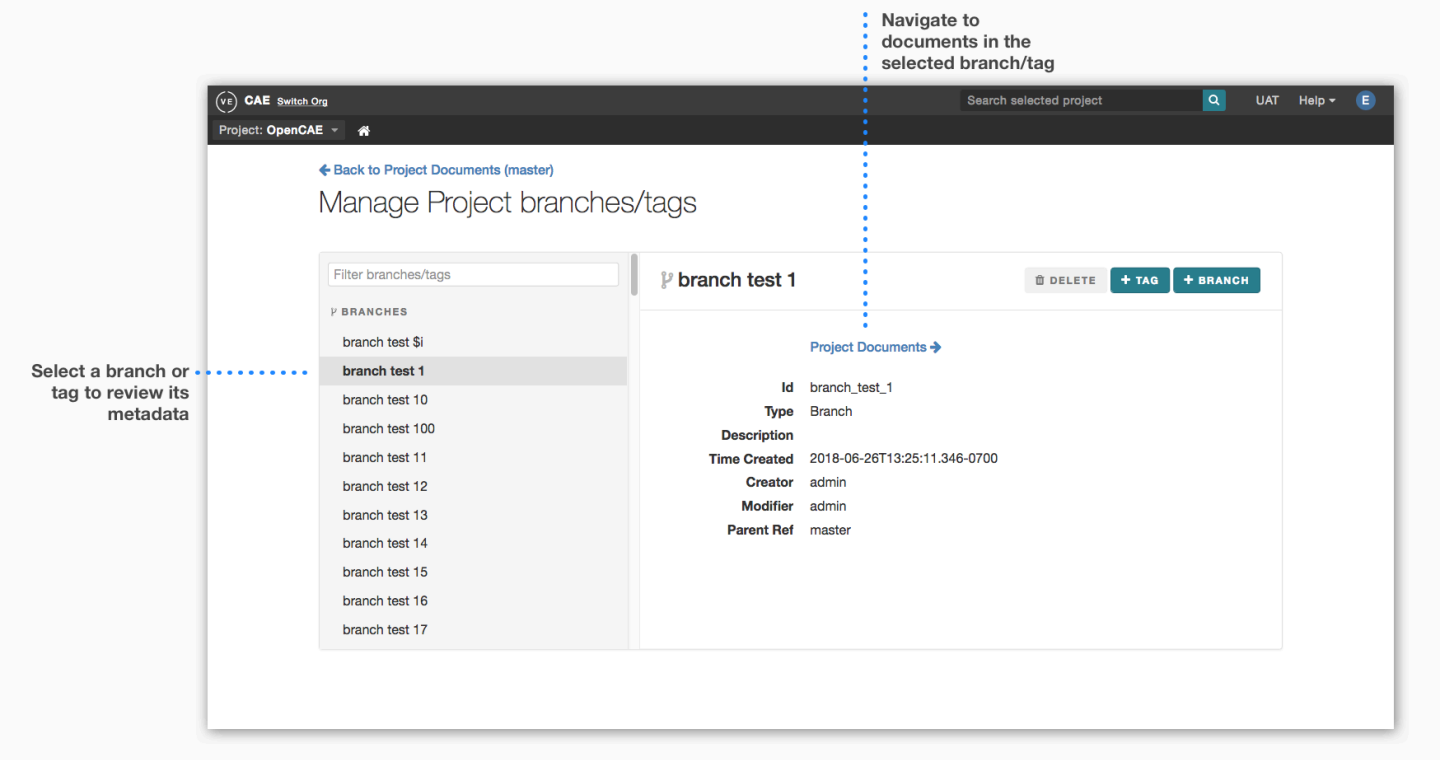


Figure 12. manage project branches/tags page

From a high level perspective, View Editor Tasks are similar to Git branches. They create a separate workspace built upon a duplication of data at a specified time. View Editor Tags are "snapshots" of all the data on View Editor at specified times. More information can be found in Section 7.

2.7 Help and Settings Menus

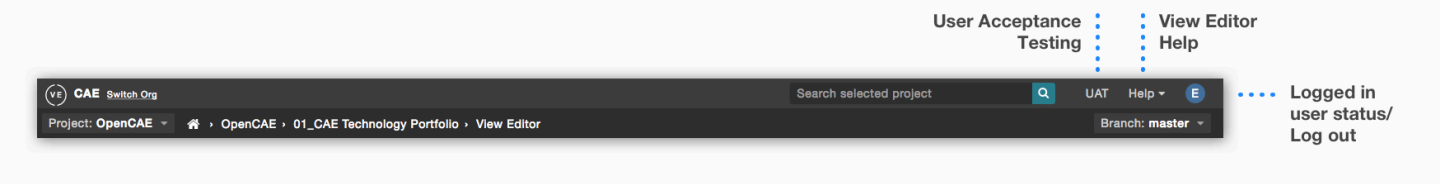


Figure 13. Support etc

User Acceptance Testing (UAT)

Test unreleased versions of View Editor and submit feedback

Help

- **Keyboard Shortcuts** - Provides a list of keyboard shortcuts for interacting with View Editor, including minimizing messages and toggling editing.
- **View Editor Help** - Link to this User's Guide.
- **Report Issue** - Navigates to JIRA Cover Page, where users can ask questions or report issues.
- **About View Editor** - View Editor and MMS version

Logged in User Status

- **Logout** - Logout of View Editor

3 Panes

Document View Panes

- Section 3.1 - Shows context of center pane (current project, branch, etc), allows management of branches and tags and provides global search and helpful links
- Section 3.2 - Shows the project/document hierarchies
- Section 3.4 - Shows Document/View content, provides editing capabilities and export options
- Section 3.3 - Shows detailed information of the selected element, element history and more advanced features of View Editor

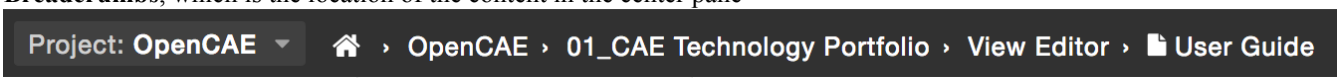
3.1 Navigation Bar

Top bar

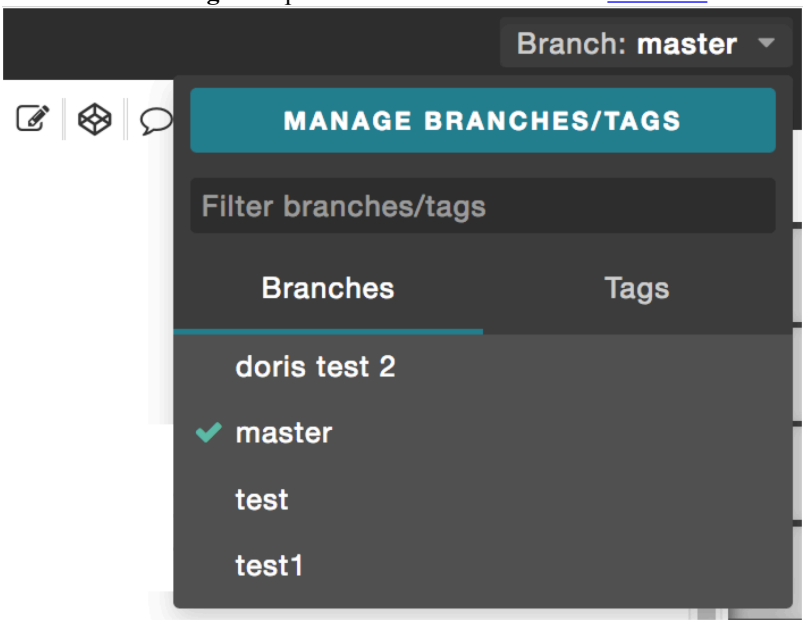
- Current **org** and option to switch
- **Section 6** for current project and other mounted projects
- **Section 2.7** for View Editor resources

Second bar - current context

- First option on the left displays the **current project** and provides quick access to switch between other projects within selected Org
- **Breadcrumbs**, which is the location of the content in the center pane



- **Current branch/tag** and option to switch between other Section 7



3.2 Left Pane Capabilities

The **Left Pane** has the following two display modes:

- **Groups and Documents** - Displays the hierarchy of groups and documents when a project is selected. For more information, refer to Section 2.1 and Section 4.2

- **Document** - the view hierarchy of the document when a document is selected

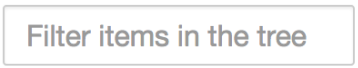
Below are instructions showing how to use the Left Pane's tools, specifically while in a document

The instruction includes:

- Show/Hide Left Pane
- Filter
- Expand All
- Collapse All
- View Mode
- Reorder views
- View full document
- Add View
- Delete View

Show/Hide Left Pane

The Left Pane can be "docked" or "hidden" in the browser. To toggle the two states, click on the left pane tab or drag in and out the pane.

Filter 

Filtering the tree allows you to see only the desired views based on the *name* of the view or document

You can then navigate to any of the filtered views. To view the full document again, simply delete anything typed in the filter field. When this is done, all the views in the document show as if the user used the "Expand All" function (see above).

Expand All 

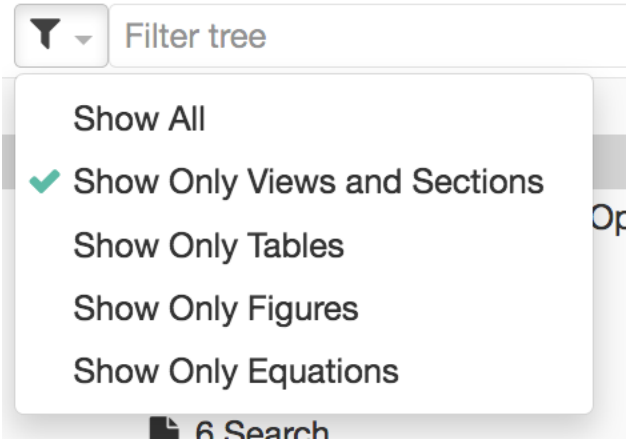
Lets you view all the subviews and sections of views within a document. The user can then individually collapse views as they please.

Collapse All 

Lets you collapse all views so that no views are visible in the Left Pane. You can then individually expand views level by level as they please.

Filter by type 

To filter by different element types, select the filter icon and choose the element type



Reorder views

You can easily reorder the views in the document, refer to Section 4.3.5.5.

View Full Document

- This functionality lets you view an entire document in the center pane by "stitching" the views all together
- You can either scroll down in the center pane or select a view in the Left Pane to navigate to a certain part of the document
- You can edit views when viewing the full document both in the Center Pane and the Right Pane
- Depending on the size of the document/views, it may take some time for the document to load.

Steps:

1. Click "Full Document"
2. Scroll down slowly through the document to show all content of document
3. Edit a section while viewing Full Document

Add View

To add a view to an existing document, refer to Section 4.3.

Delete View

To delete a view from an existing document, refer to Section 4.3.

3.3 Right Pane Capabilities

The Right Pane lets you inspect the element that is currently selected.

Note: The Edit Element option will not appear for users who do not have the correct permissions. Consult with your project manager to obtain the correct permissions.

The Right Pane tools are shown on the right and described below with links to more information.

1. **Section 3.3.1**: Provides more information about a selected element
2. **Section 3.3.2**: Provides the same editing capabilities as the Center Pane and similar, but not quite the same, saving options
3. **Section 3.3.3**: Lets you inspect an element at different points in time and provides an option to compare different versions
4. **Section 3.3.5**: Run a document generation job on current document to update any structural content changes from the model

5. **Section 3.3.4**: Provides a list of existing tags and branches, their time stamps, and a hyperlink to the snapshot of the documents
6. **Reorder View:** A user can reorder the Presentation Elements within a View. Refer to Section 4.3.5.5 for more information

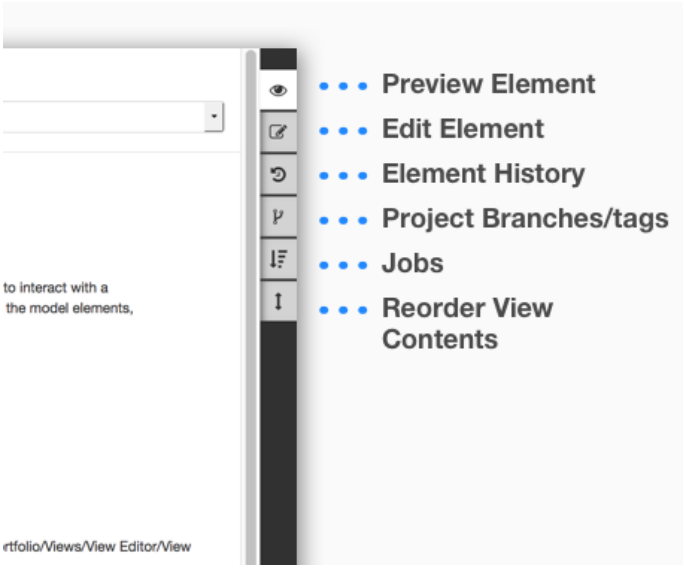


Figure 14. right pane

3.3.1 Preview Element

"Preview Element" tab displays the following information of the selected element:

- **Name**
- **Last Modification** - What date/time and by whom
- **Documentation** - rendered element documentation. clicking on the '</>' icon next to DOCUMENTATION header will toggle the display to show raw html
- **Metatype** - implicitly applied class/stereotype
- **Location** - where the actual element is stored in the associated model in terms of package hierarchy
- **ID** - the unique element ID. If it begins with "MMS", then it's a View Editor created element. If it begins with anything else (usually "18_0_..."), it was created in the MagicDraw model
- **Branch/Tag** - The name of the Version (Branch/Tag) that the selected element is currently being viewed on

You may also see element specific information (e.g. value of the properties), depending on the type of element.

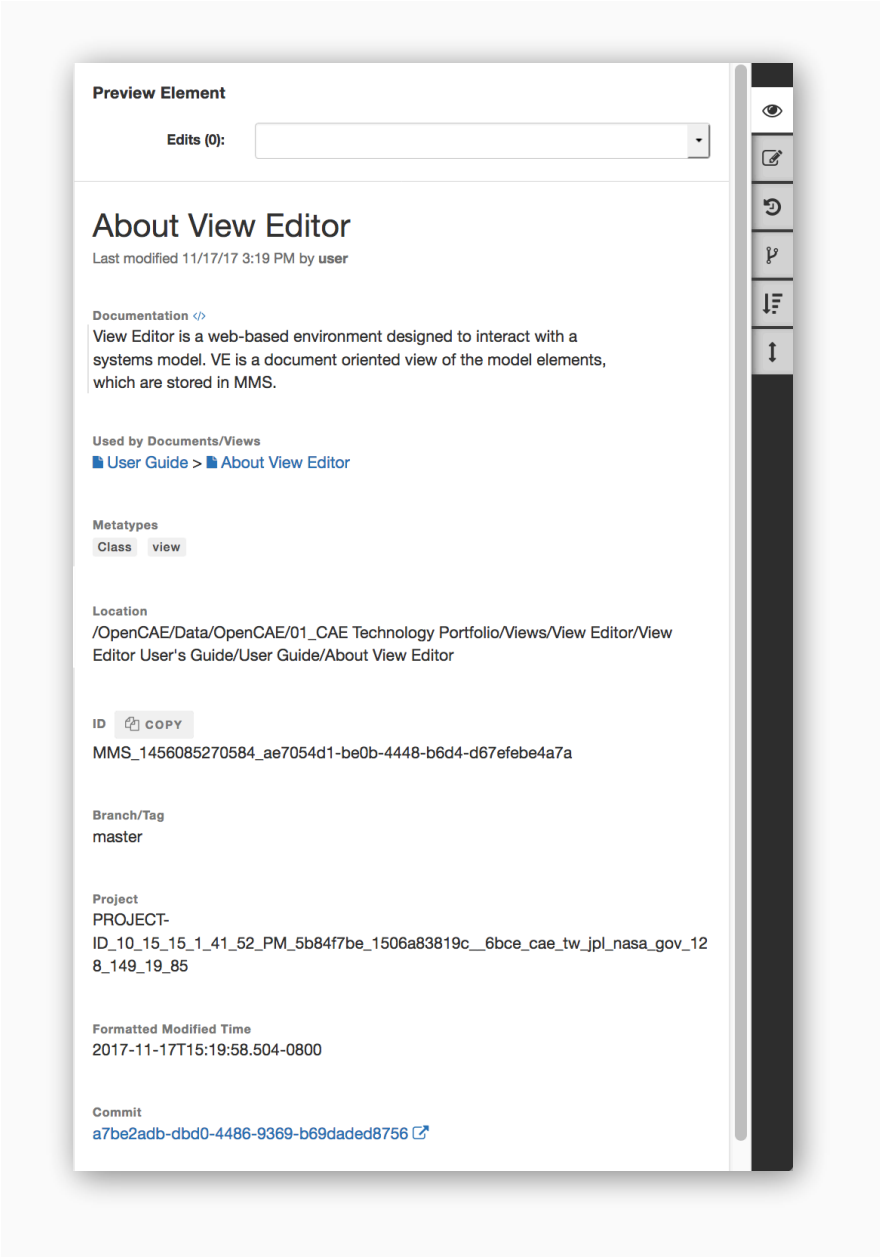


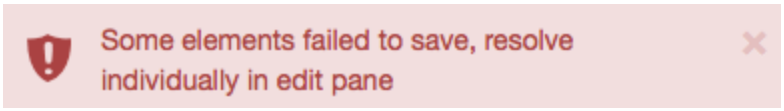
Figure 15. types right pane

3.3.2 Edit and Save Elements

Users can edit elements (refer to Section 4.3.5.1) directly from the right pane by selecting an element in the center pane and selecting the **Edit Element** button. It also provides a **Save All** option to easily save all current changes. Both the **Preview Element** and **Edit Element** views show a count and dropdown of changes in progress that have not been saved.

Various "Save" options

1. - Saves the changes within the editor and closes the editor or opens next change that has not been saved
2. - Saves changes on the server but the editor remains open to continue editing the current element
3. - Does a bulk save of all changes in progress
    - **Multiple Elements - Failed to Save All**
        - When trying to Save All, the elements may have some conflicts that require more attention before saving.
        - In this case, the you will see the following error



Note: There is an Auto Save plugin that tracks and stores changes in the browser's local storage (See Autosave to the browser's localStorage)

3.3.3 Element History

The **Element History tab** has a dropdown with a list of element versions. Select a version to display its attributes (same as Section 3.3.1) at that point in time.

By default, this tool shows the element at the latest save point.

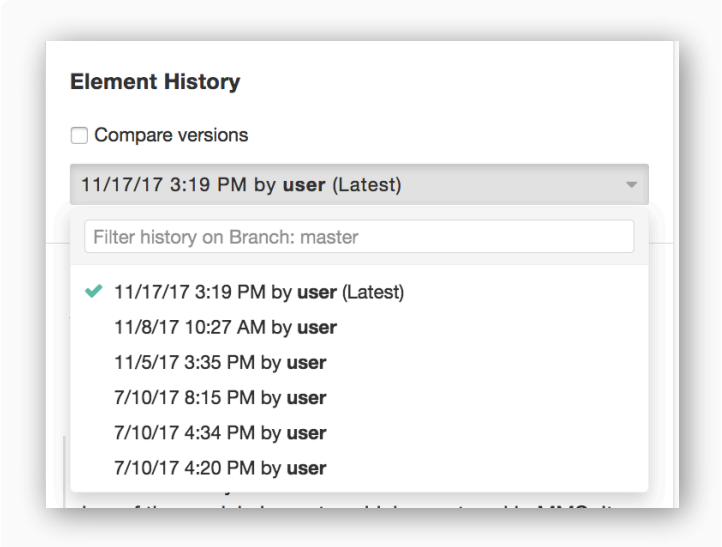


Figure 16. Element history

To visualize the difference between 2 versions, check "Compare Versions"

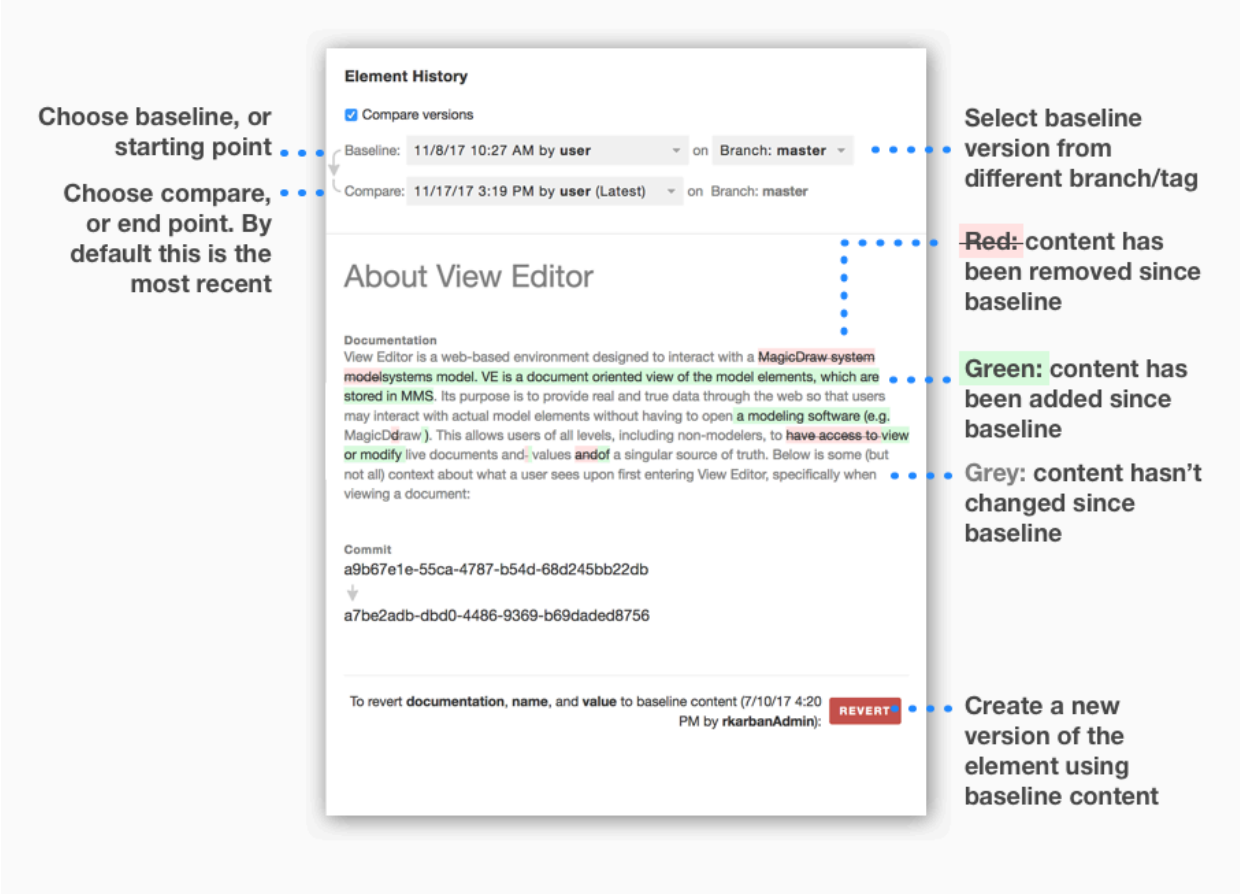


Figure 17. Compare versions

3.3.4 Branches/Tags

Branches/Tags can be accessed from the right pane. See Version Control: Branches and Tags for more information

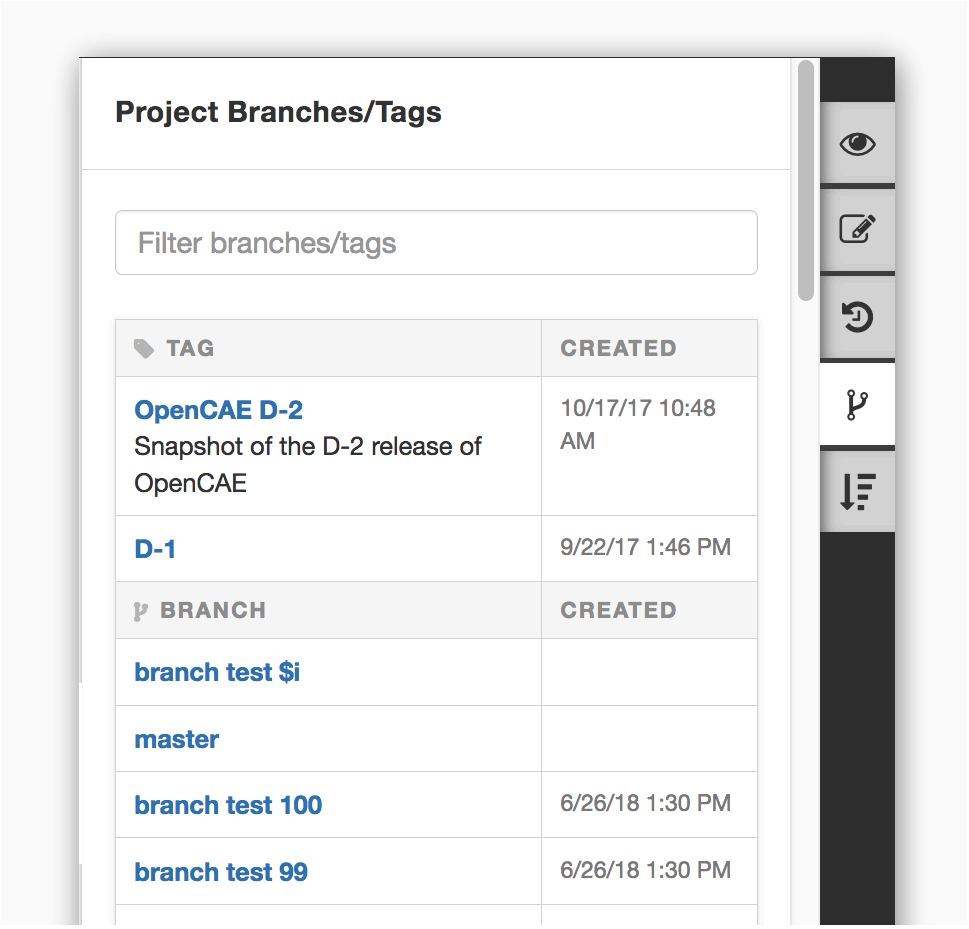


Figure 18. RIght pane branches/tags

3.3.5 Jobs

The job pane allows the user to trigger a job such as **document generation** for the current document.

Various types of jobs can be ran in the background, using this functionality.

Currently supported jobs (last modified: 11/16/2017):

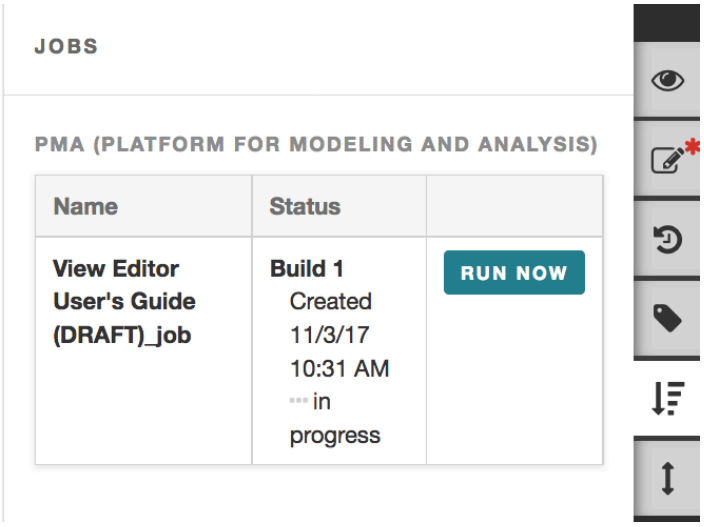
- *DocGen View Generation*
- *ViewEditor Generate Views*

Notes:

This functionality will encompass running any type of analysis in the future.

Edit permission on the document is required to run the job (*collaborator* role or higher in Alfresco).

Here is an example of a job running:



Once a user clicks on "RUN JOB", a job is started and you will see the job status on the pane, this will be updated as the job go through the stages of "**Queued**", "**Running**", "**Completed**", or "**Failed**".

Each job will have a log associated with it. The log will indicate whether the job actually succeeded or failed, and in the absence of such indication, it can be assumed that it failed.

Note: PMA is not ready for public use.

Users can disable the jobs pane by commenting out the following from toolbar.controller.j

```
tbApi.addButton(UxService.getToolbarButton("jobs"));
```

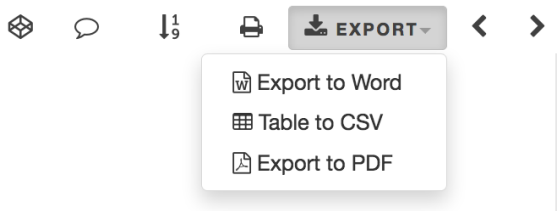
3.4 Center Pane Capabilities

The Center Pane lets you edit the view contents.

Exceptions:

1. The **Enable Edits** button will not appear for users who do not have the correct permissions. Consult with your project to obtain the correct permissions for editing.
2. **Cover Pages** currently do not have the ability to export to PDF.

The Center Pane tools are shown here and described below from left to right:



- **Alfresco Dashboard** DOCLIB - Navigates to the Alfresco dashboard of the currently selected group/document. The DOCLIB icon will only appear when a user is viewing a Cover Page or a document.
- **Enable Edits** **:** A user can enable edits in order to make changes to a view. Refer to Section 4.3.5.2 for more information. A user must have the collaborator role set in Alfresco in order to have access to edit.
- **Show Comments** **:** Comments are hidden by default. Refer to Section 2.4 for more information.
- **Export:** Refer to "Section 4.3.6" for more information on the following options:

- **Print** : Print a physical copy of a View or Document
- **Save to Word** : Save a View or Document as a local Word Document
- **Table to CSV** : Save any and all tables found in a View or Document as separate CSV files
- **HTML to PDF** : Save a View or Document as a PDF file

- **Show Elements** : Elements borders are hidden by default. Refer to Section 2.4 for more information.
- **Refresh Figure Numbering** : Table, Figure, Equation presentation elements and their references in the center pane will be updated to include numbering information.
- **Navigate Views/Sections:** Section 2.3 for the following options:
  - **Previous** : Navigate to the previous View
  - **Next** : Navigate to the next View
- **ADD Presentation Elements**
  - Section 4.3.5.1 for more information.

4 Groups, Documents and Views

The following documentations provide instructions on what View Editor "Group", "Document" and "Views" are and how to use them.

4.1 Groups

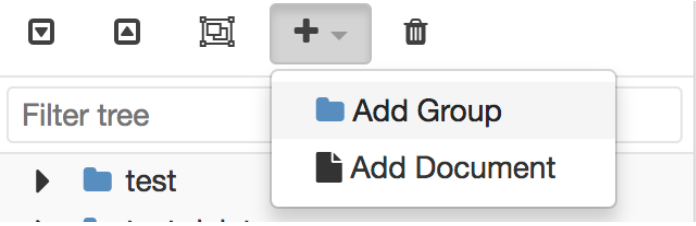
Groups organize documents and other groups within a project

4.1.1 Create Group

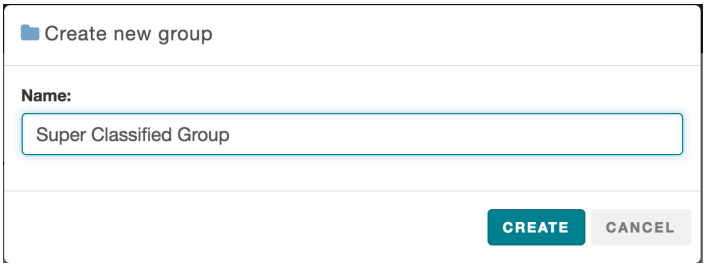
Since "Group" can only be used to organize documents/groups, it can only be created under the project level.

1) Select a parent group to create your group under in the tree or create group at the root level by navigating to the project "home"

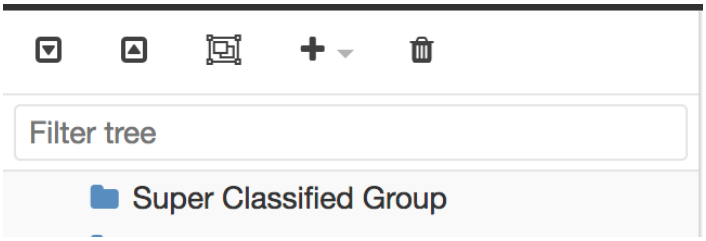
2) Select the plus in the left pane



3) Enter a title for the new group



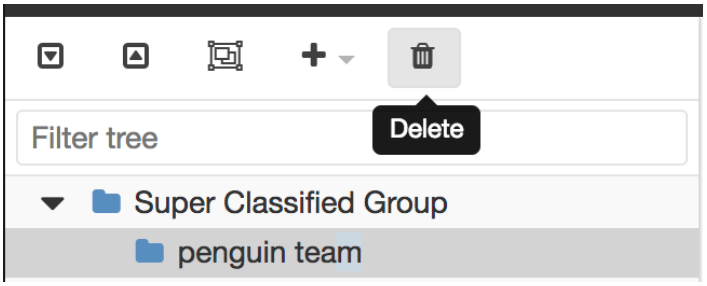
4) Your group will appear in the tree



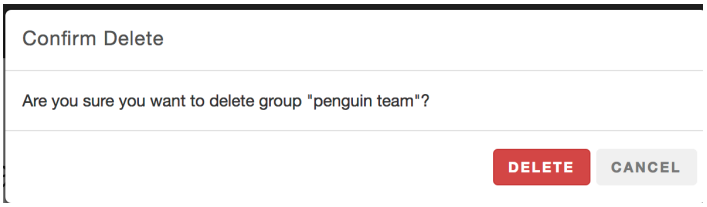
4.1.2 Delete Group

Only an empty "Group" can be deleted. To delete "Super Classified Group" Group in the picture above,

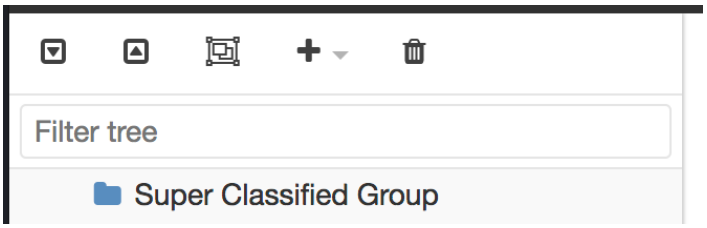
1) Select the group



2) Click delete and confirm the deletion



3) Your group will no longer appear in the tree

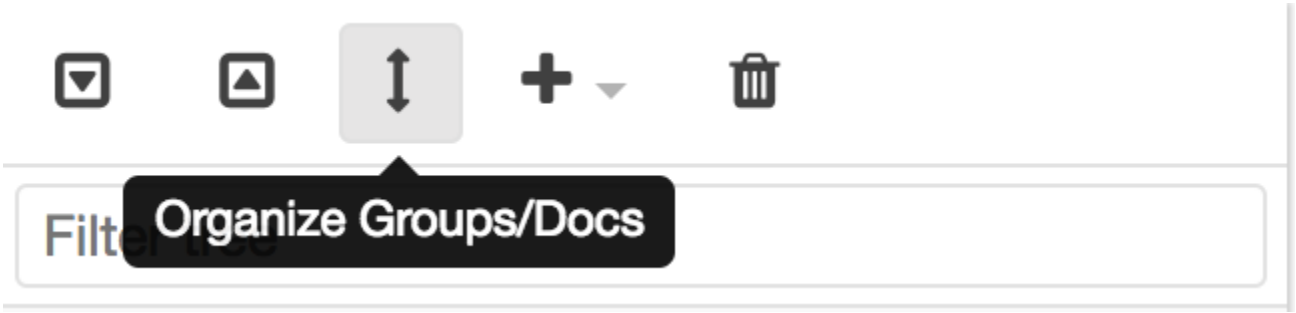


Follow the same steps to delete "Super Classified Group".

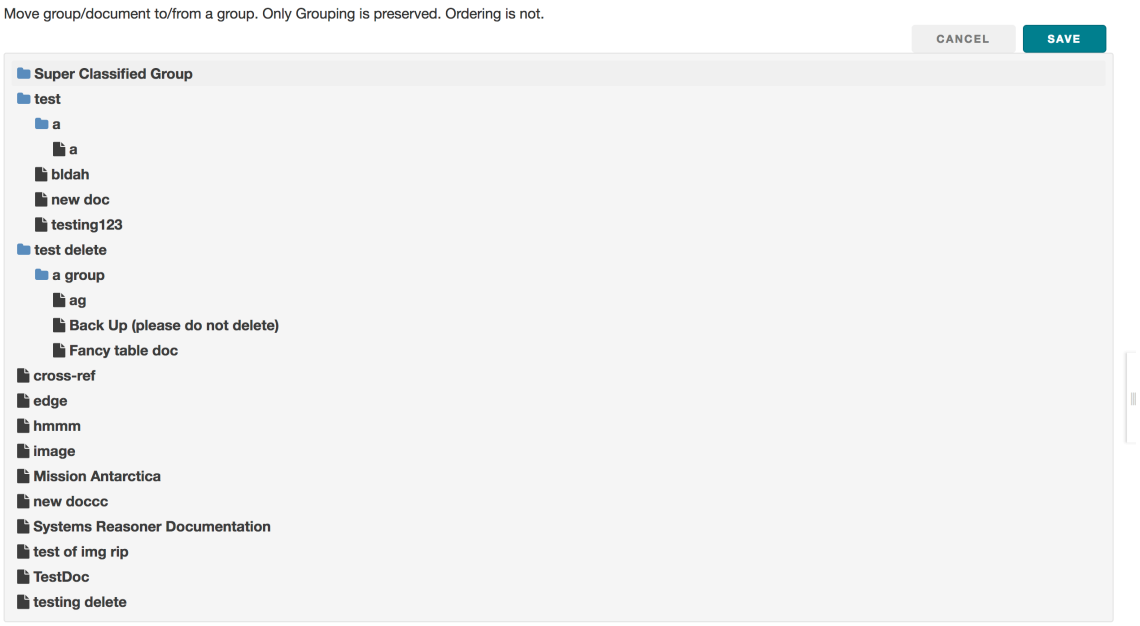
4.1.3 Organize Groups/Documents

"Groups" can be used to group together documents/groups. To move documents into a group:

1) Select the "Move to/from Group" Icon in the left pane



2) The project tree will appear in the center pane



3) Drag any documents or group and drop it under another "Group" and then click save. Groups and documents at the same level are ordered alphabetically and *cannot* be manually ordered.

4) Your updated ordering will appear in the tree

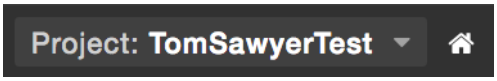
****Note: Ordering is not maintained when moving groups(s) or document(s) in or out of another group. The ordering is automatically generated with two rules: "Group" shows up before "Document" and both of them are placed in ascending order alphabetically relative to its peer.**

4.2 Documents

A **Document** is composed of Views (see Section 4.3), presentation elements (see Section 4.3.5.1), model elements, etc.

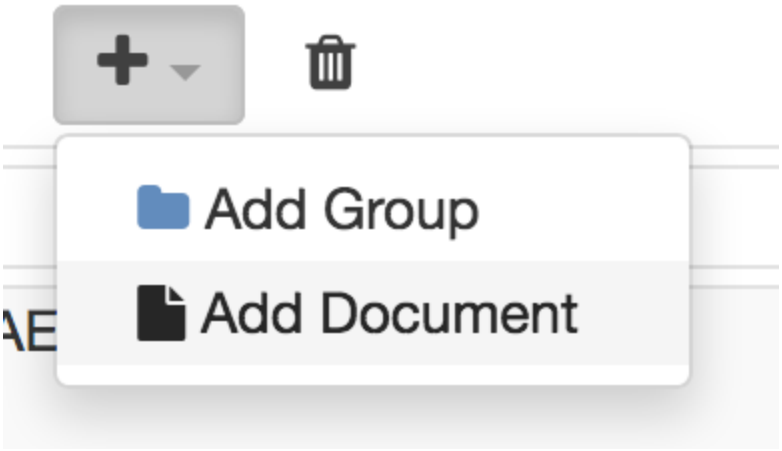
To see how a user can sync the new document to MMS, refer to Update from MMS.

4.2.1 Create Document

1) In the upper right go to the project home 

Or to create document as a child of a group, select the group.

2) Select the plus in the left pane and "Add Document"



3) In the Create Document Dialogue, add a name, and select "create" button.

4.2.2 Delete Document

1) Select the document you wish to delete in the tree

2) Click on the trash button
Note that deleting a view on View Editor will **neither** delete the View from the model nor from MMS.
To delete a view permanently, delete it from the model **and** then commit that delete to MMS.

4.2.3 Structure/Edit Document

1) Build high level document structure by creating Section 4.3

2) To edit content, toggle edit mode in the upper right toolbar

3) Add text, images, tables, equations, and section Presentation Elements (PEs, see Section 4.3.5.1) using the plus menu to the left of the document content. The advantage of using image, table, and equations PEs is that they:

- can be cross referenced and auto-numbered (see Section 4.3.5.4)
- appear in the exported document table of contents
- appear in the left document navigation tree

4.3 Views

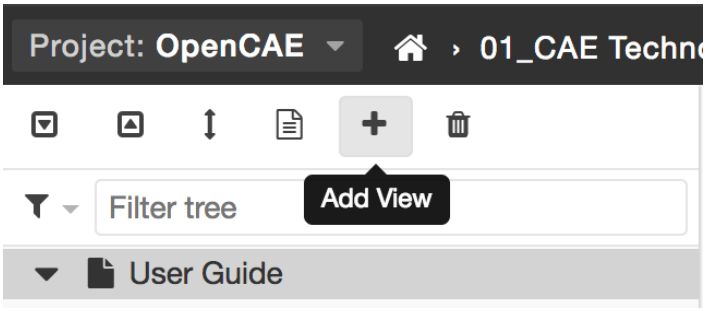
Views are sections of a document that can hold pictures, diagrams, or textual information to describe ideas and objects.

Views can be added to a document in three different ways:

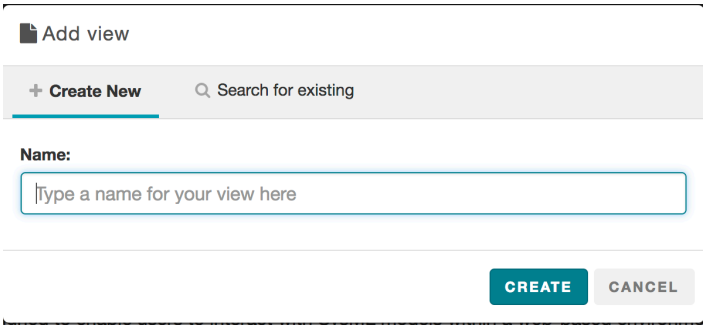
1. Adding a new View
2. Adding a new View as a subview
3. Adding an existing View

4.3.1 Add a New View

Select the document (the root on the left pane). Click on the Add button :

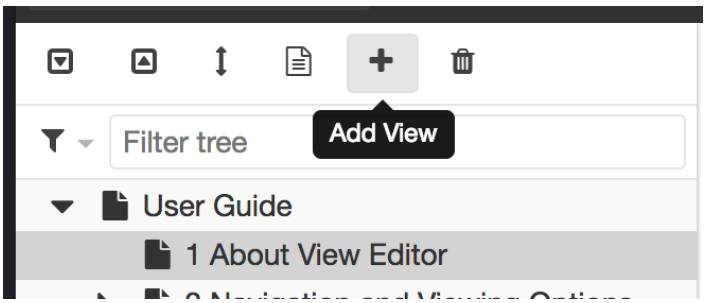


Type in a name, and click on the "CREATE" button.



4.3.2 Add a New View as a Subview

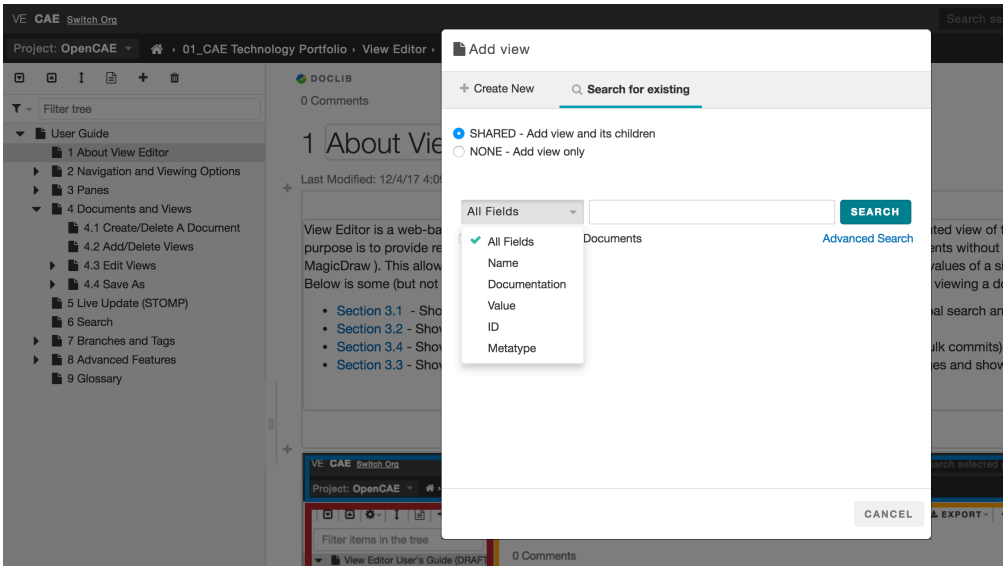
Select the view under which you want to nest the subview and follow the same steps above:



4.3.3 Add an Existing View

To add an existing view to another document, select a document or view to which you want to nest the existing view under, and click on the Add button .

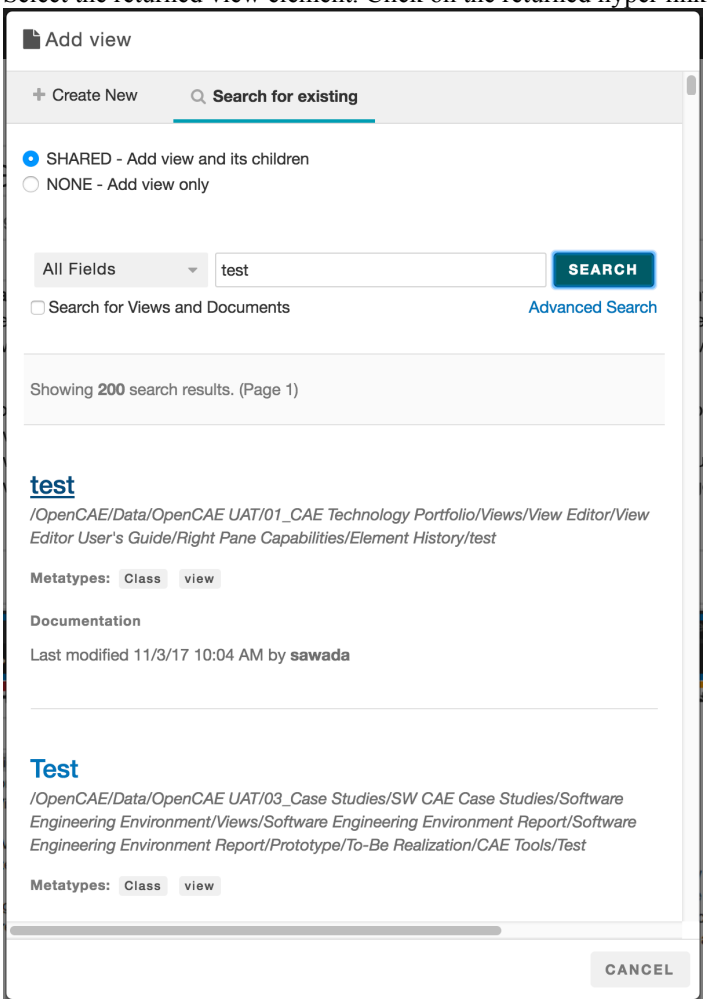
On the pop-up dialogue, click on the "search for existing" tab:



Select "SHARED" if you want to show the view/document and its children. Select "NONE" if you want to show only the view/document.

Select the desired search constraints: ALL, NAME, DOCUMENTATION, VALUE, or ID.

Select the returned view element. Click on the returned hyper link.



The existing view has been embedded under another view:

You can edit this view object from the view that was just nested or from the original view. The *single source of truth* principle is maintained.

Note: The original view will NOT be deleted upon the deletion of this view.

4.3.4 Delete View

A user can delete any existing view by selecting the view on the left pane, and clicking on the Delete button from a document.

Note that deleting a view on View Editor will **neither** delete the View from the model **nor** from MMS.

To delete a view permanently, delete it from the model **and** then commit that delete to MMS.

Upon deletion, the browser redirects the user to the top of the document.

4.3.5 Edit Views

This section focuses on the **editing aspects** that View Editor offers including the following capabilities:

- High level document editing
- Full text editing
- Adding special elements (images, videos, links, etc)
- Specifying element properties
- Using cross references for "source of truth" accuracy

For more information regarding Presentation Elements as they appear in the MagicDraw model, please consult the Presentation Element Instances view.

4.3.5.1 Add Presentation Elements

Presentation elements (PE) are key components in the interaction between View Editor and the system model. They can be thought of as small, labeled containers that hold the information displayed in Views.

View Links allow you to cross reference an existing PE inside another PE. See the section, Section 4.3.5.1.1 , for more detail.

The following demonstrates how to add and use various kinds of presentation elements to edit View content.

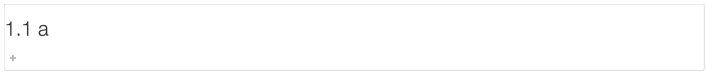
Adding Text

The default PE for new Documents/Views is the text box. This will add a paragraph PE.

1. Enable edit mode if not yet active
2. Click on 
3. Name it (optional)
4. Click on  to add content

Adding Section

Sections are used for adding concrete organization to views. They are similar to views in the sense that they provide a specific amount of information. They are also containers for presentation elements, and can be cross referenced.

1. Enable edit mode if not yet active
2. Click on 
3. Name it (optional)
4. Click new section area to add content 

5. You can nest other PEs to the section PE.

Adding Comment

You can insert comments to all documents and views. Comments are saved in the model and are by default hidden from the view. See Section 2.4 for more information.

Adding Table

You can add a table PE. Adding a separate table PE adds an element of organization (my naming and separating it from text) to the content. It also lets you cross reference the content directly.

1. Enable edit mode if not yet active
2. Click on 
3. Name it (optional)
4. Click on 

to add content

Adding Figure and Videos

A user can add figures, such as images or videos, in an image PE.

1. Enable edit mode if not yet active
2. Click on 
3. Name it (optional)
4. Click on 

to add content

Adding Equation

A user can add an equation PE.

1. Enable edit mode if not yet active
2. Click on 
3. Name it (optional)

4. Click on (no equation) to add content

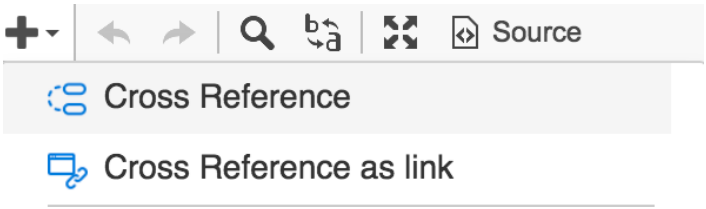
4.3.5.1.1 Cross Reference as Link

A Cross Reference as Link can be inserted to your view to reference an existing view or presentation element.

Steps:

Click  on 

or



Search for the desired PE/View/Section and click on the element name or related document to insert a cross reference as a link

For PE numbering

Search for the desired PE and click on the element name

Note: To update the link text you must switch to source view and update the <mms-view-link> tag by adding the **'link-text'** attribute as shown:

<mms-view-link **link-text="new name for link"** mms-doc-id="sampleID" mms-element-id="sampleID">[cf:SampleElement.vlink]</mms-view-link>

4.3.5.2 Edit A Presentation Element

The following operations can be performed on views and documents:

- Edit **Style** - stylize text in a similar fashion to Microsoft Word.
- Add/edit **Links**
- **Find and Replace** - search, find, and replace a PE
- Edit HTML **source code** - edit the PE by modifying the HTML source code directly

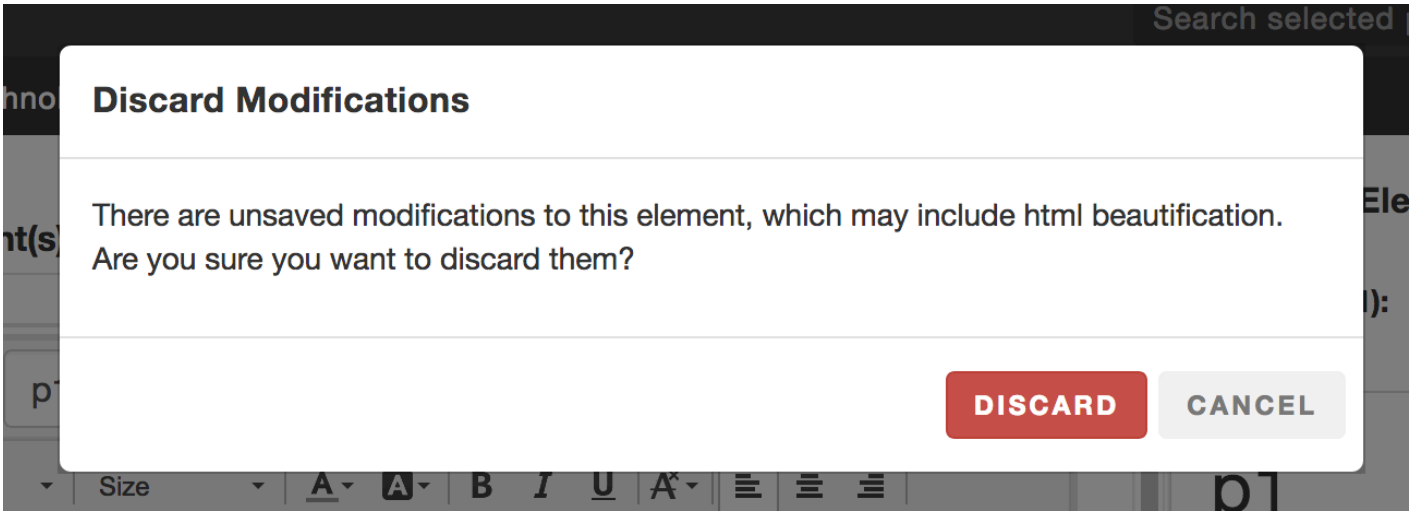
4.3.5.3 Save Elements

There are several saving options when editing Presentation Elements (PEs).
To learn how to save Documents and Views as PDFs, Word Documents etc., refer to Section 4.3.6.

Saving elements:

- Preivew Changes
- Save (and Close)
- Save and Continue
- Auto Save (See Autosave to the browser's localStorage)
- Cancel

Note: When canceling, if changes have been made, the following message will appear to warn the user that canceling changes will mean that changes will not be saved. The user would need to "Cancel" out of this message and manually save the PE if the changes were desired.



4.3.5.4 Use Cross References

Cross References are pointers to other sources of information, typically text or documentation. Such references can be **names**, **documentation**, or **values** of model elements, as well as other **views** and **documents**. The primary benefit of cross references is that wherever they are accessed in a Document/View, the Document/View will be automatically updated when the element is modified. This is also the direct interface for changing model elements because any change to the element cross reference will be reflected in the model itself. As you will notice throughout both this guide and MDK User's Guide , there are cross references constantly being made to other views and documents.

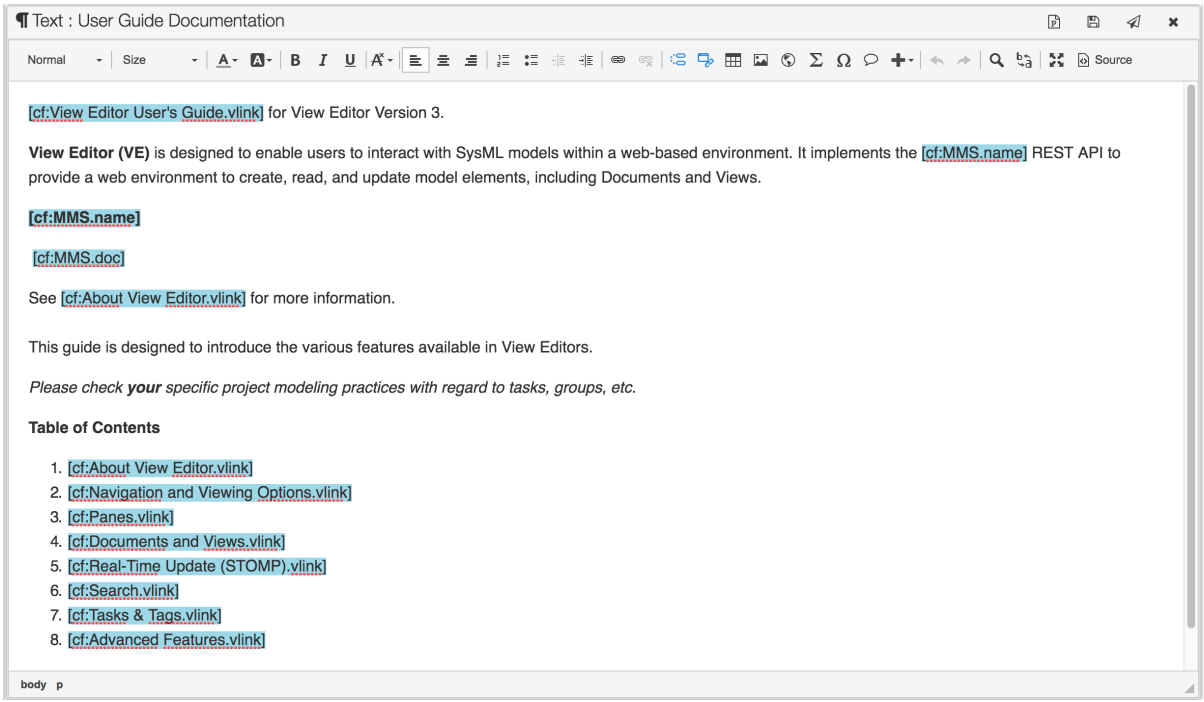
The following guide demonstrates the different features and capabilities for cross referencing in View Editor.

Create a Cross Reference - name, documentation, and value

- From 2.4.0 on, there is a checkbox in the cross reference popup that allows you to restrict the **editability** of the cross referenced element where you inserted it. This will only affect editing in the center pane and not in the element specification on the right pane.

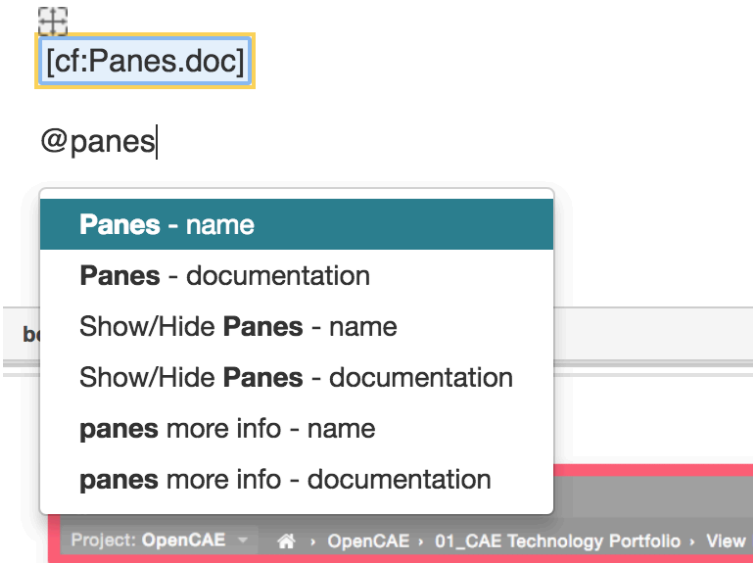
Search and add Cross Reference through interface

1. Enable Edits
2. Select a Presentation Element to Edit
3. Click on Insert Cross Ref on the editor tool bar.
4. You can search for the existing element by the following fields:
    1. Name
    2. Documentation
    3. Value (& Name of a different element in this case)
    4. Element ID
5. Select the element you want to cross reference.
6. Click on the item that you want to cross reference
7. You will see a blue box with the label, *cf: xxxxx*, where *xxxxx* is the name of the cross referenced object.



Find Cross Reference inline

1. Enable Edits
2. Select a Presentation Element to Edit
3. You can use the '@' symbol to find cross references inline
4. Can use the up/down arrow to highlight and select element



Editing cross referenced elements

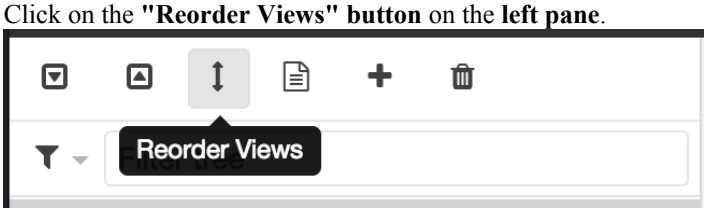
1. Cross referenced element can come from:
    - Different part in View Editor
    - New Cross Reference
2. Bonus: Run “Update from MMS” in MagicDraw to see the changes to the elements
    - More information can be found in the description

To learn more about how the edited elements are synced back into the Model, see Update from MMS .

4.3.5.5 Reorder Views/Elements

You can reorder Views and Presentation Elements (PEs) to change the hierarchy of the elements.

Reorder Views (Enhanced)

1. Click on the **"Reorder Views" button** on the **left pane**.
2. 

3. Drag and drop the tile to reorder views as desired.

Note: The blue position guide arrows let you know where the view/document will be inserted as you drag a tile:

Note: When a view that has subviews is selected to be moved, all of its subviews will move with it.

To learn about adding different types of views, refer to Section 4.3

Capabilities:

- Switch 2 views
- Move a view to become a subview
- Move a view to become a parent of another
- Change node level (depth)

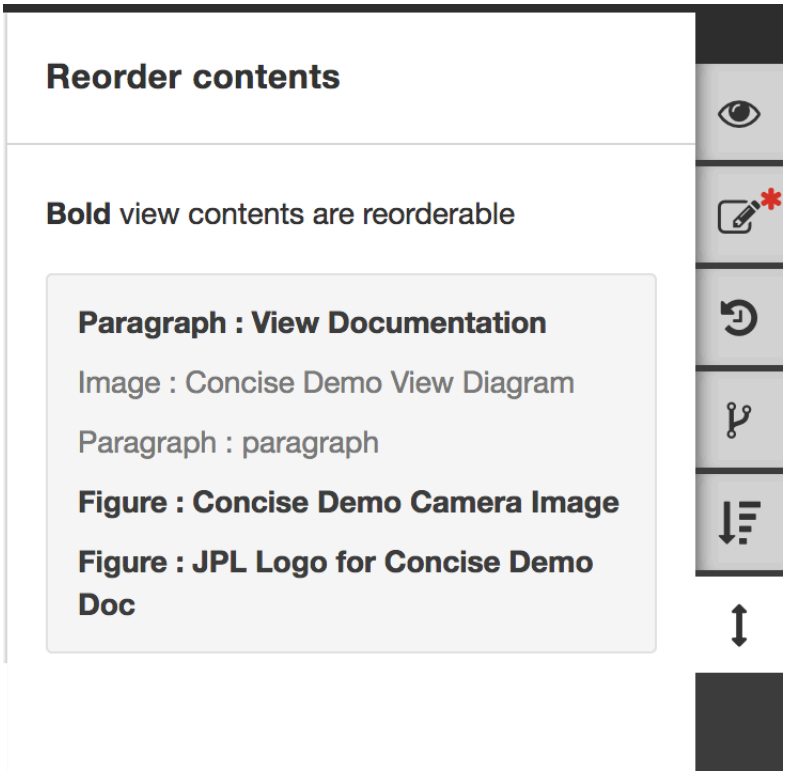
Notes for Modelers/Developers:

Each view will have indication of which type of connection it's under (composite/shared/none), only composite/shared views will show their child views. Hence you cannot move views under a view that's connected as "none"

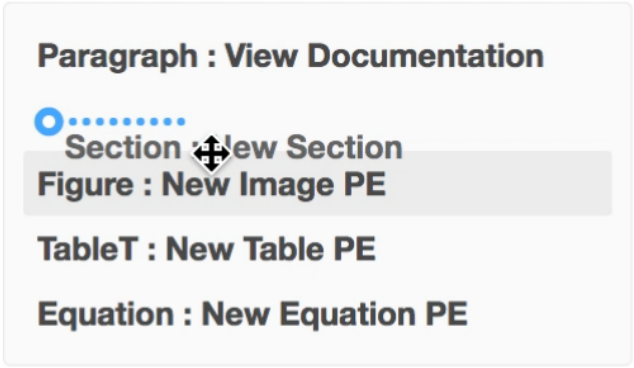
Known issue -Section numbering has been added since version 3.2.2, but view reordering page still showing numbers as if sections aren't numbered. We are working on a more robust reordering option.

Reorder Presentation Elements (PEs)

1. Click on the "Reorder Content" button on the right pane.



2. Drag and drop the tile to move the elements around and reorder them as desired.



For more information on PEs, refer to Section 4.3.5.1

For more information of other tools in the Right Pane, refer to Section 3.3

4.3.6 Save As

You can save Documents and Views locally. The following guides demonstrate the options for saving Views and Documents.

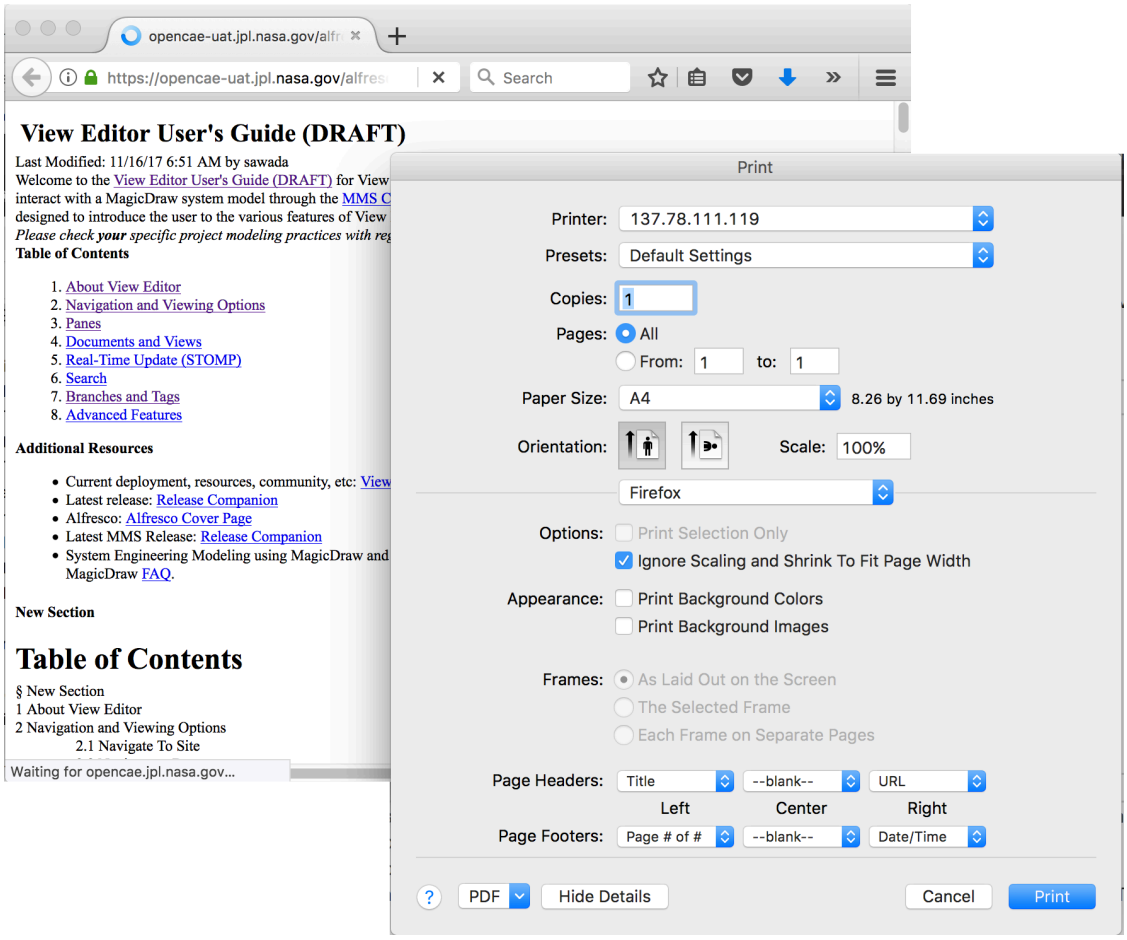
Save As options include the following for both Documents and Views:

- Section 4.3.6.1
- Section 4.3.6.2
- Section 4.3.6.3
- Section 4.3.6.4

Print to Printer and Save to PDF or Word will also generate the table of contents, list of tables, list of figures, and update the numbering within the document for any links. The popup will also allow you to enter custom header and footer info, with prefilled info if it's available in the model (through the Document stereotype's docMetadata tags).

4.3.6.1 Print to Printer

- **Print View**
    1. You can physically print a selected view:
    2. 1. Select the view/document you want to print out (click on "Full Document"  if you wish to print out the entire document).
       2. Click "Print" 



3. The print content dialogue will pop up
4. Select a printer and print

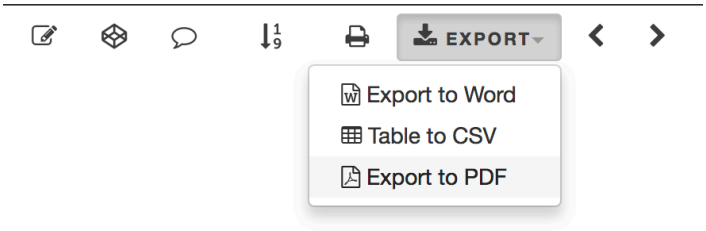
4.3.6.2 Generate PDF

See these subsections for more information about specific generations:

1. Section 4.3.6.2.1
2. Section 4.3.6.2.2
3. PDF Customization

4.3.6.2.1 Generate PDF of View/Document

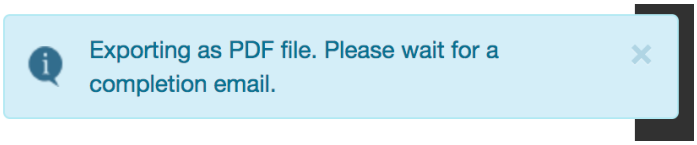
Save View as PDF 



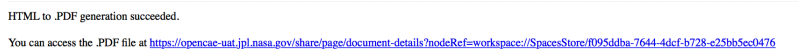
You can convert the document/view to a PDF file and save.

Step By Step Instructions:

- Select the view you want to convert
- Click " Export " button
- Select " Export to PDF "
- If not in " Full View " mode, a dialogue window will pops up, asking if you want to export from Full View.
- Generate PDF Document dialogue will pop up:
    - Choose whether or not to create list of tables and figures
        - If you wish to generate list of tables and figures based on the presentation element type, check *Use HTML for List of Tables and Figures (will not include equations and may differ from web numbering)* option
    - Check landscape option if necessary
- Click on " Generate PDF "

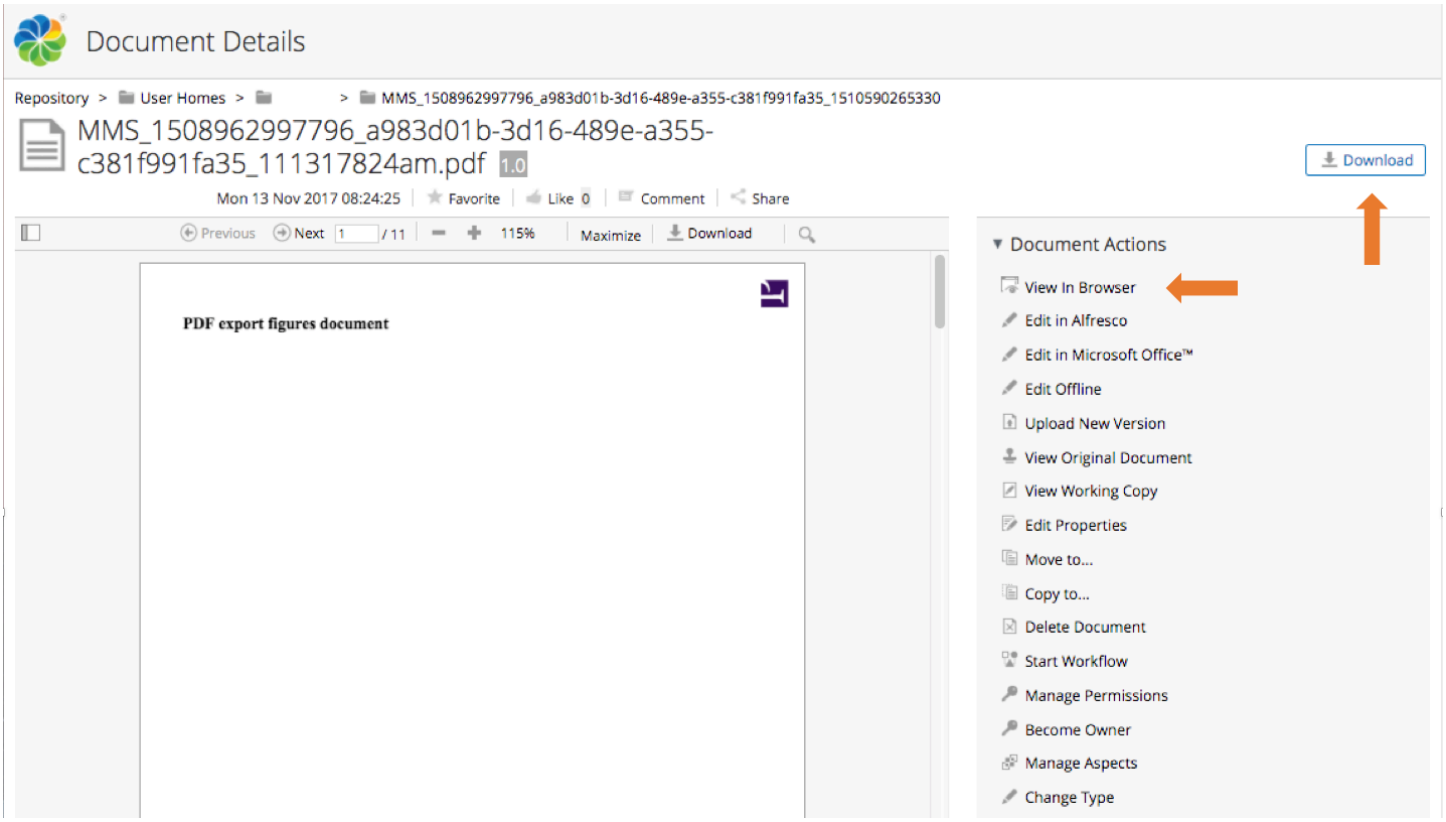


- You will receive an email with the link to the document/view, converted PDF


HTML to .PDF generation succeeded.

You can access the .PDF file at https://opencae-uat.jpl.nasa.gov/share/page/document-details?nodeRef=workspace://SpacesStore/f095ddba-7644-4dcf-b728-e25bb5ec0476

Follow the link in the email message to view the PDF document, stored in Alfresco. To download, click on the Download button. To view in the browser, click on the "View In Browser".



Options provided in “GENERATE PDF DOCUMENT” Dialogue Window

1. *Generate List of Tables and Figures*:

   Check the box if you wish to generate a list of tables and figures beneath the Table of Contents.

2. *Use HTML for List of Tables and Figures (will not include equations and may differ from web numbering)*:

   Choose this option if you wish to generate the list of tables and figures from all existing tables and figures in documents/views.

   Leave the box unchecked If you wish to generate the lists based on the associated presentation elements

Note: Images in <figure> tags are used to generate the list.

4.3.6.2.2 Generate PDF with Model Based Cover Page

In certain circumstances, you may want to create a custom cover page for a chosen document. The cover page is identified as the first View and has the Metatype of "Document" (highlighted below on the right pane). See below for the cover page of this User Guide:

This can be done in two ways:

1. View Editor
    1. A user would edit the cover page exactly the same way as any other view in the document.
    2. A user can add Presentation Elements (including texts, pictures, etc.) and edit through normal ways.
    3. This is ideal for customizing one document at a time.
2. MagicDraw
    1. A user can add a normal ViewPoint to any cover page, the same way a user would do for any view.
    2. All normal ViewPoint methods are available for the Cover Page as well.
    3. This is ideal for creating a reusable cover pages.
    4. See Create a Reusable Cover Page more information.

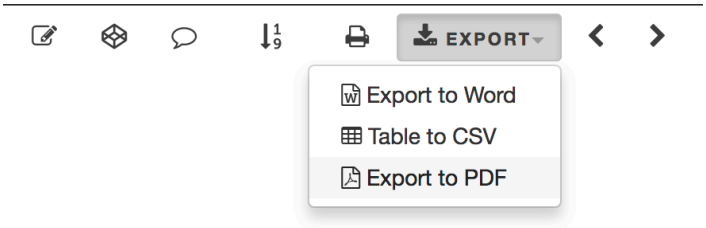
4.3.6.3 Save to Word Document

Save Document/View To Word

- You can convert the document/view to a Word file and save.

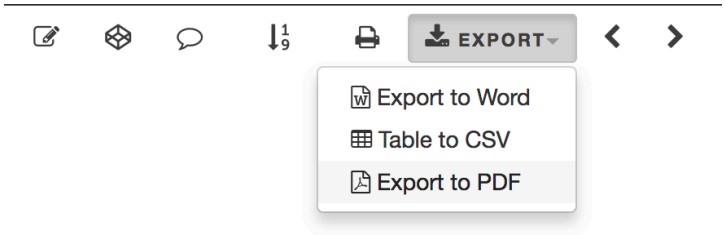
Step-by-step instructions:

1. Click on " *Export* " button, and select "*Export to Word*" (See below)
2. If not in " Full View " mode, a dialogue window will pops up, asking if you want to export from Full View.
3. You will receive an email with the link to the converted Word document/view.

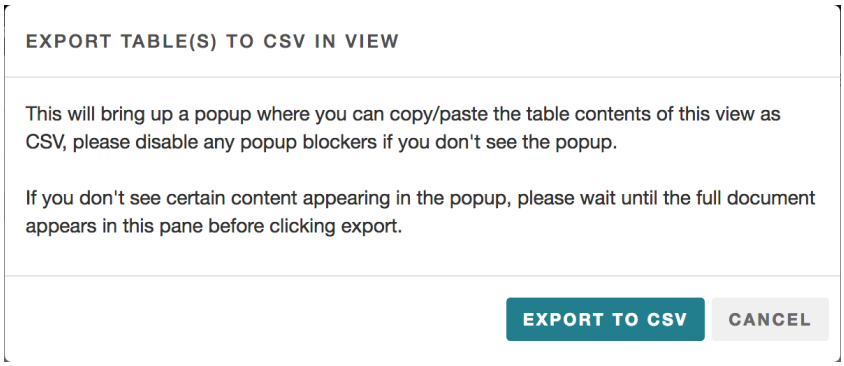


4.3.6.4 Export Tables

Tables to CSV



- Click on " Export " button, and select " Table to CSV "
- You will see the following prompt:



- Click on Export To CSV. The popup window below will display.

- Click on " Save to CSV " button to store the table in a view/document as a CSV file.

Save all tables from document to CSV

- Go to the full document by clicking on  button.
- Follow the steps above.

Export Rapid Table

1. Filter and export options are available when tables ("rapid tables") are generated through MagicDraw. In the following clip, the user began with an existing rapid table ("Community Resources" on MagicDraw Cover Page and demonstrates how to filter the contents and export the full table as CSV.

name and value

Name	Value
sdfsf	
Boolean1	false
Integer	6
Real	60
String	fairing
UnlimitedNatural	22
OpaqueExpression	what
Animal	dog

2. Learn how to create a Rapid Table in a view here: Create and Generate a Rapid Table
3. The Filter and Export icons appear (see the orange arrow in the image above):
4. You can also export a filtered table by following the same steps but not "Reset" filter

To Filter Table

1. Click “Filter Table” button
2. Enter desired filter and “Apply”
3. "Reset" filter

To Export CSV (*can be cross referenced to"Save as" screencast)

1. Click “Export CSV” button
2. Open with default settings

5 Live Update (STOMP)

View Editor provides **real-time updates** to Views using the Streaming Text Orientated Messaging Protocol (STOMP) capability. This feature ensures modified contents are broadcasted to all users who accesses the same resources simultaneously

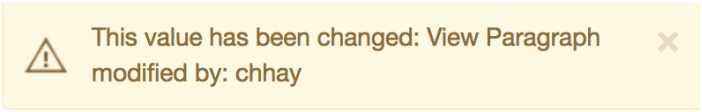
Users are alerted when:

1. The current page that is being edited has been changed somewhere else
2. There is a conflict between two saved elements
3. The page that is about to be edited is out of date

This means that View Editor is constantly interacting with the Presentation Element editors so that it can automatically update content as well as notify users when there are live changes. The STOMP features assure users that changes will not be lost, nor accidentally overwritten, and that users will be fully aware of who else is editing at the time.

View Contents Outdated

- You may occasionally come across the following pop-up message on the bottom right of your browser.
- If you see this message, **save the editor content in your local machine** (i.e. copy & paste the content to your text editor, and store it), then refresh the page to load the latest version of the content in your browser.



- The following scenario is an example of the sequence of events that would trigger such messages to pop-up:
    - user2 begins to edit
    - user1 saves the document above exactly at the same time
    - the page user2 is currently viewing is now out of date (compared to what is stored on the server)

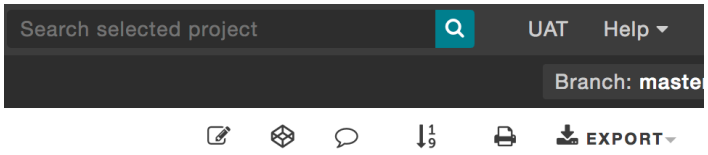
6 Search

Global Search

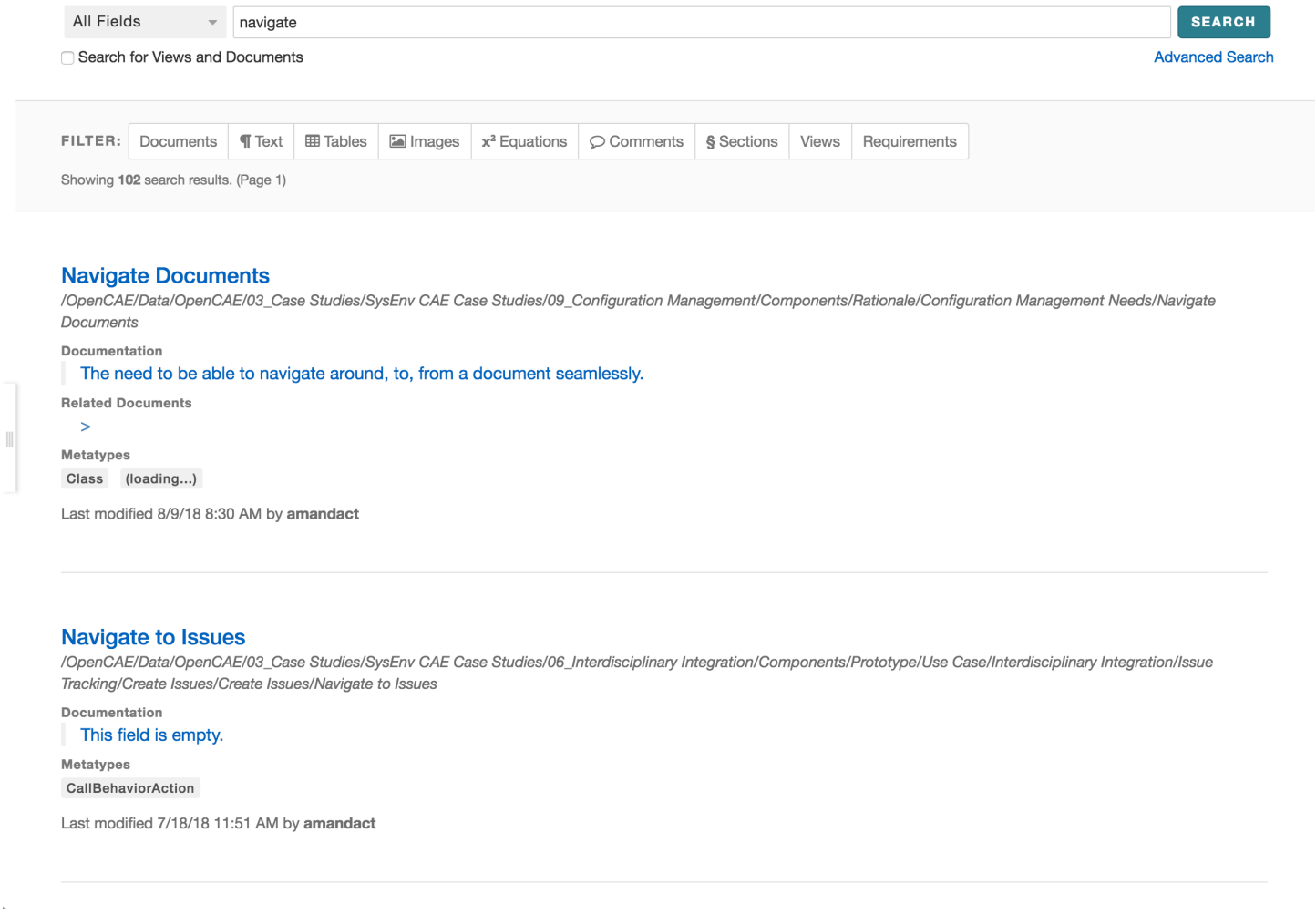
View Editor provides the user with the ability to run "global" searches. It allows searching for elements, views, docs, etc. on reference branch and its latest tags. The biggest component of the Search feature it that the user can see the properties of a searched element. A use can also navigate to the element and the Related Document.

Search for an element

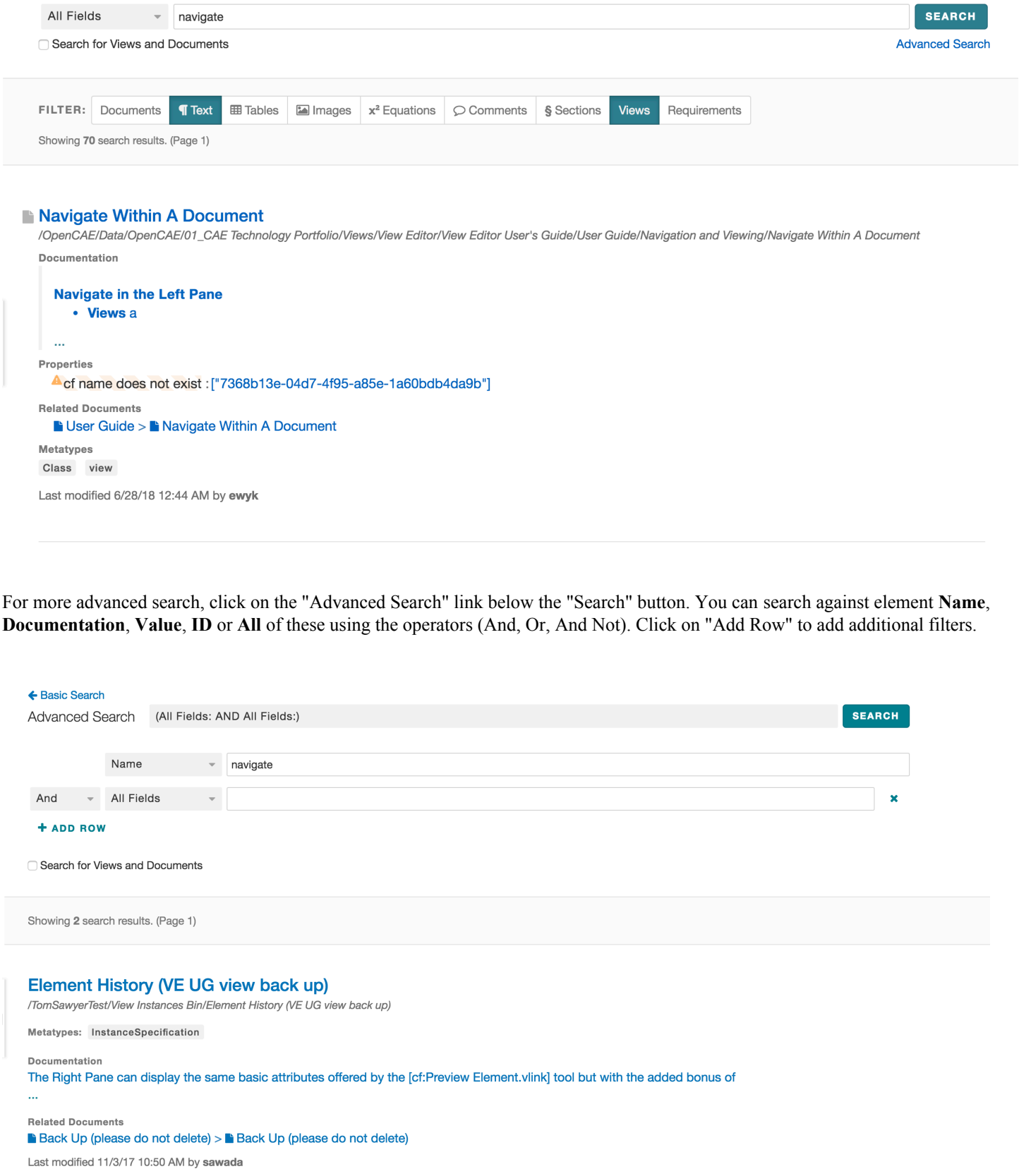
Enter your search keywords in the search box on top right



All matching search results will appear in the center pane



There are options to Filter the results by Documents, Views, presentation element types and Requirements.



For more advanced search, click on the "Advanced Search" link below the "Search" button. You can search against element **Name**, **Documentation**, **Value**, **ID** or **All** of these using the operators (And, Or, And Not). Click on "Add Row" to add additional filters.

Inside Document Search

- When trying to search for a word or sequence of characters in a View, the browser's "Find" feature
- When trying to search for a word or sequence of characters in a Document, it is suggested to
    1. View Full Document (Icon in Left Pane, see Section 3.2 for more information)

2. Use the browser's "Find" features

7 Version Control: Branches and Tags

Branches and **Tags** are used for project version control.

- A **branch** is an editable copy of a project
- A **tag** is a read-only snapshot of a project at a certain time
- For element version documentation, please see Section 3.3.3

Branches

- From a high level perspective, View Editor branches are similar to Git branches.
- They create a separate workspace built upon a duplication of data at a specified time.
- A branch contains live data; however, the live data is a duplicated copy and therefore any changes made in the Branch do not affect the live data in the "master" branch
- Branches are configured to be able to sync with Teamwork Branches of the same name. Refer to Branch Syncing for more information

Tags

- View Editor Tags are "snapshots" of all the data on a View Editor project at specified times.
- They are read-only
- This offers users a chance to freeze data at specific and relevant times, including reviews and releases

7.1 Navigate and View Options

Please see Section 3.3.4 for instructions on how to navigate to branches and tags

7.2 Create/Delete Branches and Tags

A user can create Branches and Tags from the Manage Branches/Tags Page. From there, a user can inspect, add or delete branches. **Master** branch can not be deleted

7.2.1 Create Branch

1) Click on "*Manage Branches/Tags*" button from the *Branch/Tag dropdown* menu on top right.

2) In *Manage Branches/Tags* view, select the version to branch off of and click the "+BRANCH" button:

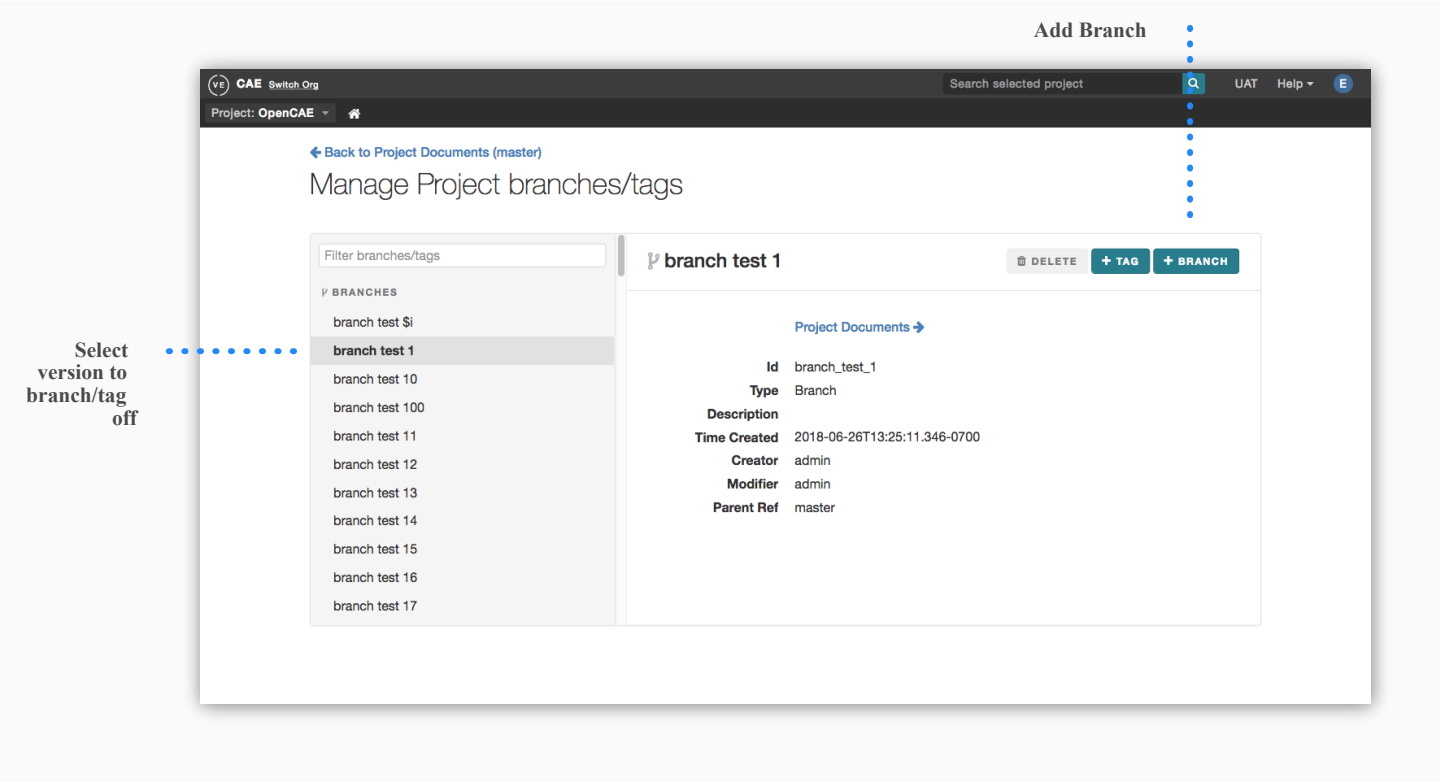


Figure 20. add branch

3) Follow the dialogue:

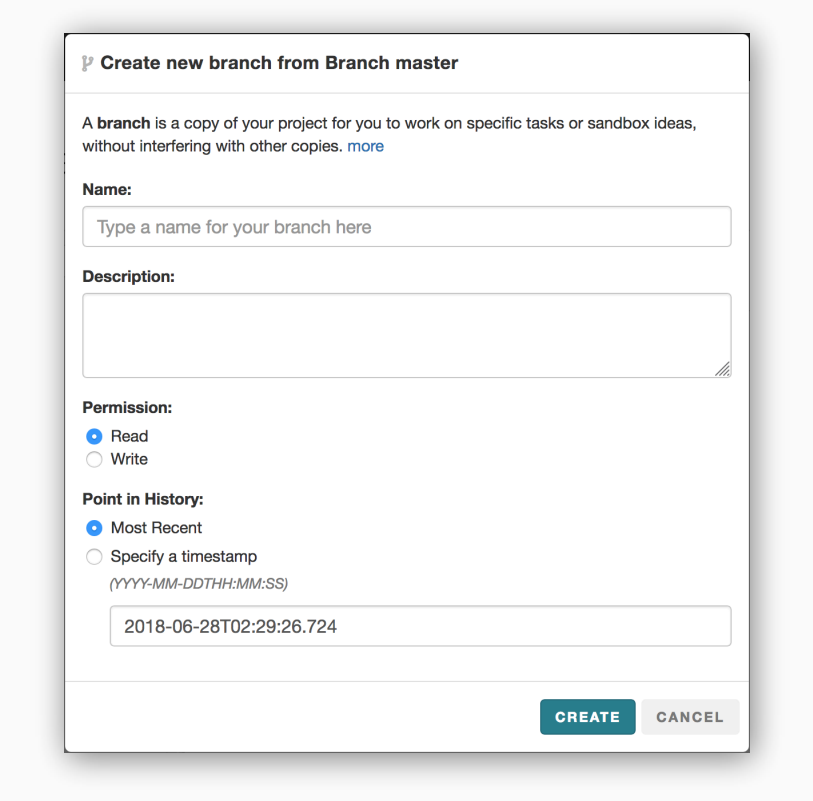


Figure 21. create branch dialog

1. Name of the branch is required.
2. Set permissions by selecting from the options provided - "Read" or "Write"
    1. By default, the user who created the branch will be able to edit no matter what option is chosen.

2. Creating a "Read" branch means that only the creator and those who are granted specific permissions can edit that branch.
3. "Write" enables all users the ability to edit the branch

7.2.2 Create Tag

1. Tags can be created the same way as branches (see Section 7.2.1
2. Upon creation, the user can choose what timestamp the tag should reflect, either "Now" or "Specified
    1. By default, "Now" is selected and the timestamp of "Now" is shown
    2. If a user chooses "Specified", then the user has to manually enter a time for the Tag to be taken.
    3. The user can specify year, hour, and minute - although there are decimal numbers shown by default, a user should delete these values since new ones wil be generated upon Tag creation

7.2.3 Delete Branch/Tag

1) In Manage Branches/Tags view, select the branch/tag you wish to delete

2) Click "Delete" Button

Once deleted, the branches/tags can no longer be accessed

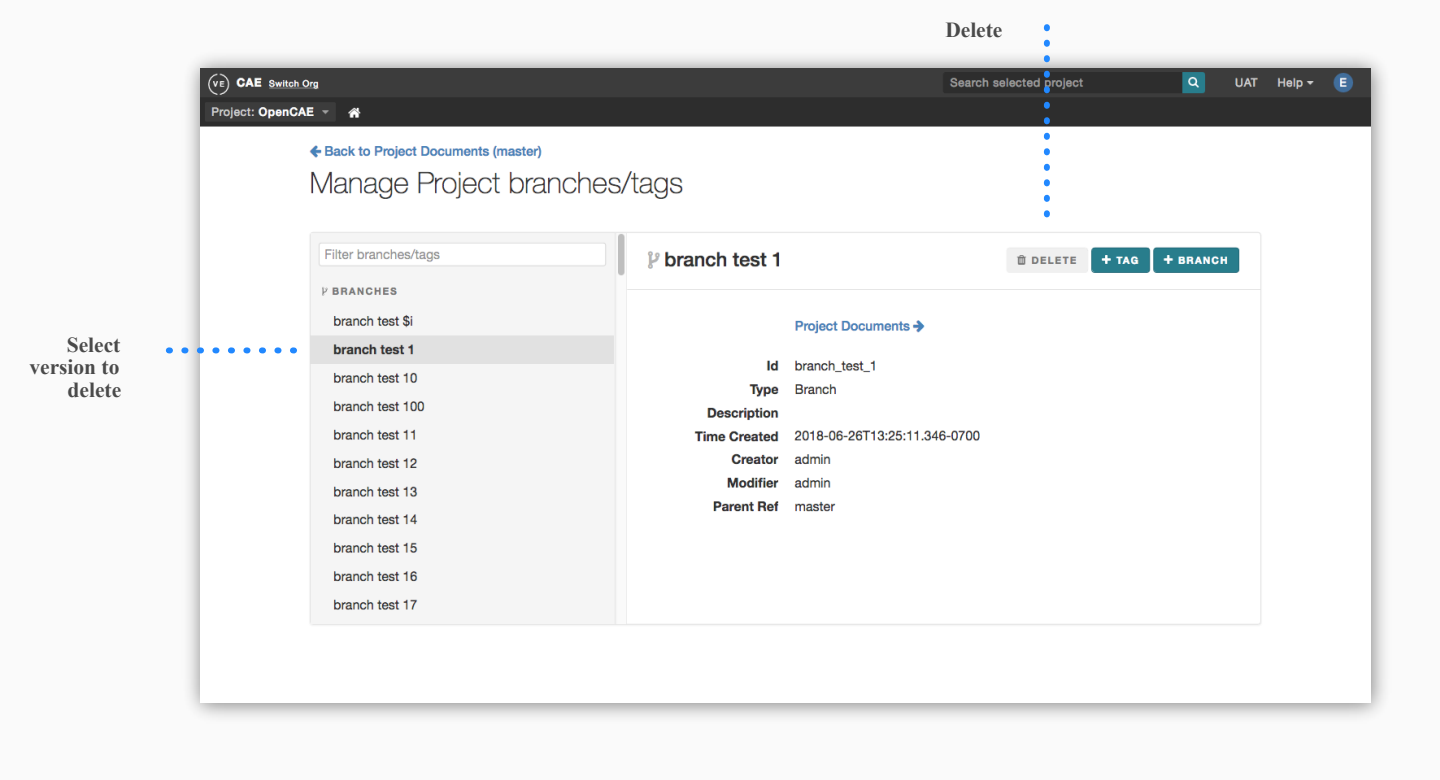
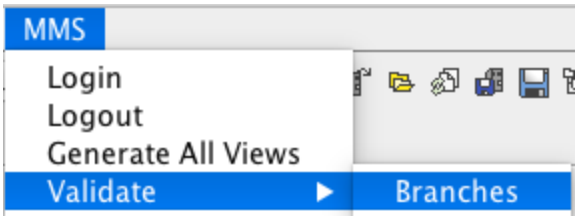


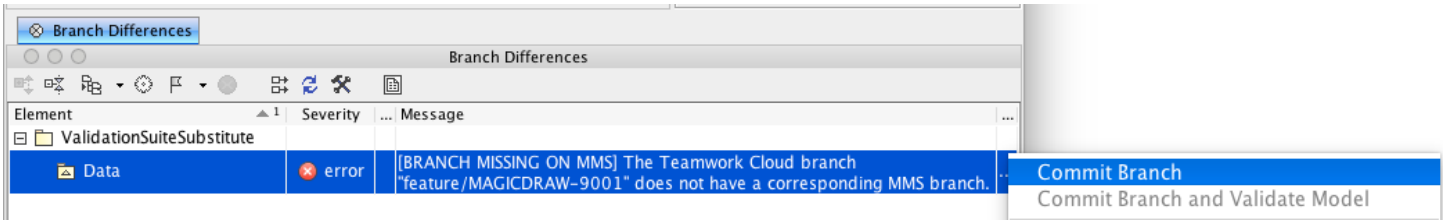
Figure 22. delete branch

7.3 Branch Syncing

Note: This applies to Teamwork Cloud (TWC) projects, but not local projects as the latter do not have branching.

Both TWC and MMS support branching as a part of their version control functionality. MDK syncs branches created in TWC by committing them to MMS. To validate the branches on both sides, select "MMS" from the main menu > "Validate" > "Branches". Validation rule violations will be presented if they are not in sync, and resolutions can be selected by right clicking each violation.


MMS
Login
Logout
Generate All Views
Validate
Branches


Branch Differences
Branch Differences
Element
Severity
Message
ValidationSuiteSubstitute
Data
error
[BRANCH MISSING ON MMS] The Teamwork Cloud branch "feature/MAGICDRAW-9001" does not have a corresponding MMS branch.
Commit Branch
Commit Branch and Validate Model

8 Advanced Features

This section is dedicated to View Editor Advanced Features, including visualizations and custom tags.

8.1 Visualizations

For TomSawyer diagrams or plots, please see the DocGen Manual.

8.2 Temporal Diff Tag

Compares an element at two different refs/commits and generates a diff highlighting what has been added and deleted. You can use the element history view in the right pane to access element level changes.

Example Code

```
<mms-diff-attr mms-base-element-id="" (mms-compare-element-id="") mms-attr="name|doc|val"

   (mms-base-project-id="" mms-compare-project-id="" mms-base-ref-id="" mms-compare-ref-id=""

    mms-base-commit-id="" mms-compare-commit-id="")></mms-diff-attr>
```

8.3 Group Documents

The Group Documents directive generates a table used to reference all the document links within a site. This can be placed on the cover page of a group.

Here is an example of how you would define the directive to load the appropriate HTML.

```
<mms-group-docs mms-group-id="_18_0_2_bec02f9_1446154915939_541002_41021">[cf:site docs]</mms-gr
```

Here is an example of document links for CAE View Editor site.

Document(s)
Developer Guide
FAQ
Release Companion
UAT Documentation
Section

8.4 Autosave to the browser's localStorage

This feature automatically stores unsaved contents from any of the CKEditors to the browser’s localStorage except for the editor on the Comment's Modal, Proposal's Modal, Cross Reference Modal and Workspace's description. The contents will be auto saved at a configurable interval of 5 seconds and with the users’ consent reloaded automatically to the editors which they belong.

These auto saved contents are automatically deleted when either one of the following conditions is met:

1. Users press on one of the following buttons on the editor itself:
    1. save
    2. save and continue
    3. cancel: when the dialog shows up and users confirm the cancellation
    4. delete: when the dialog shows up and users confirm the deletion

2. Users press on one of the following buttons on the toolbar located on the right side of the app's layout
    1. save
    2. save and continue
    3. cancel: when the dialog shows up and users confirm the cancellation
    4. saveAll: This button is a little bit special because it shows up in two different situations.
        1. Shows up after users click on the "Edit Element" button on the toolbar located on the right side of the app's layout. In this case, it will delete all the new auto saved contents related to the specific element the user is editing.
        2. Shows up after a user modifies one or more elements on the page. In this case, it will delete all the new auto saved contents corresponding to all these elements.

When saving to a full capacity browser's localStorage, all expired auto saved contents will be automatically deleted to make room for new contents.

8.5 Table Sorting and Filtering

There are three main functionalities:

1. Sorting a column
2. Table-Wide filtering
3. Column(s)-Wide filtering

Sorting and Column(s)-Wide Filtering features are enabled only for the top level table's header columns. Please read further for special rules of these features regarding different types of content such as an image, an SVG, and a nested table.

Sorting Feature works on a single column at a time (no multi-columns sorting) with the following capabilities and rules:

1. Sorting is done alphabetically in an ascending or descending order
2. Content such as a nested table, an image and a SVG are not considered sortable and as a result, when sorting them among other text-only content, they will either be pushed to the bottom or the top based on the sorting order
3. To restore the original content's order, click the "Reset Sort" button which appears when the order of the content is changed

Table-Wide filtering works by comparing the user's specified filter term against the content of every row on the table with the following rules:

1. Images and SVG are not filterable
2. Filter term can either be an exact match or just a partial match of the content in the table

Column(s)-Wide Filtering allows filtering on a column or multiple columns in a sense that additional filtering can be performed further on top of the previously filtered results.

Column(s)-Wide Filtering works the same way as Table-Wide Filtering regarding the types of content that can be filtered. Table-Wide and Column(s)-Wide Filtering don't work on top of each other; when Column(s)-Wide Filtering already filters some results, Table-Wide Filtering will perform the filtering on the original content instead of the filtered results and vice versa. To enable Table-Wide and Column(s)-Wide Filtering features, click the "Filter table" button.

8.6 Configure Org Home Link

The Org name in the upper left can be configured to go to a specific url - to change it, issue this POST request to

```
host/alfresco/service/orgs

{"orgs": [
    {
     "id": "target org id",
     "name": "org name",
     "homeLink": "some url"
    }
]}
```

To see current list of orgs, make a GET request to /alfresco/service/orgs

8.7 Configure Auto-numbering

By default figure and table auto-numbering are sequential. To change the numbering scheme, fill in the "figureContextDepth" and "figureSeparator" tag values on the Document stereotype in the model. figureContextDepth controls how many levels of context to show, figureSeparator is the separator between context and number.

Ex. 2 and - results in numbering that looks like 1.3-2 or 1.0-3

8.8 PDF Customization

When exporting to pdf, the user can choose to provide their own css stylesheet. If this Advanced Options is used, the header and footer options from the Basic Options tab are ignored.

VE uses PrinceXML for styling PDFs. See Prince User Guide for all options.

By default, this is the CSS that's used:

```
/*-----------------------------------------------------------------
Custom CSS Table of Contents
1. Images
2. Tables
3. Typography
   3.1 Diff
   3.2 Errors
4. Figure Captions
5. Table of Contents
6. Page Layout
7. Headers and Footers
8. Signature Box
9. Bookmark Level
-----------------------------------------------------------------*/

/*-----------------------------------------------------------------
1. Images
-----------------------------------------------------------------*/
img {max-width: 100%; page-break-inside: avoid;
page-break-before: auto; page-break-after: auto;
margin-left: auto; margin-right: auto;}
img.image-center {display: block;}
figure img {display: block;}
.pull-right {float: right;}

/*-----------------------------------------------------------------
2. Tables
-----------------------------------------------------------------*/
 tr, td, th { page-break-inside: avoid; } thead {display: table-header-group;}
table {width: 100%; border-collapse: collapse;}
table, th, td {border: 1px solid black; padding: 4px; font-size: 10pt;}
table[border='0'], table[border='0'] th, table[border='0'] td {border: 0px;}
table, th > p, td > p {margin: 0px; padding: 0px;}
table, th > div > p, td > div > p {margin: 0px; padding: 0px;}
table mms-transclude-doc p {margin: 0 0 5px;}
th {background-color: #f2f3f2;}

/*-----------------------------------------------------------------
3. Typography
```

```
------------------------------------------------------------------*/
h1, h2, h3, h4, h5, h6 {font-family: 'Arial', sans-serif; margin: 10px 0;
page-break-inside: avoid; page-break-after: avoid;}
h1 {font-size: 18pt;} h2 {font-size: 16pt;} h3 {font-size: 14pt;}
h4 {font-size: 13pt;} h5 {font-size: 12pt;} h6 {font-size: 11pt;}
.ng-hide {display: none;}
.chapter h1.view-title {font-size: 20pt; }
body {font-size: 10pt; font-family: 'Times New Roman', Times, serif; }

/*------------------------------------------------------------------
   3.1 Diff
------------------------------------------------------------------*/
ins, .ins {color: black; background: #dafde0;}
del, .del{color: black;background: #ffe3e3;text-decoration: line-through;}
.match,.textdiff span {color: gray;}
.patcher-replaceIn, .patcher-attribute-replace-in, .patcher-insert, .patcher-text-insertion
{background-color: #dafde0;}
.patcher-replaceIn, .patcher-attribute-replace-in, .patcher-insert
{border: 2px dashed #abffb9;}
.patcher-replaceOut, .patcher-delete, .patcher-attribute-replace-out, .patcher-text-deletion
{background-color: #ffe3e3; text-decoration: line-through;}
.patcher-replaceOut, .patcher-delete, .patcher-attribute-replace-out
{border: 2px dashed #ffb6b6;}
.patcher-text-insertion, .patcher-text-deletion {display: inline !important;}
[class*=\"patcher-\"]:not(td):not(tr) {display: inline-block;}

/*------------------------------------------------------------------
   3.2 Errors
------------------------------------------------------------------*/
.mms-error {background: repeating-linear-gradient(45deg,#fff,#fff 10px,#fff2e4 10px,#fff2e4 20px

/*------------------------------------------------------------------
4. Figure Captions
------------------------------------------------------------------*/
caption, figcaption, .mms-equation-caption {text-align: center; font-weight: bold;}
table, figure {margin-bottom: 10px;}
.mms-equation-caption {float: right;}
mms-view-equation, mms-view-figure, mms-view-image {page-break-inside: avoid;}

/*------------------------------------------------------------------
5. Table of Contents
------------------------------------------------------------------*/
.toc, .tof, .tot {page-break-after:always;}
.toc {page-break-before: always;}
.toc a, .tof a, .tot a { text-decoration:none; color: #000; font-size:9pt; }
.toc .header, .tof .header, .tot .header { margin-bottom: 4px; font-weight: bold;
font-size:24px; }
.toc ul, .tof ul, .tot ul {list-style-type:none; margin: 0; }
.tof ul, .tot ul {padding-left:0;}
.toc ul {padding-left:4em;}
.toc > ul {padding-left:0;}
.toc li > a[href]::after {content: leader('.') target-counter(attr(href), page);}
.tot li > a[href]::after {content: leader('.') target-counter(attr(href), page);}
.tof li > a[href]::after {content: leader('.') target-counter(attr(href), page);}

/*------------------------------------------------------------------
6. Page Layout
------------------------------------------------------------------*/
@page {margin: 0.5in;}
@page landscape {size: 11in 8.5in;}
```

```
.landscape {page: landscape;}
.chapter {page-break-before: always}
p, div {widows: 2; orphans: 2;}

/*--------------------------------------------------------------------
7. Headers and Footers
--------------------------------------------------------------------*/
@page:first {@top {content: ''} @bottom {content: ''} @top-left {content: ''}
@top-right {content: ''} @bottom-left {content: ''} @bottom-right {content: ''}}

/*--------------------------------------------------------------------
8. Signature Box
--------------------------------------------------------------------*/
.signature-box td.signature-name-styling {width: 60%;}
.signature-box td.signature-space-styling {width: 1%;}
.signature-box td.signature-date-styling {width: 39%;}

/*--------------------------------------------------------------------
9. Bookmark Level
--------------------------------------------------------------------*/
.h1 {bookmark-level: 1;}
.h2 {bookmark-level: 2;}
.h3 {bookmark-level: 3;}
.h4 {bookmark-level: 4;}
.h5 {bookmark-level: 5;}
.h6 {bookmark-level: 6;}
.h7 {bookmark-level: 7;}
.h8 {bookmark-level: 8;}
.h9 {bookmark-level: 9;}
```

For page related css, see Paged Media

VE css classes

Available Classes

selector	description
.ve-cover-page	container of the document cover page
.chapter	top level views (1, 2, 3, etc)
.first-chapter	first view
.h1, .h2, .h3, etc	corresponds to view or section titles at that level (title of view/section 1.2.3 would have class of .h3)
.view-title, .section-title	the h1 title of a view or section
.toc	table of contents
.tof	list of figures, list of equations
.tot	list of tables
.landscape	landscape elements

Example customizations that changes font size of titles based on level, alternating footers based on odd/even pages, starting page number on a certain page, roman numerals:

```
//smaller sizes for nested titles
.h1 {font-size: 18pt;} .h2 {font-size: 14pt;} .h3 {font-size: 12pt;}
.h4 {font-size: 10pt;} .h5, .h6, .h7, .h8, .h9 {font-size: 9pt;}

//start top level sections on odd pages
```

```
.chapter {page-break-before: right;}

//start toc on odd page, set page number to 5, give it page style toc
.toc {page-break-before: right; counter-reset: page 5;}
.toc, .tof, .tot {page-break-after:always; page: toc;}

//alternating footers and roman numeral page number for toc pages
@page toc:right { @bottom-left {font-size: 9px; content: 'footer';}
             @bottom-right {font-size: 9px; content: counter(page, lower-roman);}}
@page toc:left { @bottom-right {font-size: 9px; content: 'footer';}
              @bottom-left {font-size: 9px; content: counter(page, lower-roman);}}

//start main content at page 3, alternating numbers
.first-chapter {counter-reset: page 3;}
@page:right { @bottom-left {font-size: 9px; content: 'footer';}
           @bottom-right {font-size: 9px; content: counter(page);}}
@page:left { @bottom-right {font-size: 9px; content: 'footer';}
           @bottom-left {font-size: 9px; content: counter(page);}}
```

9 Glossary

Table 1. Glossary

Term	Definition
Branch	View Editor branches are similar to Git branches. They create a separate workspace built upon a duplication of data at a specified time.
Document	A **Document** is composed of Views (see Section 4.3), presentation elements (see Section 4.3.5.1), model elements, etc.
Groups	Groups/directories are composed of Documents.
Job	Jobs are the unit of work executed by PMA. i.e. running a user defined analysis of a model
Org (Organization)	Orgs are a configuration-managed collection of projects.
Project	Projects are used for granting special viewing/editing permissions through Alfresco's interface.
Section	Sections are used for adding concrete organization to Views. They are similar to views in the sense that they provide a specific amount of information, are containers for presentation elements, and can be cross referenced.
Tag	Tags are snapshots of data that have been permanently captured with a unique timestamp. It is a read only element.
Version	A version can refer to a working copy of a software, element history, model, document, view etc. at a specific point in time.
View	Views are individual parts of a full document. They can be specialized to have their own content and layout.
Presentation Element	It can be thought of as a small, labeled container that holds the information displayed in a view. It is a key component in the interaction between View Editor and the system model.
MMS	MMS is a version control system for structured data. It exposes model information through RESTful web services that can be used for CRUD operations, branching, and tagging of the model repository.