



CLM May 2024



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## CLM Overview

Veeva's closed loop marketing (CLM) functionality allows commercial and medical reps to engage with HCPs and key opinion leaders using compelling visual content hosted in Veeva Vault. Users can display marketing or informational material during calls and track CLM activity for accounts, allowing marketers to gain insight into their targets and improve the content to maximize relevance and effectiveness.

Users can access the following directly from CLM:

- [Approved Email](#)
- [Medical Inquiry](#)
- [Order](#)
- [Survey](#)

Additionally, users hosting meetings from the CRM Engage app can present CLM content. See [Engage CLM Content Creation Guidelines](#) for more information. Users can also display CLM content directly from a call objective. See [Using CLM Call Objectives](#) for more information.

iPhone users can also view CLM in the CRM for iPhone app. This allows users to easily review the content in their media libraries and send links for content to HCPs from their iPhone devices at any time, leading to increased engagement with HCPs. See [Supported CLM Functionality on CRM iPhone](#) for more information the available CLM functionality on iPhone.

With CLM, the following users can perform the following tasks:

### Content Creators

- **Creating Interactive Content** – Using HTML, CSS, and Veeva's multichannel JavaScript library, content creators can create reusable, compelling, and interactive content for end users to present during calls and events



## Integration Users

- **Integrating Vault with CRM** – The integration user can customize the connection between CRM and Veeva Vault, including mapping fields between the two systems, and manage the content available for end users and for testing

## Content Admins

- **Managing CLM Content** – Content admins can upload content to CRM via FTP or sync content from Veeva Vault, manage how content displays, and control which end users have access to the content. They can also test staged content in CRM using the same flow as an end user to ensure content functions correctly.
- **Tracking CLM Activity** – Content admins can track activity tied to a CLM presentation, for example, related products, viewing duration of each slide, and reactions to key messages, and use that information to optimize content

## End Users

- **Navigating the Media Library** – End users can customize the organization of presentations in the media library to simplify navigation
- **Displaying Presentations** – When displaying content, end users can interact with the media player and connect with other areas of CRM
- **Reporting on CLM** – End users can view reports and dashboards to observe trends in CLM activity and improve future presentations

## Supporting Multi-Product CLM Presentations

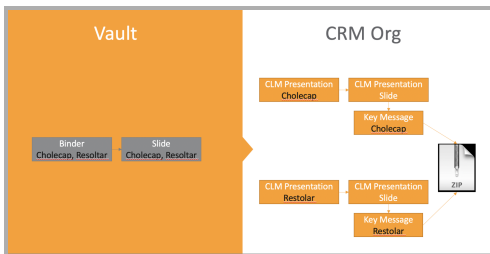
CRM Desktop (Windows)|Browser (Classic, Lightning)|iPad|

Content creators can avoid duplicating CLM content in Vault by assigning multiple products to Multichannel Presentations (binders), Multichannel Slides, and document records created via [auto-publishing](#). Multi-product content then generates in CRM as one CLM\_Presentation\_vod



and Key\_Message\_vod record per assigned product. This results in a more streamlined content library that is easier to maintain.

Each CLM\_Presentation\_vod and Key\_Message\_vod record in CRM associates with only one product, determined by their Product\_vod fields. For example, if one Multichannel Presentation with one Multichannel Slide is assigned to five products in Vault, five CLM\_Presentation\_vod and Key\_Message\_vod records are created in CRM, one for each product.



For example, Veeva BioPharma has a CLM presentation containing key messages for both Cholecap and Restolar. Sarah Jones is only assigned to the product Cholecap in her [My Setup](#) products, while Christine Roberts is only assigned to Restolar. Both Sarah and Christine need access to the presentation. When the presentation is synced from Vault, two versions are created: one assigned to the product Cholecap and the other to Restolar. After Sarah and Christine sync their mobile devices, the presentation displays in both of their media libraries.

## Considerations

- The CLM sync ignores any Vault products assigned to presentations when CRM Products and/or CRM Product Groups are added. Only presentations with multiple CRM Products and/or CRM Product Groups are copied in CRM.
- The CLM sync ignores any CRM Detail Groups assigned to presentations when CRM Product Groups are added.
- CRM Detail Groups can still be used for single-product content
- The following information from CRM should display in Vault:





- CRM Products
- CRM Product Groups – Represents pairings of CRM Products and CRM Detail Groups
- Multi-product presentations created via [single doc publishing](#) are supported
- Multi-product presentations containing sub-presentations and shared resources are supported as long as one of the following is true:
  - There are no CRM Products or CRM Product Groups assigned to the sub-presentations and shared resources
  - All available CRM Products or CRM Product Groups are assigned to the sub-presentations and shared resources added to their linked presentations
- Multi-product presentations with assigned CRM Products and/or CRM Product Groups from different CRM orgs are supported
- Multi-product presentations uploaded via FTP are not supported
- Multi-product presentations for Engage for Portals or CoBrowse are not supported

## Prerequisites

- [Vault Metadata Sync](#)

## Configuring Multi-Product CLM Presentations

To allow multiple products or product groups to be assigned to presentations in Vault, Vault admins must configure the following:

1. Edit the following fields to be multi-select picklists:
  - `crm_product__v`
  - `crm_product_group__v`



2. Grant integration users read access to the following fields:
  - crm\_product\_\_v
  - crm\_product\_group\_\_v
3. Add the following fields to the Multichannel Presentation and Multichannel Slide document types, along with document types configured for single doc publishing:
  - crm\_product\_\_v
  - crm\_product\_group\_\_v

To allow multi-product CLM content to sync to CRM, CRM admins must configure the following:

1. Navigate to the **Vault\_External\_Id\_vod** field on the following objects:
  - CLM\_Presentation\_vod
  - Key\_Message\_vod
2. Ensure the **Unique** check box in the General Options section is deselected.

## Assigning Multiple Products to CLM Content

CRM Products and CRM Product Groups can be added to CLM content via the corresponding picklists on the appropriate records in Vault.

Each presentation and all of its slides must be assigned the same CRM Products and CRM Product Groups in Vault. If a presentation or its slides are assigned to different CRM Products or CRM Product Groups, a CLM sync failure occurs and the entire presentation is not synced or copied.



To assign values to Multichannel Presentations (binders) and Multichannel Slides in Vault:

1. Navigate to the appropriate **Multichannel Presentation** record in Vault.
2. Select **Edit**.
3. Populate the appropriate picklists:
  - crm\_product\_\_v
  - crm\_product\_group\_\_v – Represents a pairing of a CRM Product and a CRM Detail Group
4. Select **Save**.
5. Navigate to each related **Multichannel Slide** record.
6. Select **Edit**.
7. Populate the appropriate picklists with the same values selected for the Multichannel Presentation record.

To assign values to documents created via single doc publishing:



1. Navigate to the appropriate document record in Vault.
2. Select **Edit**.
3. Populate the appropriate picklists:
  - crm\_product\_\_v
  - crm\_product\_group\_\_v – Represents a pairing of a CRM Product and a CRM Detail Group
4. Select **Save**.

**Note:** When migrating content from single-product to multi-product, content creators should be aware of how the picklists interact using the examples in the below section.

### Interaction of the Picklists

The picklists interact to determine the values of the Product\_vod and Detail\_Group\_vod fields of the resulting CLM\_Presentation\_vod and Key\_Message\_vod records in CRM.

Use the crm\_product\_group\_\_v multi-select picklist to designate product-detail group pairs. Optionally, use the crm\_product\_\_v picklist to create records in CRM unaffiliated with a detail group.

For example, Veeva BioPharma has a multi-product CLM presentation with two slides assigned the CRM Products Cholecap and Restolar. When the presentation is synced to CRM, two CLM\_Presentation\_vod records and four Key\_Message\_vod records are created:

Input (Vault)		Output (CRM)		
	CRM Products	CRM Product Groups	Cholecap Presentation	Restolar Presentation



Input (Vault)			Output (CRM)	
Multichannel Presentation	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	n/a	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>
Multichannel Slide 1	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	n/a	Key_Message_vod 1: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	Key_Message_vod 1: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>
Multichannel Slide 2	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	n/a	Key_Message_vod 2: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	Key_Message_vod 2: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>

In another example, Veeva BioPharma has a multi-product CLM presentation with two slides assigned the CRM Product Groups Cholecap Cardiology and Restolar Oncology. When the presentation is synced to CRM, two CLM\_Presentation\_vod records and four Key\_Message\_vod records are created:



Input (Vault)			Output (CRM)	
	CRM Products	CRM Product Groups	Cholecap Cardiology Presentation	Restolar Oncology Presentation
Multichannel Presentation	n/a	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Oncology</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Oncology</li> </ul>
Multichannel Slide 1	n/a	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Oncology</li> </ul>	Key_Message_vod 1: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	Key_Message_vod 1: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Oncology</li> </ul>
Multichannel Slide 2	n/a	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Oncology</li> </ul>	Key_Message_vod 2: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	Key_Message_vod 2: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Oncology</li> </ul>

In a final example, Veeva BioPharma has a multi-product CLM presentation with two slides assigned the CRM Products Cholecap and Restolar and the CRM Product Groups Cholecap Cardiology and Restolar Cardiology. When the presentation is synced to CRM, four CLM\_Presentation\_vod records and eight Key\_Message\_vod records are created:



Input (Vault)			Output (CRM)			
	CRM Products	CRM Product Groups	Cholecap Presentation	Restolar Presentation	Cholecap Cardiology Presentation	Restolar Cardiology Presentation
Multichannel Presentation	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Cardiology</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	CLM_Presentation_vod: <ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Cardiology</li> </ul>



Input (Vault)			Output (CRM)			
Multichannel Slide 1	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Cardiology</li> </ul>	Key_Message_vod 1:	Key_Message_vod 1:	Key_Message_vod 1:	Key_Message_vod 1:
			<ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Cardiology</li> </ul>
Multichannel Slide 2	<ul style="list-style-type: none"> <li>Cholecap</li> <li>Restolar</li> </ul>	<ul style="list-style-type: none"> <li>Cholecap Cardiology</li> <li>Restolar Cardiology</li> </ul>	Key_Message_vod 2:	Key_Message_vod 2:	Key_Message_vod 2:	Key_Message_vod 2:
			<ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = blank</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = blank</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Cholecap</li> <li>Detail_Group_vod = Cardiology</li> </ul>	<ul style="list-style-type: none"> <li>Product_vod = Restolar</li> <li>Detail_Group_vod = Cardiology</li> </ul>





## Syncing Multi-Product CLM Presentations

When multi-product presentations are synced to CRM and created, each copy is stamped with a unique identifier (VExternal\_Id\_vod).

**Note:** Since CLM presentations in CRM created from one multi-product Vault presentation may have the same presentation ID, the gotoSlide, gotoSlideV2, and launchSelector JavaScript methods use the Product\_vod and Detail\_Group\_vod values to navigate to the correct presentation. See the [Developer Portal](#) for more information.

If a product is removed from a presentation, the sync expires the copy of the presentation, slides, and key messages created for that product. If the product is added back to the presentation, the expired records are recovered and relinked.

If a new product is added to an existing presentation, the sync creates a copy of the presentation, slides, and key messages for that product.

If a CRM product is added to an existing presentation with one Vault product, and both products have the same external ID, the sync updates the existing presentation, slides, and key messages to reference the CRM product.

## Creating Dynamic Content

iPad|

Content creators can develop dynamic content to enable end users to generate personalized versions of content for HCPs and share them via Approved Email. This allows end users to follow up with HCPs about the personalized content discussed while presenting CLM content, for example, a cost calculator, formulary matrix, or personalized reprint.

**Note:** English is the only supported language for dynamic content.

Dynamic content consists of the following components:



- **Dynamic Content Template** – Content creators create dynamic content templates, which are PDF documents containing form fields. These form fields populate with personalized values from the corresponding CLM content.
- **CLM Content** – Content creators create CLM content that contains data from CRM or external sources, calculations, or user input. This data maps to specific form field identifiers in the dynamic content template.
- **Email Template or Email Fragment** – Content creators create an Email Template or Email Fragment for sharing the personalized version of the dynamic content via Approved Email

See [Generating and Sending Dynamic Content](#) for more information about generating and sending dynamic content to HCPs as an end user.

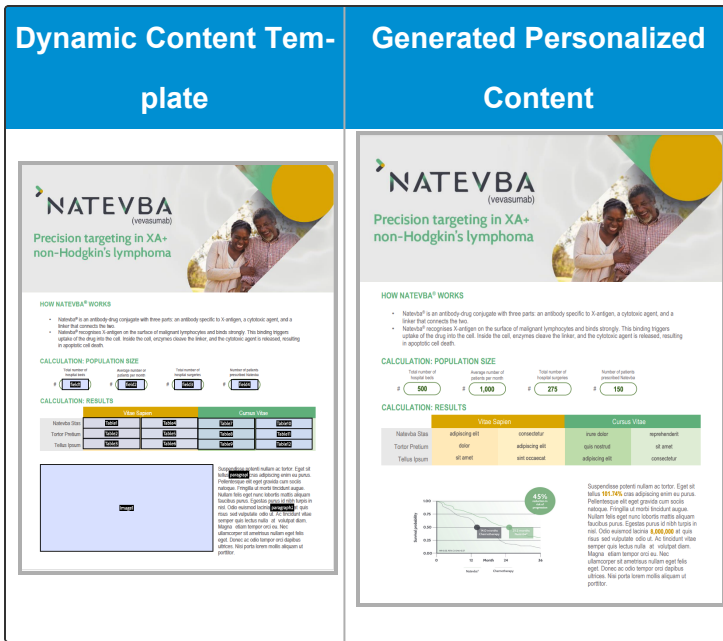
## Creating the Dynamic Content Template

The dynamic content template must satisfy the following requirements:

- Must be a PDF containing form fields. The name of each field is the identifier.
- Must be uploaded into PromoMats/MedComms using any document type (Promotional Piece, Reference Document, etc.)

**Note:** Ensure the Vault (PromoMats/MedComms) integration user defined in the CLM Admin Console has access to the document type and the permission to download document source files from Vault. This user retrieves the document when generating the dynamic content. See [Vault Help](#) for more information about downloading document source files.

- Any font can be used as long as the entire font is embedded in the PDF. See [Adobe documentation](#) for more information about embedding fonts in PDF documents.



## Creating the CLM Content

Content creators must use two JavaScript methods in CLM content, one to generate dynamic content and one to allow end users to share it through Approved Email:

- `generateDynamicContent(vaultId, documentNum, account, expiryPeriod, allowDownload, displayName, values, callback)` – Retrieves the specified dynamic content template from Pro-moMats/MedComms, then creates and publishes a personalized PDF version of CLM content with the field values provided. The personalized PDF is published and stored in Veeva CRM as a Salesforce File attached to a `Veeva_Content_vod` record.

- This method must be associated with a user action in the CLM content. When the end user selects the action, a loading indicator displays while the personalized PDF version of the content is generated in the background. The end users can select Cancel in the loading indicator to cancel the request.



- The following fields on the `Veeva_Content_vod` record are populated based on the parameters:
  - ◆ `Name` – Populated from the `displayName` parameter. This is the name displayed in the HCP Content Player when an HCP accesses the link to the content.
  - ◆ `Account_vod` – Populated from the `account` parameter. This is a lookup field to the Account record.
  - ◆ `Allow_Source_Download_vod` – Populated from the `allowDownload` parameter. When this value is set to true, a download button displays in the HCP Content Player.
  - ◆ `Expiration_Date_vod` – Populated from the `expiryPeriod` parameter. This is calculated from the sum of the content's creation date and the `expiryPeriod` value. If `expiryPeriod` is empty, this field is not populated.
  - ◆ `Dynamic_Content_Vault_Doc_ID_vod` – Populated from the `documentNum` parameter. This is the Document ID of the dynamic content template stored in Pro-moMats/MedComms and can be used for reporting on which dynamic content templates are used and shared.
  - ◆ `Dynamic_Content_Vault_Instance_ID_vod` – Populated from the `vaultId` parameter. This is the Vault Instance ID of the dynamic content template stored in Pro-moMats/MedComms.



- The `values` parameter is a JSON object containing the fields and values mapped to the form fields in the dynamic content template. The values are resolved when generating the personalized version.
  - ◆ The total supported request size is 1MB
  - ◆ Images can be included as a value. Images should be included as a base64 data URI. For example: `data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAAEAAAABCAQQAAC1HAWCAAAAC0lEQVR42mNk+A8AAQUBAScY42YAAAAASUVORK5CYII=`
- The `Veeva_Content_vod` record is returned in the `generateDynamicContent` method's success response so it can be provided to the `launchApprovedEmailWithVeevaContent` JavaScript method
- `launchApprovedEmailWithVeevaContent(email_template, email_fragments, veeva_content, callback)` – Launches the specified email template or email fragment in Approved Email from CLM content containing a link to the personalized PDF. This method can be used as a callback function for `generateDynamicContent` to immediately display Approved Email after generating the personalized PDF.

See [Creating HTML Content](#) on page 31 for more information about creating CLM content.

## Code Sample

### Code Sample

```
// first, get the current Account Id, store it in a global scope variable called "accountId"
function getCurrentAccount() {
    com.veeva.clm.getDataForCurrentObject("Account", "Id", getTemplateDocId);
}
```



```

// second, get the Email Template (and Email Fragments, if applicable), store
it in a global scope variable called "myTemplate"
function getTemplateDocId(result) {
    if (result.success == true) {
        accountId = result.Account.Id;
        com.veeva.clm.getApprovedDocument("https://my-test-vault.veevavault.-
com", "7002", generateContent);
    }
}

// third, generate the content, return type is the Veeva Content record ID of
the generated content
function generateContent(result) {
    if (result.success == true) {
        myTemplate = result.Approved_Document_vod__c.ID;
        vaultId = "https://my-test-vault.veevavault.com";
        documentNum = "7702";
        expiryPeriod = 30;
        allowDownload = true;
        displayName = "Natevba - Precision Targeting Report";

        // values to resolve in the generated content
        var values = {};
        values.field1 = "1,000";
        values.field2 = "725";
        values.field3 = "100";
        values.field4 = "50";
        values.image1 = "data:im-
age/png;-
base64,iVBORw0KGgoAAAANSUHEUgAAAAEAAAABCAQAAAC1HAWCAAAAC01EQVR42mNk+A8AAQUBAScY-
42YAAAAASUVORK5CYII=";

        // generate content and Launch Approved Email
        com.veeva.clm.generateDynamicContent(vaultId, documentNum, accountId,
expiryPeriod, allowDownload, displayName, values, launchAE);
    }
}

// last, Launch Approved Email with the generated content
function launchAE(result) {
    if (result.success == true) {
        com.veeva.clm.launchApprovedEmailWithVeevaContent(myTemplate, "", res-
ult.id, callback);
    }
}

function callback(result) {}

```

## Troubleshooting Errors

The following are errors that may occur when using the genericDynamicContent method.



Error Message	Code	Reason	Solution
User is missing required configuration: {0}. 0 = Object/Object.Field API Name	1310	The user does not have the required permissions to execute the generateDynamicContent() request.	Enable OLS/FLS for the user on the object or object field specified in the error message.
No Internet connection.	1311	No internet connection. The system cannot complete the generateDynamicContent() request.	Connect to the Internet and try again. An Internet connection is required to execute the generateDynamicContent() request.
Unable to connect with PromoMats/MedComms Vault.	1312	The system cannot communicate with the PromoMats/MedComms Vault to obtain the document source file.	Verify the credentials are valid for the Vault (PromoMats/MedComms) integration user defined in the CLM Admin Console.



Error Message	Code	Reason	Solution
Defined document_num cannot be found.	1313	The dynamic content template cannot be found in the specified PromoMats/MedComms Vault.	Set the dynamic content template document number to a document that exists in the specified PromoMats/MedComms Vault. Ensure the PromoMats/MedComms integration user defined in the CLM Admin Console has access to the document type.
Unable to obtain source file for defined document_num.	1314	The system cannot obtain the source file for the dynamic content template.	Grant the Vault (PromoMats/MedComms) integration user defined in the CLM Admin Console the permission to download document source files.
Defined document_num is not in Steady State.	1315	The dynamic content template is not in a Steady State in the specified PromoMats/MedComms Vault.	Move the dynamic content template to a Steady State in PromoMats/MedComms.





Error Message	Code	Reason	Solution
Unable to generate content due to malformed JSON in the defined values.	1316	The JSON object provided for the <code>values</code> parameter of the method is malformed.	Ensure the JSON object for the <code>values</code> parameter is valid. For example: <pre>{ "field1": "100,000", "field2": "0.1%", "field3": "10%" }</pre>
Unable to generate content due to invalid format for the defined document template.	1317	The dynamic content template cannot be parsed.	Ensure the specified dynamic content template is a PDF containing form fields.
Missing required parameter: {0}. 0 = Field Name	1318	The <code>generateDynamicContent()</code> request is missing a required parameter.	Ensure the required parameters are passed into the method. <code>expiryPeriod</code> is the only optional parameter.  If <code>expiryPeriod</code> is not applicable for the content, populate the parameter with "".



Error Message	Code	Reason	Solution
An unexpected error occurred.	1319	<p>The request to the system is not supported. This error typically occurs when the system is unable to process the content provided.</p> <p>Possible unsupported content errors:</p> <ul style="list-style-type: none"> <li>The request size exceeds 3MB. This can occur when multiple base64 data URIs for large images are included in the content.</li> <li>The content includes unsupported characters</li> </ul>	<p>Ensure the following conditions are met:</p> <ul style="list-style-type: none"> <li>The request size is less than 3MB. Converting images from PNG to JPG can allow for more images to be included in the request.</li> <li>The dynamic content template and provided values are in English</li> </ul>

## Creating the Email Template or Email Fragment

The Email Template or Email Fragment must include the `{{DynamicContentLink}}` token. When an end user sends an email containing dynamic content to an HCP, this token is replaced with the URL to the personalized PDF. When recipients access the link, the PDF displays in the



[HCP Content Player](#). See [Creating Approved Email Templates](#) and [Creating Approved Email Fragments](#) for more information.

The Email Template or Email Fragment containing the `{{DynamicContentLink}}` token must be launched from CLM via the `launchApprovedEmailWithVeevaContent` method to ensure the personalized PDF version (Veeva Content record) can be provided as a parameter.

Approved Email content containing the `{{DynamicContentLink}}` token is not applicable to any other Approved Email entry points. Mark this content as hidden to ensure it does not display as an option to select when composing Approved Emails from other entry points. See [Preventing Approved Email Content from Displaying](#) for more information.

## Expiring Dynamic Content

Admins can expire published dynamic content in CRM. When an HCP accesses a link to expired content, an error message displays.

To expire published dynamic content:

1. Navigate to the appropriate **Veeva\_Content\_vod** record with the `Dynamic_Content_vod` record type.
2. Select **Edit**.
3. Select `Expired_vod` for the **Content\_Status\_vod** field.
4. Select **Save**.

## Testing Dynamic CLM Content

CLM test users (users with the [Enable\\_CLM\\_Testing\\_Features\\_vod](#) check box selected on their User record) can test the dynamic content on their devices. Both Steady State and Non Steady State dynamic content templates can be used for test users. If a dynamic content template has both Steady State and Non Steady State versions, the latest version is used.



## Verifying CLM Configuration

Admins can verify the CLM configuration by creating sample presentation records and ensuring the content displays on offline devices. To verify the configuration:

1. Create a **Key\_Message\_vod** record, specify a Key Message name and product, and select save.
2. Upload the sample Cholecap-1-Intro.zip file, or any other sample zip file (then download the file to verify the upload was successful).
3. Create a **CLM\_Presentation\_vod** record, specify a name and presentation ID, and select save.
4. Create a **CLM\_Presentation\_Slide\_vod** record, specify the presentation name and Key Message name, and select save.
5. Confirm the user has **My Setup Products** entries for the product referenced in the Key\_Message\_vod record, and has visibility to at least one account online, but not all of them (like an admin can).

On the offline device:

1. Sign in as the user.
2. Sync.
3. View an account.
4. Record a call.
5. Select the media button.
6. View the previously created presentation.
7. Return to the call report.
8. Record a reaction to the slide.



9. Select Submit.

10. Sync.

Online, verify the call report correctly displays the slides visited.

## Testing CLM Content

CRM Desktop (Mac, Windows)|iPad|Windows Tablet|

Content reviewers can test CLM content in CRM sandbox orgs with both Staged and Approved presentations.

**Note:** This functionality should only be enabled for users who can review CLM content updates.

Testing CLM content includes three components. Enabling the feature for a content reviewer makes all three components available for that user.

### Configuring Staged Presentations for Review

To enable staged content for content reviewers:

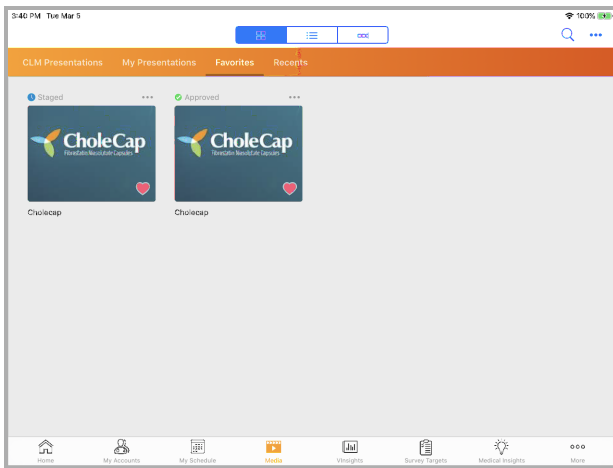
1. Grant FLS Edit permission to the **Enable\_CLM\_Testing\_Features\_vod** field on the User object.
2. Select the **Enable\_CLM\_Testing\_Features\_vod** check box for the appropriate User.
3. Activate the **SHOW\_INFORMATION** Veeva Message.

### Displaying the Presentation Status

A status label displays above presentation thumbnails so content reviewers can easily identify which presentations are Staged or Approved.



To display presentation statuses in the CRM Engage app online, activate a VMOC for the **User** object with the Device\_vod field set to CRM\_Engage\_vod.



## Displaying the Show Information Overlay

Users can select the Show Information option from the action menu to display an information overlay over the slide. The overlay contains information for the corresponding Key Message record. If the Shared\_Resource\_vod check box is selected on the overlay, it is hyperlinked. Selecting the hyperlink displays the Show Information overlay for the Shared Resource. See [Using the Action Menu](#) for more information about CLM actions in the media player.

## Viewing Staged Presentations

When content is coded using gotoSlide v1 or gotoSlidev2, content reviewers always view the Staged presentation when jumping across presentations. For example, Presentation A is Approved and Presentation B is Staged because the latter was just updated. The content reviewer wants to test the content flow of Presentation A to Presentation B. If the content reviewer cannot view Staged presentations, gotoSlide jumps to the Approved version of Presentation B. If the content reviewer can view Staged presentations, gotoSlide jumps to the Staged version of Presentation B, which contains the updated content. If a Staged version of Presentation B cannot be located, then gotoSlide jumps to the Approved Presentation.



## Creating HTML Content

Content creators can embed the following functionalities in CLM content with HTML and JavaScript:

- [Launching Third-Party Applications from CLM](#)
- [Launching Veeva CRM from Third-Party Applications](#)
- [Displaying Dynamic Content](#)
- [Customizing Slide Navigation](#)
- [Tracking User Activity Using JavaScript](#)
- [Creating and Updating Records from CLM](#)

## Launching Third-Party Applications from CLM

The CLM media player supports custom URLs to other applications. Any application with a properly registered URL can be launched directly from CRM. Selecting the control containing the link launches the respective external application. The following links are standard iPad applications that can be used in HTML5 content:

- [mailto://](#) - Launches the Mail application
- [maps://](#) - Launches the Maps application
- [facetime://](#) - Launches FaceTime (for iPad2 only)
- [http://](#) and [https://](#) - Launches the Safari browser

## Launching Veeva CRM from Third-Party Applications

Veeva supports the following custom URLs to allow external iPad applications to launch Veeva CRM:



- `veeva://`
- `irep://`

Calling either of these URLs launches the Veeva CRM app. If the user is already signed in, the last screen the user was viewing displays. If the user is not signed in, the signin screen displays.

## Displaying Dynamic Content

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

To display dynamic content to target accounts, CLM content can include personalized information pulled from Veeva CRM, such that the content is tailored for each HCP. Veeva provides the `getDataForCurrentObject` and the `getDataForObject` JavaScript functions to enable content creators to read from the Veeva CRM database. Possible uses of these include:

- Displaying the HCP's name and specialty
- Displaying the HCP's parent organization name
- Changing the information displayed on the content based on the physician's segment
- Reading which survey is associated to the presentation being displayed

## Customizing Slide Navigation

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

Content creators can include links to other slides within a presentation or to slides in other presentations, or directly launch a specific slide.

### Linking Between Slides and Presentations

Content creators can use the `gotoSlide` JavaScript function within an HTML `<a>` tag as the href parameter or update the document location attribute within the JavaScript code.





When users select the link or control that contains this underlying function, the media player jumps to the slide defined in the function. Navigation from the slide that was reached by the gotoSlide functionality is identical to navigation had that slide been reached through traditional navigation, for example, swiping left will display the slide before that slide in the presentation, not the slide from which the user jumped. [Tracking CLM Key Messages](#) also continues normally.

The gotoSlide function respects My Setup, Restricted Products on Account, and Allowed Products on Call and TSF when media is launched from a Call or an Account. The gotoSlide function does not respect Restricted Products or Allowed Products when media is launched from the Home Page.

**Note:** The one-parameter gotoSlide works the same using the Media\_File\_Name\_vod as the external ID from which to jump to in the context of the same presentation. This feature assumes the same Media File Name is not used more than once in a presentation, otherwise, the gotoSlide randomly selects one to jump to.

The gotoSlide function jumps to Staged or Approved versions of presentations depending on the status of the originating presentation:

- If gotoSlide is called when viewing a Staged presentation, then it jumps to the latest version of the presentation specified in the parameters (can be Staged or Approved)
- If gotoSlide is called while viewing an Approved presentation, then it jumps to the Approved version of the presentation specified in the parameters
- If the originating presentation does not have a status, the gotoSlide function jumps to the presentation specified in the parameters based on the following priority: Status\_vod = Approved > Staged > blank



To help maintain the uniqueness of the `Presentation_Id_vod` field, when CLM Presentation records are created during the CLM Vault sync, an error occurs if a `Presentation_Id_vod` value is used across Vault presentations with different Doc IDs.

## Launching Specific Slides

Content creators can launch a selector from within HTML content for specified Key Messages. To set navigation behavior for individual slides, the JavaScript function must use the following format:

`com.veeva.clm.launchSelector({presentation: [key message]}, callback)` where

- `presentation` specifies the `Presentation_Id_vod`
- `key message` specifies the `Media_File_Name_vod`

For example: `com.veeva.clm.launchSelector([{{PresABC: [KM1, KM2, KM3], PresXYZ: [KM4, KM5], PresLMNO: [KM7, KM8, KM9]}}, callback)`

## Adding Text Navigation

If the [swipe gesture for slide navigation is disabled](#) for a Key Message, content creators can use the [nextSlide](#) and [prevSlide](#) JavaScript functions within the HTML5 code to create text links to allow users to navigate between slides.

## Tracking User Activity Using JavaScript

CRM Desktop (Windows)|iPad|iPhone|Windows Tablet|

To support analysis of detailed user activity within CLM content, content can be coded to capture specific user actions performed on HTML5 content using the [createRecord](#) and [updateRecord](#) JavaScript functions. These actions can include button selections or certain gestures (clickstream data), or generic data capture, such as updating an HCP's email address on the Account object. See the [CLM JavaScript library](#) for more information on the available functions.



**Caution:** Do not use the createRecord function to create Call2\_Key\_Message\_vod records. Doing so interferes with Veeva-defined logic for call key messages.

If saving data into a custom object, ensure end users have OLS CRU access the object and FLS Edit permissions to the fields where the data is saved.

Clickstream data can be used to capture custom information. By building a custom control within HTML5 content, responses can be captured and later displayed directly on the call report.

Additionally, the Call Clickstream object can automatically populate the following fields each time a record is created for a Call. Manually entered values for the fields are overwritten:

- Call\_vod - set to the current Call record ID
- Product\_vod - Product\_vod of corresponding Key\_Message\_vod record
- Key\_Message\_vod - record ID of corresponding Key\_Message\_vod record
- CLM\_ID\_vod - CLM\_ID\_vod of corresponding Key\_Message\_vod record
- Presentation\_ID\_vod - Presentation\_ID\_vod of CLM\_Presentation\_vod record

To display the Call Clickstream information captured on the call report, add the zvod\_Surveys\_vod field on a separate section of the appropriate Call2\_vod object page layouts. This section displays a table of responses. The following fields from the Clickstream object display in the table:

- Presentation ID
- Product
- Key Message Name
- Track Element Description
- Answer

The fields displayed in the table are not configurable.



**Note:** When implementing clickstream capture, content creators must be mindful of the potential amount of data captured as a part of each slide and/or presentation. Creating a large amount of records on each slide will increase sync times for users and cause performance degradation on the Reporting module in the online application.

## Creating and Updating Records from CLM

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

The `createRecord` and `updateRecord` JavaScript functions can be used to capture data for custom and Veeva-defined objects. Since application logic and validation are not executed when using these functions, all content must be rigorously tested before publishing into production.

**Caution:** Do not use the `createRecord` function to create `Call2_Key_Message_vod` records. Doing so interferes with Veeva-defined logic for call key messages.

**Note:** Content must be written to Veeva CRM objects using the API. Local storage is not supported in any CLM content.

## Creating and Updating Records Upon Exiting CLM

Users can save information to CRM when navigating between slides or exiting CLM. Content creators can use the following functions to implement this functionality:

- `createRecordsOnExit()`
- `updateRecordsOnExit()`
- `updateCurrentRecordsOnExit()`

**Note:** These functions are available on iPad only. The standard `onUnload` JavaScript function can be used on Windows.



To help format these functions, use the following helper functions to return strings for use with the OnExit functions:

- [formatCreateRecords\(object array, values array\)](#)
- [formatUpdateRecords\(object array, record array, values array\)](#)
- [formatUpdateCurrentRecords\(object array, values array\)](#)

**Note:** The exit functions cannot include alert or confirmation dialogues requiring user interaction.

#### Sample code

```
com.veeva.clm.updateCurrentRecordsOnExit = function() {  
  var object1 = Account;  
  var values1 = {};  
  values1.Preferred_Statin__c = Juvastatin!;  
  var object2 = KeyMessage;  
  var values2 = {};  
  values2.Customer_Field__c = Saved information;  
  var objectArray = [object1, object2];  
  var valuesArray = [values1, values2];  
  return com.veeva.clm.formatUpdateCurrentRecords (objectArray, valuesArray);  
}
```

## Creating Interactive HTML Content

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

HTML5 provides a rich set of tools for creating interactive media for users. In general, anything that can be done in Flash can be replicated in HTML5. Some simple suggestions for adding interactivity to otherwise static media include:

- Create an HTML button linked to an online resource, such as a patient information site
- Use motion to visually guide the viewer to key pieces of information, such as efficacy results, rather than animating background or secondary information



- Provide interactions which meaningfully customize the message for an HCP, such as filtering data by demographic or zip code
- Add audio narration of important aspects of content
- For videos also available on YouTube, embed a local copy of the video and display it within a frame or open it full screen via a button, so it is always available regardless of 3G coverage. The YouTube URL can be referenced as a hyperlink.
- Link to or embed (using a frame) external systems, such as a send additional info mini-website or a subscribe to mailing list web-form

Some considerations when creating HTML5 media:

- HTML5 speed: HTML5 documents in CLM render faster than loading from a remote website but slower than loading from the browser's cache. Testing all content in CLM is recommended.
- JavaScript speed: The JavaScript execution speed of Safari on the iPad is less than 10% of the speed on a desktop computer. Complex animations that render smoothly on a computer may appear to stutter on the iPad. Using subtler or slower animations reduces the visibility of these performance limitations.
- Navigation: The Veeva CRM app handles transitioning to the next piece of media via a swipe to the left. Internal navigation should be limited so users don't lose their place when swiping left and right through media. Each slide should be created as a separate piece of media.
- Zooming: This can be disabled on iPad using `<meta name=viewport content=width=device-width,initial-scale=1,user-scalable=no />` as part of the HTML. See [Apple's developer documentation](#) for more information.

HTML5 media can be tested by loading it into a website and viewing the website from iPad's Safari browser or Windows' IE browser. Various HTML editor applications can provide more



accurate representations of how content displays. These tools are a good proxy for how content displays in Veeva, with the following exceptions:

- Page loading times are slightly faster than loading from a website, but significantly slower than loading from the browser cache. If the initial page load creates any flashes or wait time, smaller media files or different background colors are recommended.
- The top left corner of the page (60 x 176 pixels) is obscured by navigation controls, so interactive media should not be placed there

In order to increase interactive options and dynamic content within HTML5 media, Veeva provides several API functions that can be embedded within HTML5 slides. See the [CLM JavaScript library](#) for more information on the available functions.

## Stamping Media Type and Publishing Method for CLM Content

CRM Desktop (Mac, Windows)|iPad|iPhone|

Admins can report on the following fields, allowing customers to analyze HCP engagement with content:

- Media\_Type\_vod on the Key\_Message\_vod object
- Publishing\_Method\_vod on the CLM\_Presentation\_vod object

When users navigate to the media library, the Key\_Message\_vod records for each presentation are appropriately stamped with one of the following Media\_Type\_vod values:

- HTML\_vod
- Video\_vod
- Image\_vod
- PDF\_vod



- PowerPoint\_vod
- Website\_vod

**Note:** Media\_Type\_vod is not stamped on shared resources. Additionally, it is not supported on CRM Desktop (Mac).

When a CLM\_Presentation\_vod record is updated, the Publishing\_Method\_vod field is stamped to indicate how the presentation was created:

- Vault\_Published\_vod - Binders and Slides, Create Presentation
- Vault\_Auto\_Published\_vod - Auto-publishing for CLM in Vault
- CRM\_Published\_vod - Uploaded via FTP

## Integrating Approved Email with CLM

iPad|Windows Tablet|

Content creators can reference pre-defined Approved Email templates and fragments that are portable across production environments to allow users to send specific emails and content from a CLM slide to HCPs in attendance.

Content creators can use the following functions to interact with Approved Email from CLM content:

- [getApprovedDocument](#)
- [launchApprovedEmail](#)

**Note:** When using the [queryRecord](#) function to query Approved Document records for the launchApprovedEmail function, if an incorrect Vault Id is passed into the function, records are not returned. To avoid passing in null values to the launchApprovedEmail function, which causes CLM content to





display incorrectly, content creators should include an error message to identify the issue.

See the [CLM JavaScript library](#) for more information about using these functions.

## Launching Approved Email from CLM on Veeva CRM on Desktop

CRM Desktop (Mac, Windows)

The `launchApprovedEmail` function is supported on the CRM Desktop platforms. During a call, including Engage calls, when users take action on CLM content calling the `launchApprovedEmail` JavaScript function, the Send Email screen displays in Lightning on the device's default browser. The following are already selected:

- Appropriate and valid email templates and fragments
- Attendee accounts as recipients

**Note:** Using `launchApprovedEmail` to send emails from CLM is only supported on Lightning.

When users launch Approved Email from CLM content outside of a call, for example, from the Veeva CRM on Desktop, accounts are not selected. To allow users to add accounts as recipients, admins must set the `ADD_RECIPIENTS_vod` Approved Email Setting to 1.

**Note:** The `getApprovedDocument` function is not available in Veeva CRM on Desktop. Content creators can use `queryRecord` to reference Approved Email templates and fragments.

## Integrating External Data with CLM

Content creators can create CLM content to directly access external applications. This allows users to load data from Veeva CRM and external sources in a single presentation without navigating away from the Veeva CRM.



Content creators can use the [request](#) function to interact with external applications from CLM content. See the [CLM JavaScript library](#) for more information.

## Supporting CLM Content

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

The CLM media player is optimized for electronic detailing with HTML5 media and various other digital assets. The media player supports images, video, and PDF, allowing reuse of existing media libraries.

When creating media, it is important to consider both the quantity and image quality of the media to ensure the Veeva CRM app responds quickly and users do not wait for long periods while media downloads. Larger files are supported, but longer sync times ensue and there is a risk of poorer performance when displaying the media in the media player.



Type	Ext	Display	Additional Guidelines
HTML5	.html .htm	Displays full screen and in landscape view	<ul style="list-style-type: none"> <li>• Can be multiple files of type HTML, CSS, images, video and PDF and can be stored in multiple folders</li> <li>• Media included with the HTML should be referenced using relative paths, such as /css/-styles.css rather than http://server.com/css/styles.css. Media referenced using absolute paths is not available when users are out of network coverage.</li> <li>• Swiping left or right navigates to other pieces of media, but dragging left, right, and selecting are allowed for in-page navigation. Overriding the swipe gesture is supported. (See <a href="#">Disabling Touch Gestures</a> for more information.)</li> <li>• Embedded Flash videos are not supported</li> </ul>



Type	Ext	Display	Additional Guidelines
Video	.mp4 .m4v .mov .avi	<ul style="list-style-type: none"> <li>Displays full screen and in landscape view</li> <li>Small videos stretch to fill the screen</li> </ul>	<ul style="list-style-type: none"> <li>Large files increase the battery use of the device during sync: using the highest level of video compression that creates the desired effect is strongly recommended</li> <li>iPad: Videos must be playable in the iPad video player (see Apple's Tech Specs for more information) <ul style="list-style-type: none"> <li>H.264 MPEG4 is recommended</li> <li>The TV and Video section of Apple's Tech Specs provides more detailed information</li> </ul> </li> <li>Windows: only displays .mp4</li> </ul>
Images	.jpg .png	<ul style="list-style-type: none"> <li>Displays full screen and in landscape view</li> <li>If the resolution of the image is larger than the display, pinch to zoom is allowed</li> </ul>	<p>Images should be the smallest resolution and compressed as much as possible without impacting quality. The maximum supported resolution for images is 2499 x 2499.</p>



Type	Ext	Display	Additional Guidelines
PDF	.pdf	<ul style="list-style-type: none"> <li>Displays full screen and in landscape view</li> <li>Stretches to fill the screen width</li> </ul> Scrolls vertically	<ul style="list-style-type: none"> <li>Multi-page PDFs are supported</li> <li>For presentations, using HTML5 or images is recommended instead of PDF as those formats can be presented more easily</li> <li>PDF resolution should be 150 dpi with medium quality for image compression</li> <li>Hyperlinks are retained in PDFs, allowing users to navigate within the PDF via internal hyperlinks or access external websites</li> <li>Interactive PDFs are not fully supported due to OS limitations</li> </ul>
PPTX	.pptx	Displays using native PPT settings	<ul style="list-style-type: none"> <li>Library media that can be opened in PowerPoint displays the PowerPoint logo on the top right of the thumbnail. Selecting the logo launches the presentation in the PowerPoint application.</li> <li>Sub-presentations are not supported for PowerPoint presentations</li> </ul>

## Supported CLM JavaScript Library Functions for Veeva CRM on Desktop

To provide flexibility when designing new presentations and enable reusing existing presentations, the following functions are supported on the CRM Desktop platforms:

- `createRecord()`
- `getDataForCurrentObject()`
- `gotoSlide()`
- `gotoSlideV2()`



- `launchApprovedEmail()`
- `nextSlide()`
- `prevSlide()`
- `queryRecord()`
- `updateCurrentRecord()`
- `updateRecord()`

## Ensuring Content Compatibility Across Platforms

CLM uses open web standards, HTML, CSS, and JavaScript to create and deploy content because there is a wealth of knowledge in our agencies. Unfortunately, current web browsers (IE, Chrome, Safari, etc.) are sometimes inconsistent or inaccurate when interpreting these open standards. As a result, web content publishers spend significant time testing content and creating workarounds for incompatibilities across browsers.

CLM was introduced only on Veeva CRM for iPad so there was only Mobile Safari to support on the iOS platform. Agencies used specific capabilities available on Safari which limited their testing to that browser. As a result, content created for Veeva CRM for iPad is not likely to run in CLM on CRM Desktop platforms without re-work and testing.

### Creating Content

To help reduce the amount of re-work, testing, and workarounds, use the following guidelines when creating HTML content for CLM:

- Use web design best practices to create content that functions on both iPad and Windows



- Build and design content that can be deployed across:
  - different screen resolutions, since this is the primary challenge between iOS and Windows Tablet devices
  - two different web browsers (Internet Explorer 11 and Mobile Safari)
- Be familiar with responsive design best practices. Responsive design allows content to scale in response to the size of the screen displaying the content
- Do not use fixed width designs if the goal is to deploy content on multiple platforms

## Migrating Content from iPad to Windows

Existing CLM content reusability varies based on the content type. In general, most HTML content requires re-work to render properly. Content created for iPad often used a fixed width design that does not scale to the different screen resolutions found on Windows Tablet devices.

The following is a summary of compatibility by supported content types:

- HTML - Re-work is required if agencies used a fixed width 4:3 aspect ratio or any webkit (Mobile Safari) specific HTML code. Additionally, legacy CLM API functions do not work on Windows Tablet. The current version of the CLM Javascript library, provided by Veeva, works with both iPad and Windows Tablet CLM content.
- Images - All current CLM image types are supported on Windows. Typically, they are created with a 4:3 aspect ratio for iPad. Windows devices typically use a 16:9 aspect ratio. Surface devices use a 3:2 aspect ratio. Images in 4:3 aspect ratio display with black bars on the left and right sides. No changes required.
- Videos - All current CLM video types are supported on Windows. Typically, they are created with a 4:3 aspect ratio for iPad. Windows devices typically use a 16:9



aspect ratio. Videos in 4:3 aspect ratio will display with black bars on the left and right sides. No changes required.

- PDFs - PDF documents scroll and zoom in and out similarly on iPad and Windows. No changes required.

## Naming Files on Windows

On Windows Tablet devices, file names must be less than 260 characters and directory names must be fewer than 248 characters. CLM content is stored in a file path that uses approximately 140 characters. An exact number cannot be given because the file path contains items with variable lengths, such as usernames. All files must be within the character limit when the CLM content is unzipped, otherwise an error displays.

## Downloading Content

While an iPad can hold 16 GB of files or more, downloading that amount of content over 3G/4G (or even WiFi) can take several hours. For the best end user experience, the total sync time should not take over an hour. Internal testing over a 3G connection on an iPad 1 (the slowest device and connectivity combination possible) found that a content sync of 1360 MB of data took between 20 to 40 minutes to download.

While there is no technical limitation for larger media libraries, longer sync times and degraded performance of media might offset the advantages of having larger, more complex files.

Data	Size / unit
HTML5	2 MB
Video	10 MB
Images	0.25 MB





If HTML5 pages are created without using transparent PNG files, the size can often be reduced to 25 percent of the size from 2 MB to 0.5 MB by using JPG instead of PNG. This also improves the load time of the page, allowing smoother and more attractive transitions.

While it is possible to load much larger files into HTML5, if those files use up all the memory on the device, Veeva CRM may crash when displaying the content or soon after exiting CLM. During testing, it is important to test displaying and interacting with HTML5 content repeatedly to ensure memory issues do not occur. Memory warnings may appear in the log on the device to identify possible memory issues, although a warning may not always appear and a warning may not always indicate an impending crash. XML parsing within HTML5, complicated JavaScript references, non-default fonts, CSS 3D transformations, and more may be technically possible, but are known to use up a lot or even all of the memory.

**Note:** The newer iPad and iPad 2 devices provide slightly more memory, which may allow them to display more complex content. It is important to test thoroughly with the oldest model and lowest OS version combination deployed to the field and to imitate real world situations (such as other apps running besides Veeva CRM) to ensure compatibility across versions.

Providing images at a larger resolution allows users to zoom in on parts of the media, adding a level of interactivity and appeal to the media. Complex images can be compressed to about 250kb without visibly impacting quality. If images are significantly larger than 100kb, changing the quality settings or using a different tool to create the jpgs can reduce their size.

PDFs are best used for long-format media, such as reports and articles, as users typically do not display every page from a PDF document. For shorter media and presentations, images or HTML5 provide better navigational experience and more accurate reporting.



## Converting PowerPoint Presentations to Images

With Microsoft PowerPoint 2007 or newer, entire presentations can easily be exported as images. When viewing a presentation within PowerPoint, content creators can perform the following steps to export the presentations as images:

1. Select the **Office** button.
2. Select **Save As**.
3. Select **Other Formats**.
4. Select **jpeg (or png)** from the Save as type dropdown.

PowerPoint then displays a popup asking whether to export the current slide or every slide in the presentation. After making a selection, the images are created and ready for use.

## Download Times

Estimated download times are provided in the following table using the basic formula of file size / avg. download speed.

Average Download Speed	File Size		
	200 MB	500 MB	1 GB
	Download Time		
512 Kbps	53 minutes	2.2 hours	4.6 hours
1 Mbps	27 minutes	67 minutes	2.3 hours
5 Mbps	5 minutes	13 minutes	27 minutes
10 Mbps	3 minutes	7 minutes	14 minutes
20 Mbps	1 minutes	3 minutes	7 minutes

These times represent download time in perfect conditions. However, because many factors affect actual download time, download speeds may vary dramatically. Network speed, data



syncing, number of zip files, and connection times for each media request can all alter download time. For example, one 1GB zip file can take 35 minutes to install with a 5Mbps connection while 1000 1MB zip files can take 60 minutes to install at the same connection speed.

Special care should be taken to determine the download speeds which are actually available to users. Veeva recommends content syncs be performed over a fast WiFi connection.

Since the system records detailed statistics about every piece of media displayed, unused media should be reviewed regularly and removed to ensure users can quickly find the current and most important media and maintain fast download performance.

## Packaging Custom CLM Content

CRM Desktop (Mac, Windows)|iPad|Windows Tablet|

After creating a piece of media, content creators must prepare the media before it can be loaded into Vault. The content is then synced from Vault to Veeva CRM. See [Managing CLM Syncs](#) for more information. Overall, the process involves creating lower resolution versions of the media, putting all files into a folder, and compressing the folder into a zip file. Each piece of media in the system is encapsulated into a separate zip file before loading.

Each piece of media is loaded into the system as a zip file containing the media, thumbnails, and supporting files.

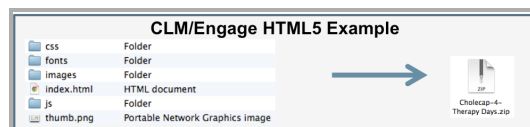
For information about creating website content, see [Creating Website Content](#).

## Formatting Content Packages for Vault

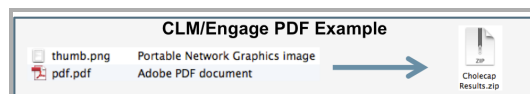
Vault uses this packaging format when auto-generating distribution zip files for Multichannel.

There is a zip called <filename>.zip. The contents of the zip files vary depending on content type.

- image zips - contain files named image.png and thumb.png
- html zips - contain index.html and thumb.png



- pdf zips - contain pdf.pdf and thumb.png





- video zips – contain video.mp4, poster.png, and thumb.png
- Powerpoint zips - contain <document name>.pptx, poster.png, and thumb.png

Folders should not be inside the zip file for non-HTML content. CLM creates a folder called <file-name> and unzips the contents of the zip into that folder.

To share assets across multiple key messages, see [Using Shared Resources](#).

## Packaging Thumbnails and Full-Screen Images

When users view a list of media, small thumbnail images display. These smaller images are also generated before loading into the system in order to maximize the performance of the application.

When the thumbnail image is selected, the full page HTML, PDF, or image displays. For videos, the full-screen preview image displays until the user starts the video.

To support thumbnails, each piece of media in the system (including an image file) must be packaged with a thumbnail. Video content must include an image for both the thumbnail and the full screen preview. These images should be highly compressed JPGs to minimize download time. Setting the JPG quality to 75% results in the sizes below for a piece of media named Media1.jpg:

Type	Name	iPad Resolution	Windows Resolution	Typical Size
Original Media	Media1.jpg	2048 x 1536	1920 x 1080	250 kb
Preview Image	Media1-full.jpg	1024 x 768	1600 x 900	70 kb
Thumbnail	Media1-thumb.jpg	200 x 150	195 x 110	7 kb

images in the 4:3 aspect ratio display centered with black borders on the sides.



To quickly generate preview images, a screen capture application is helpful. Once installed, set the computer's screen resolution to 1024 x 768, view the media full screen, and capture the preview images.

To quickly generate thumbnails, an imaging editing application is helpful.

## Uploading CLM Content Using FTP

Content admins can upload content directly into Veeva CRM via FTP, which allows for bulk load of multiple files at a time. Content can be loaded using any FTP client (for example, Filezilla).

**Note:** Veeva CRM on Mac and Windows Desktop do not support FTP content.

FTP is not supported with the CLM Vault Integration. See [Vault Help](#) for information on how to manage CLM content in Vault and Packaging Custom CLM Content on page 51 for information on packaging CLM content for Vault.

## Setting Up the Content Server

If an FTP account and username is provided separately for the org by [Support](#), use it to log in to the FTP server. If one was not provided, use the following instructions to allow a user to log in to the FTP server using their Veeva CRM username and password:

1. Navigate to the **User** object page layout.
2. Ensure the **Content\_Admin\_vod** field is on the page layout.
3. Select **Save**.
4. **Edit** the User record for the user who you want to have FTP credentials
5. Select the **Content Admin** check box.
6. Select **Save**.



## 7. Clear Veeva Cache.

8. Sign in to the FTP server (using the FTP client) with the Content Admin user's credentials:

- FTP Host server: FTP Server value from the Main Veeva Common settings (Setup > Develop > Custom Settings > Manage (Veeva Common) > Main)
- User: Veeva CRM username
- Password: Veeva CRM password

If your company uses [Delegated Authentication](#) to log in to Veeva CRM, use the Unix user-name and password provided by Support.

## Uploading CLM Content

When set-up is complete, create a control (CTL) file for every piece of content that is being uploaded. The format of the control file is as follows:

**Note:** The file extension must be lowercase for the file to be processed when uploaded, for example, <filename>.ctl.

- USER=<Veeva CRM User name >
- PASSWORD=<Veeva CRM Password>
- FILENAME= <Filename.zip>
- EMAIL=<email address to receive log in error messages>

**Note:** The EMAIL field is optional. It is only utilized in the event of a sign in error. If sign in is successful, the user's email address in Veeva CRM is used for success and failure messages.



Optionally, if your company uses Delegated Authentication to log in to Veeva CRM, the following should be added to the control file:

- SAML
  - APPLIES\_TO\_URL=<Applies to URL>
  - AUTH\_URL= <Authentication URL>
- OpenToken
  - APPLIES\_TO\_URL=<Applies to URL>

The CTL file should be created using one of the following encoding formats:

- ASCII
- ISO-8859-1
- UTF-8
- UTF-16
- UTF-32

**Note:** Files may not contain any of these special characters: ',/<>?:;{}[]~`!@#\$\$%&\*()=+

Additional fields on the Key\_Message\_vod object can be added to the control file. Each field should be entered in a separate line in the following format: <Field API Name>=<value>.

1. Name the control file with the exact name of the associated file, with the ctl extension. For example, a control file for the Cholecap-Intro-1.zip slide should be named Cholecap-Intro-1.ctl.
2. Upload the file and the associated content through FTP.

The content itself (zip file) is loaded to the content directory of the FTP server. The content folder may be your root directory, in which case you will not see a content folder.





- The control file should be uploaded to the ctlfile directory
- Always upload the zip file first, then upload the control file

When found, the control file is removed from that directory and then processed. After opening the ctl file directory on the right, you can right select and select Refresh to see when the file was removed.

If the control file was processed successfully, the zip file is also removed. After selecting the / directory on the right, you can right select and select Refresh to see when the file was removed.

The Media\_File\_Name\_vod field is a unique external ID. If content is uploaded via FTP with the same name as an existing record, the existing content is replaced and the record updates with the information from the control file.

An example control file looks like the following:

#### Example CTL file

```
USER=datasteward@customer.com.sandbox
PASSWORD=mypassword
EMAIL=user@company.com
FILENAME=Cholecap-1-Intro.zip
CLM_ID_vod__c=VeevaCLM
Name=Cholecap - Events
Product_vod__c=a00S0000002i4o0
Slide_Version_vod__c=1.0.0
Description_vod__c=Cholecap - 5 53% Fewer Adverse Events
```

## Troubleshooting

If no media is available on mobile devices, ensure the content server is set up correctly. See [Setting Up the Content Server](#) for more information.

If other media is available but the new content does not display, the following steps may be helpful in troubleshooting:



1. Find a presentation online that users can view on a mobile device. Add your new key message as a presentation slide within that presentation. Check if the presentation slide with the new key message is available on the mobile device.
2. View the newly created key message online and check that you can download the file by selecting the file name. If you cannot, upload the file again.
3. Navigate to More > Options > Media on a mobile device and confirm that the new key message is listed as downloaded to the device. If it is not present, try syncing again to ensure the local data is up to date.
4. Verify that the presentation and slide are available in the Media tab on a mobile device. If the presentation are not available, it could be that the presentation is missing a slide. Presentations only display if the user has all the slides required to show that presentation.

## Using Shared Resources

CRM Desktop (Mac, Windows)|iPad|Windows Tablet|

To optimize storage space and reduce sync times, HTML assets known as shared resources can be used with multiple Key Messages.

The system automatically creates a shared folder which links to the shared content. Use the following structure to reference the content from HTML:

- `./shared/<folder structure inside the zip>`

Content creators can use the following methods to reference a shared resource:

- `<img src='./shared/images/cholecap_logo.jpg>`
- `<script src='./shared/js/veeva_javascript_library_v3.2.js type=text/javascript></script>`
- `<link href='./shared/css/base.css rel=stylesheet type=text/css>`



Zip files for content that refers to a shared resource Key Message should not contain a shared folder. The symlink overwrites the shared resource.

Example zip file hierarchy for a shared resource:



**Note:** Key Messages with the `Is_Shared_Resource_vod` field selected should not be associated with any CLM Presentation Slides.

## Creating AR Content

iPad|

Content creators can create Augmented Reality (AR) content for CLM to display on iPad devices, enabling more creativity when displaying product metrics, effects, and information. AR overlays virtual objects, known as models, onto a lens of the real world, known as the scene. Augmented Reality differs from Virtual Reality (VR) in that AR uses a blend of virtual objects and the user's real surroundings, rather than completely replacing the surroundings with a virtual environment.



Veeva CRM supports ARKit 3.0.

## Guidelines

**Note:** The font, location, and size of all headings or labels cannot be formatted.

### Models

All models must use the .dae, .obj, or .usdz file formats. If the model uses animations, the .dae or .usdz format must be used. For optimal performance, an individual model must not exceed 100,000 polygons.

**Note:** Veeva recommends limiting a scene to less than 10 models.

### Animations

IDs must be set for each animation to be referenced in the JSON file.

Animations should have recognizable names describing the associated object, for example, Disposable\_Syringe, Iris, Left\_Artery, etc.

### Masks

Masks enable all or a portion of a model to be hidden when viewing the model from a certain angle. Masks must be a 3D mesh and can be any shape. The mask must be identified in the JSON file.

**Note:** Use only one mask per model.

### Textures

Textures can be created and edited using a raster graphics editor. For optimal performance, use textures to portray details on a model rather than adding polygons.



Limit each model to one set of 2048 by 2048 textures.

## Lighting

- Lighting in Edit Mode – There are three nodes in edit mode:
  - a ring to display the model direction
  - a round shadow layer on the plane below the model
  - a directional light above the model so the model's shadow displays beneath
- Lighting in Locked Mode – Specific lighting does not display in locked mode. The only lighting in the scene is ARKit's default ambient lighting which is automatically adjusted by the lighting of the overall environment. Any additional lightning needs to be added in the model itself.

Content creators can customize scene lighting. See [Customizing AR Lighting](#) for more information.

## Preparing Files

After optimizing and testing a model and its associated textures, normal maps, audio, and animations, place the model and its assets in a folder.

For example, the folder Eye contains the model file for a human eye along with all other assets used by the model.

Repeat this process for all models in an AR scene.

## Creating AR Models

When designing 3D models, it is good to know that Xcode scenes use the Y-up axis. The position of the origin of the axes should be set to match the use of the model. For example, if the model is expected to be sitting on a horizontal surface, the origin should be at the bottom of the



model. The size of the model should also be determined depending on the environment it is used in.

## Building Interactivity and Animation into Models

To create 3D models for Veeva AR:

- **Modeling:** Veeva recommends Autodesk Maya 2017 or later. Other software may also work as long as it supports the .dae file format. The entire scene should max out at around 1 million polygons. Users may experience longer load times if there is too much detail and too many polygons. Rendering speeds can vary widely depending on the types of models created. It is important to test the rendering speed of the model on the target devices within XCode before finalizing.
- **Animations** are created during the modeling process. Each animation must be referenced by ID in the JSON file.
- **Masking:** If you are using masking, the mask must be a 3D mesh. It can be any shape as long as it covers everything that needs to be masked. Once exported and brought into SceneKit, the mesh must be set as a mask. While loading, the material is changed to a default SceneKit material with almost 0 transparency and a rendering order higher than the default value.
- **Exporting:** Export the file from Maya as a DAE file instead of an OBJ file if you have animations in the model. The OBJ file format does not export animations. DAE files export slowly. Find an alternate converter to expedite the process.
- **Texturing and Normal Maps:** You can use Photoshop to create or alter the textures and normal maps of a 3D object. Instead of creating minute details on the models (wrinkles, scratches, etc.) as polygons, it is better to use the normal map to handle these. This enables you to create more realistic models without placing additional load and rendering burdens on the device. To make details stand out, increase the height of the detail on the normal map. Normal maps, together with



other textures, must be sent to ARKit separately, as DAE files do not export them.

Specify the name of the normal map file in the JSON file to load it with the model.

Watch Apple's video on [Creating Great AR Experiences](#) to learn more about creating 3D content.

## Optimizing Models Using Xcode Script

Before you can use your model in Veeva AR, it needs to be optimized to work properly. To do this:

1. Export the model from the 3D Model editor (Maya) as a [model].obj file (no animations) or as a [model].dae file (includes animations).
2. Place the model, all textures, audio files, and the overlay image into a folder, for example [model].scnassets.
3. Run the following script from the [model].scnassets folder to create an optimized file for Xcode:
4. `run /Applications/Xcode.app/Contents/Developer/usr/bin/scntool --convert [model].dae --format c3d --output [new model name].dae --force-y-up --force-interleaved --look-for-pvrtc-image`
5. Create an ARKit template project and import the model into the project to test the model, get and check the animation names, textures, etc.
6. Zip the folder with only the optimized file, audio, overlay image, and textures, not the original .dae file.
7. Configure the JSON file. See [Defining AR Scenes](#) for more information.

See this [blog post](#) for more information about optimizing files with SceneKit.

## Defining AR Scenes

iPad|



The AR\_configuration.json file defines the scene and all models used by the presentation.

Every scene has an ID, name, and an array of models:

Sample scene code

```
"scenes" : [
  {
    "id" : "scene.L001",
    "name" : "Veeva Codesign",
    "models" : [...]
  }
]
```

To view a full example, including a configuration JSON file and a 3D model, download Veeva's [sample AR zip file](#).

Each model contains a series of metadata tags defining the model's appearance and behavior.

The following metadata tags are available:

Tag Name	Example	Description
id	scene.L001	
name	Veeva Codesign	The title of the scene displays at the top of the screen.





Tag Name	Example	Description
debug_mode	<pre data-bbox="396 611 1166 711">"debug_mode": "false"</pre>	<p data-bbox="1192 268 1401 600">If true, displays the debugging overlay for testing the models and colored X, Y, and Z axes.</p> <p data-bbox="1192 722 1382 1052">Veeva recommends setting this to false before deploying to production.</p>
edit_mode_animation	<pre data-bbox="396 1199 1166 1299">"edit_mode_animation": "false"</pre>	<p data-bbox="1192 1081 1401 1411">Determines if the edit mode animation is enabled. Can be true or false. Defaults to true.</p>



Tag Name	Example	Description
models	<pre data-bbox="396 600 1166 940"> "models":[   {     "id":"LogosCodesignVeeva",     "name":"LogosCodesignVeeva",     "path":"Models",     "assets":"Logos",     "file_extension":"dae"   } ]</pre>	<p data-bbox="1192 268 1398 657">The list of models available for selection in the scene. Specify the following parameters for each model:</p> <ul data-bbox="1192 772 1398 1272" style="list-style-type: none"> <li>• Id</li> <li>• Name</li> <li>• Path</li> <li>• Assets</li> <li>• File_extension – Must be either dae or obj</li> </ul>
id	LogosCodesignVeeva	<p data-bbox="1192 1304 1398 1749">The unique id of each model. This needs to be specified when placing more than one model on the scene.</p>



Tag Name	Example	Description
path	Models	The path to the Models file. Each model within a scene can have its own path.
assets	Logos	The path to the assets used by the model. This path is within the path metadata tag. In this example, the location is ./Models/Logos/
file_extension	.dae or .obj	Allows different kinds of AR compatible files.



Tag Name	Example	Description
normal_ maps	<pre>"obj_name": "file3", "texture_name" : "CodesignStudio.tga"</pre>	More than one normal map can be associated with a model. Specify both the texture name and the ID of the associated object.
scale	0.025, 0.025, 0.025	The X, Y, and Z values of the object's initial scale.



Tag Name	Example	Description
logo	logo.png	<p>The name of the overlay image.</p> <p>This image can contain company logos, instructions, safety information, etc. This image is always centered and will scale down to fit a screen resolution, but not up.</p> <p>Veeva recommends this image have a transparent background and is tested to ensure the image does not obscure actions.</p>



Tag Name	Example	Description
animation_control_panel	<pre> "animation_control_panel":{   "type":"control_panel",   "id":"control_panel.interactions",   "buttons":[     "...",   ],   "slider":{     "type":"slider",     "id":"slider.main",     "animations":[       "...",     ]   } } </pre>	<p>Defines the actions when selecting the Next and Previous buttons. Each button can have multiple associated actions.</p>
touch_triggers	<pre> "touch_triggers":[   {     "type":"trigger",     "id":"trigger.pupil",     "obj_name":"Pupil",     "fade_object":true,     "fade_object_duration":1.0,     "actions":[       "...",     ]   } ] </pre>	<p>Defines actions initiated by selecting specific objects of the model. Set the ID parameter to the ID of the associated object.</p> <p>Fades and duration of fades, in seconds, are also controlled by this metadata tag.</p>



Tag Name	Example	Description
anchors	<pre> "anchors":[   {     "type":"anchor",     "id":"anchor.eyeball",     "obj_name":"II__Eyeball",     "position":[       0,       0,       0     ],     "distance":0.4,     "actions":[       {         "type":"label",         "id":"label.eyeball"       }     ]   } ] </pre>	<p>The reference points for proximity triggers. When the camera is closer to the object than the distance specified, the actions initiate.</p> <p>The following parameters must be defined for each anchor:</p> <ul style="list-style-type: none"> <li>• Type – Is always anchor</li> <li>• Id</li> <li>• Obj_name – The id of the appropriate object</li> <li>• Position – Specifies an offset dis-</li> </ul>



Tag Name	Example	Description
		<p>tance from the center of the object. This enables the activation point to be outside of the model rather than all around it.</p> <ul style="list-style-type: none"><li>• Distance – Radius, in meters, of the activation point</li><li>• Actions – Multiple actions can be associated</li></ul>





Tag Name	Example	Description
animations	<pre> "animations":[   {     "type":"animation",     "id":"Codesign-anim",     "autoplay":true,     "repeat_count":1   } ] </pre>	<p>Defines all animations in the model.</p> <p>Set the autoplay parameter to true to begin the animation when the model loads.</p> <p>A repeat count of 0 (zero) endlessly loops the animation.</p>
audios	<pre> "audios":[   {     "type":"audio",     "id":"audio.shot",     "file_name":"ArrowHit02.wav"   } ] </pre>	<p>Defines any audio files played when initiating actions.</p>



Tag Name	Example	Description
labels	<pre data-bbox="396 590 1166 869">"labels":[   {     "type":"label",     "id":"label.eyeball",     "text":"The Eyeball"   } ]</pre>	<p data-bbox="1192 268 1401 478">Defines labels or descriptions displayed using actions.</p> <p data-bbox="1192 604 1401 1108">Formatting cannot be applied to this text block. Labels always displays in the same location at the bottom center of the screen.</p>
reference_images	<pre data-bbox="396 1289 1166 1541">"reference_images":[   {     "name":"eyeball_marker.png",     "width":0.08   } ]</pre>	<p data-bbox="1192 1220 1401 1612">The name of the image used to trigger the image-recognition software when placing a model.</p>



Tag Name	Example	Description
reference_objects	<pre> "reference_objects":[   {     "name":"eyeball_marker_rounded_small.arob- ject"   },   {     "name":"eyeball_marker_dark.arobject"   } ] </pre>	<p>The name of the object used to trigger the object recognition software when placing a model.</p>
mask	<pre> "portal":{   "type":"portal",   "id":"portal.demo",   "interior_name":"Entire_Scene",   "mask_name":"Mask" } </pre>	<p>Enables hiding all or a portion of a model when viewed from a certain angle. The interior_name parameter defines the ID of the model being hidden. The mask_name parameter defines the ID of the masking object.</p>



## Example Scene

### Sample scene code

```

{
  "scenes": [
    {
      "id": "scene.L001",
      "name": "Veeva Codesign",
      "debug_mode": false,
      "models": [
        {
          "id": "LogosCodesignVeeva",
          "name": "LogosCodesignVeeva",
          "path": "Models",
          "assets": "Logos",
          "file_extention": "dae",
          "scale": [
            0.025,
            0.025,
            0.025
          ],
          "normal_maps": [
            {
              "obj_name": "file3",
              "texture_name": "CodesignStudio.tga"
            },
            {
              "obj_name": "file4",
              "texture_name": "site.tga"
            }
          ],
          "logo": "logo.png",
          "animation_control_panel": {
            "type": "control_panel",
            "id": "control_panel.interactions",
            "buttons": [
              "..."
            ]
          }
        }
      ]
    }
  ]
}

```

Interaction triggers cause certain changes in the model to occur, for example, starting an animation, displaying a label, or playing an audio file.

Three kinds of interaction triggers initiate actions:



- Touch triggers
- Proximity triggers
- Animation Control Panel - Controlled in one of two ways:
  - Slider control bar
  - Forward and Previous buttons

Each interaction trigger can cause one or several actions. These triggers are set up in an array within the JSON file. Always specify the following information for all interaction triggers:

- Type
- ID of the associated object
- Name of the associated object
- Type of action
- ID of individual action

## Touch Trigger Example

### Sample touch trigger code

```
"touch_triggers":[
  {
    "type":"trigger",
    "id":"trigger.left.door",
    "obj_name":"NovaSeq_2_a_Left_Door",
    "actions":[
      {
        "type":"animation",
        "id":"NovaSeq_2_a_Right_Door-anim"
      },
      {
        "type":"audio",
        "id":"audio.right.door.start"
      }
    ]
  }
]
```



## Proximity Trigger Example

### Sample proximity trigger code

```

"anchors":[
  {
    "type":"anchor",
    "id":"anchor.lens",
    "obj_name":"Retina_front",
    "position":[
      0,
      0,
      0
    ],
    "distance":0.4,
    "actions":[
      {
        "type":"animation",
        "id":"Back-anim"
      },
      {
        "type":"label",
        "id":"label.eyeball"
      }
    ]
  }
]

```

## Control Panel Example

Each set of animations can also be controlled by the animation slider rather than playing from beginning to end automatically:

### Sample animation control panel code

```

"animation_control_panel":{
  "type":"control_panel",
  "id":"control_panel.interactions",
  "slider":{
    "type":"slider",
    "id":"slider.main",
    "animations":[
      {
        "type":"animation",
        "id":"Codesign-anim"
      }
    ]
  }
}

```



```

    {
      "type": "animation",
      "id": "group1-anim"
    }
  ],
},
"buttons": [
  {
    "actions": [
      {
        "type": "animation",
        "id": "Codesign-anim"
      },
      {
        "type": "animation",
        "id": "group1-anim"
      }
    ]
  }
],
},
//Animations that play when triggering the associated action
"animations": [
  {
    "type": "animation",
    "id": "NovaSeq_2_a_Left_Door-anim",
    "autoplay": false,
    "repeat_count": 1
  }
],
//Audio files the play when triggering the associated action
"audios": [
  {
    "type": "audio",
    "id": "audio.fgfr",
    "file_name": "Pipeline.mp3"
  }
],
//Labels that display depending on the triggered action.
"labels": [
  {
    "type": "label",
    "id": "label.monitor",
    "text": "This is the MONITOR"
  }
]

```

## Customizing AR Lighting

iPad|



Augmented reality (AR) content creators can customize the lighting for AR scenes to adjust the visibility of the entire scene, instead of the individual models. Content creators can also disable the lighting and animation in edit mode so users can view models exactly as they appear in locked mode to prevent confusion. This allows content creators to improve AR content for customers.

There are 4 custom lighting options, which can be configured simultaneously:

- Ambient
- Directional
- Omni
- Spot

**Note:** The default lighting is the standard ARKit ambient light. Defining custom lighting automatically disables the standard ARKit lighting.

For example, Sarah Jones launches an AR scene with multiple models. The scene has a directional light which acts like the sun illuminating the entire scene from one direction.

## Defining Custom AR Lighting

Content creators can define values for the lighting parameters in the JSON configuration file.

Each lighting option has specific sub-parameters to adjust how the lighting interacts with a scene. The following sub-parameters are available for multiple lighting options:

- `auto Updating lighting` – determines if the scene should use ARKit’s scene lighting calculations to adjust the intensity based on lighting in the real environment
- `color` – color of the light in RGB; defaults to 255, 255, 255 (white)
- `direction` – direction of the light as an Euler vector with X, Y, and Z coordinates in radians; defaults to -1.57, 0, 0





- The value -1.57 represents  $-\pi/2$ . The default direction points directly down from the origin.
- intensity – intensity of the light in lumens; defaults to 1000
- position – position of the light with respect to the origin; defaults to 0, 0, 0 (origin)
- temperature – temperature of the light in Kelvin; defaults to 6500



Parameter	Description	Available Sub-parameters
ambient_lighting	<p>An ambient light is a soft light without a source or a direction. It illuminates a scene without casting shadows.</p> <p>There can only be one ambient light in a scene.</p>	<ul style="list-style-type: none"> <li>• auto Updating lighting</li> <li>• enabled               <ul style="list-style-type: none"> <li>• true</li> <li>• false – Disables all ambient lighting, including the standard ARKit lighting</li> </ul> </li> <li>• auto (default) – Ignores custom parameters and uses the default standard ARKit ambient lighting</li> <li>• intensity</li> </ul>



Parameter	Description	Available Sub-parameters
directional_lighting	<p>A directional light is a light source pointing in a specific direction.</p> <p>There can be multiple directional lights in a scene.</p>	<ul style="list-style-type: none"> <li>• auto Updating lighting</li> <li>• color</li> <li>• direction</li> <li>• intensity</li> <li>• temperature</li> </ul>
omni_lighting	<p>An omni light is a light source pointing in every direction.</p> <p>There can be multiple omni lights in a scene.</p>	<ul style="list-style-type: none"> <li>• auto Updating lighting</li> <li>• color</li> <li>• intensity</li> <li>• position</li> <li>• temperature</li> </ul>



Parameter	Description	Available Sub-parameters
spot_lighting	<p>A spot light is a light source pointing at a target object composed of two concentric cones. The inner cone illuminates the target at maximum brightness. The outer cone partially illuminates the target and defines the maximum area of illumination.</p> <p>There can be multiple spotlights in a scene.</p>	<ul style="list-style-type: none"> <li>• auto Updating lighting</li> <li>• color</li> <li>• direction</li> <li>• inner_angle – angle of the inner cone in degrees</li> <li>• intensity</li> <li>• outer_angle – angle of the outer cone in degrees</li> <li>• position</li> <li>• temperature</li> </ul>

## Disabling the Edit Mode Animation

Content creators can disable the animation and lighting in edit mode. This ensures models do not float above the plane and only displays lighting defined by the content creator in the JSON configuration file.

To disable the edit mode animation, content creators can define the `edit_mode_animation` parameter in the JSON configuration file. See [Defining AR Scenes](#) for more information.

## Aligning Approved Email and CLM Content

Browser (Classic, Lightning)|CRM Desktop (Mac, Windows)|iPad|iPhone|



Content alignment allows customers to give the right users access to the right content using content groups. Content groups are groups of users who have access to the same content, allowing admins to efficiently manage the Approved Email and CLM content assigned to large groups of users. Content alignment provides customers with more transparency over what content is available for specific types of users. Customers can use content alignment with Align and/or Vault to further streamline the process. Customers can build dashboards and reports to understand which users have access to which content.

## Configuring Content Groups

Content groups can be configured to work with Align and/or Vault in one of the following combinations:

- CRM only
- CRM and Align
- CRM and Vault
- CRM, Align, and Vault



## Configuring Content Groups in CRM

To enable content groups in CRM:

1. Ensure the Default Sharing Settings for the following objects are set to **Private**:
  - Approved\_Document\_vod
  - CLM\_Presentation\_vod
  - Key\_Message\_vod
2. Ensure the UserType field on User records for end users is set to **Standard**.
3. Grant admins the following permissions:

Object	OLS	Record Types	Fields	FLS
Content_Group_Content_vod	CRUD	<ul style="list-style-type: none"> <li>• Approved_Document_vod</li> <li>• CLM_Presentation_vod</li> <li>• Key_Message_vod</li> </ul>	<ul style="list-style-type: none"> <li>• Approved_Document_vod</li> <li>• CLM_Presentation_vod</li> <li>• Content_Group_vod</li> <li>• Key_Message_vod</li> <li>• RecordTypeId</li> <li>• Record_Type_Name_vod</li> <li>• VExternal_Id_vod</li> </ul>	Edit
Content_Group_User_vod	CRUD	User_vod	<ul style="list-style-type: none"> <li>• Content_Group_vod</li> <li>• RecordTypeId</li> <li>• User_vod</li> <li>• VExternal_Id_vod</li> </ul>	Edit



Object	OLS	Record Types	Fields	FLS
Content_Group_vod	CRUD	Content_Group_vod	<ul style="list-style-type: none"> <li>• Country_vod*</li> <li>• Description_vod*</li> <li>• Detail_Group_vod*</li> <li>• Group_vod</li> <li>• External_Id_vod</li> <li>• Language_vod*</li> <li>• Name</li> <li>• Product_Group_vod*</li> <li>• Product_vod*</li> <li>• RecordTypeId</li> <li>• Status_vod</li> </ul> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> * This field is optional and can be used to provide additional context.</p> </div>	Edit

4. Grant the integration user access to the following Apex classes:

- VeevaContentGroupContentTriggerHandler
- VeevaContentGroupTriggerHandler
- VeevaContentGroupUserTriggerHandler



- VeevaSetupObjectHandler
  - VeevaTriggerHandler
5. Ensure VMOCs for the following object are **Active** and **Enable Enhanced Sync** is selected:
- Approved\_Document\_vod
  - CLM\_Presentation\_Slide\_vod
  - CLM\_Presentation\_vod
  - Key\_Message\_vod

### Configuring Content Groups in Align

To enable content groups in Align, ensure [Content Groups in Align](#) are configured and the CRM configuration above is complete.

### Configuring Content Groups in Vault

To enable content groups in Vault:

1. Ensure the [CRM Vault Metadata Sync](#) is configured and the CRM configuration above is complete.





2. Grant integration users the following permissions:

Object	OLS	Record Types	Fields	FLS
Content_Group_ Content_vod	CRU	<ul style="list-style-type: none"> <li>• Approved_Docu- ment_vod</li> <li>• CLM_Present- ation_vod</li> <li>• Key_Message_ vod</li> </ul>	<ul style="list-style-type: none"> <li>• Approved_Docu- ment_vod</li> <li>• CLM_Presentation_ vod</li> <li>• Content_Group_vod</li> <li>• Key_Message_vod</li> <li>• RecordTypeId</li> <li>• Record_Type_ Name_vod</li> <li>• VExternal_Id_vod</li> </ul>	Edit



Object	OLS	Record Types	Fields	FLS
Content_Group_vod	CRU	Content_Group_vod	<ul style="list-style-type: none"> <li>• Country_vod*</li> <li>• Description_vod*</li> <li>• Detail_Group_vod*</li> <li>• Group_vod</li> <li>• External_Id_vod</li> <li>• Language_vod*</li> <li>• Name</li> <li>• Product_Group_vod*</li> <li>• Product_vod*</li> <li>• RecordTypeId</li> <li>• Status_vod</li> </ul> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> * This field is optional and can be used to provide additional context.</p> </div>	Read



3. Perform the following steps in Vault:

- Add the **crm\_content\_group\_\_v** Shared Field to the appropriate document types.
- Grant Vault integration users the following permissions:

Object	Object Permission	Object Types	Fields	Field Permission
crm_content_group__v	CRE	n/a	<ul style="list-style-type: none"> <li>country__v</li> <li>crm_org__v</li> <li>crm_id__v</li> <li>description__v</li> <li>id.crm_detail_group__v</li> <li>id.crm_product_group__v</li> <li>id.crm_product__v</li> <li>language__v</li> <li>name__v</li> </ul>	Edit
crm_org__v	CRE	n/a	<ul style="list-style-type: none"> <li>crm__org_id__v</li> <li>name__v</li> </ul>	Edit



## Creating and Managing Content Alignment

Content alignment is composed of the following objects:

- **Content\_Group\_vod** - defines a group of users aligned to the same content. A content group can have multiple CRM users and many pieces of CLM and Approved Email content. A corresponding Salesforce Group record is automatically created for each Content\_Group\_vod record.
- **Content\_Group\_User\_vod** - assigns a user to a content group. A user can be assigned to multiple content groups. A corresponding Salesforce GroupMember record is automatically created for each Content\_Group\_User\_vod record.
- **Content\_Group\_Content\_vod** - assigns a piece of content to a content group. A piece of content can be assigned to multiple content groups. For Approved Email, a piece of content consists of an Approved\_Document\_vod record. For CLM, a piece of content consists of a CLM\_Presentation\_vod record and its associated Key\_Message\_vod records. For each Content\_Group\_Content\_vod record, a corresponding record is automatically created in the Salesforce Approved\_Document\_vod\_\_Share, CLM\_Presentation\_vod\_\_Share, or Key\_Message\_vod\_\_Share tables.

The process of creating and managing content groups, and assigning users and content to each group depends on whether the customer is integrating CRM with Align and/or Vault.

### Creating and Managing Content Alignment in CRM Only

To align content in CRM:

For customers who are only using CRM, admins must manually create or data load all Content\_Group\_vod, Content\_Group\_User\_vod, and Content\_Group\_Content\_vod records for each content group.



1. Define content groups. Create **Content\_Group\_vod** records with the **Content\_Group\_vod** record type and populate at least the following fields:

- Name - name of the group
- Status\_vod - Active. Set to Inactive when deactivating but not deleting a content group. Approved\_Document\_vod\_\_Share, CLM\_Presentation\_vod\_\_Share, and Key\_Message\_vod\_\_Share records for all content are deleted and users no longer have access to that content.
- External\_Id\_vod - unique ID of the group

**Note:** Define a naming convention and use optional fields, for example, Country\_vod, Description\_vod, and Language\_vod, to provide additional context for the content group, which may be useful across teams.

2. Assign users to each content group. Create **Content\_Group\_User\_vod** records with the **User\_vod** record type and populate at least the following fields:

- Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
- User\_vod - lookup to the User record

3. Assign content to content groups.

- To assign Approved Email content, create **Content\_Group\_Content\_vod** records with the **Approved\_Document\_vod** record type and populate at least the following fields:
  - Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
  - Approved\_Document\_vod - lookup to the Approved\_Document\_vod



- record
- Record\_Type\_Name\_vod - Approved\_Document\_vod
- For a CLM presentation, admins must create Content\_Group\_Content\_vod records for the presentation and each of its associated key messages.

**Note:** Sub-presentations are treated the same as CLM presentations and Shared Resources are treated the same as key messages. Admins must create Content\_Group\_Content\_vod records for a sub-presentation and its key messages, as well as for a Shared Resource. Veeva recommends data loading Content\_Group\_Content\_vod records for key messages (including Shared Resources) first, followed by CLM presentations (including sub-presentations).

- Create **Content\_Group\_Content\_vod** records with the **CLM\_Presentation\_vod** record type and populate at least the following fields:
  - ◆ Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
  - ◆ CLM\_Presentation\_vod - lookup to the CLM\_Presentation\_vod record
  - ◆ Record\_Type\_Name\_vod - CLM\_Presentation\_vod
- For each key message in a CLM presentation, create **Content\_Group\_Content\_vod** records with the **Key\_Message\_vod** record type and populate at least the following fields:
  - ◆ Content\_Group\_vod - lookup to the Content\_Group\_vod record



- ◆ Key\_Message\_vod - lookup to the Key\_Message\_vod record
- ◆ Record\_Type\_Name\_vod - Key\_Message\_vod

## Creating and Managing Content Alignment using Align and CRM

Customers can use Align to manage content groups and users. The content assigned to each content group is managed in CRM.

To align content using Align and CRM:

1. Create content groups and assign users in Align. Admins in Align manually create content groups and the users are automatically assigned to each group based on territory assignments. Admins then sync the content groups and users to CRM. In CRM, Content\_Group\_vod and Content\_Group\_User\_vod records are automatically created and linked based on the content groups synced from Align.

**Note:** When a user is moved from one territory to another, the content groups to which they are assigned are also updated accordingly.

2. Sync the content groups and users from Align to CRM.
3. Assign content to each content group.
  - ◆ To assign Approved Email content, create **Content\_Group\_Content\_vod** records with the **Approved\_Document\_vod** record type and populate at least the following fields:
    - Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
    - Approved\_Document\_vod - lookup to the Approved\_Document\_vod



- record
- Record\_Type\_Name\_vod - Approved\_Document\_vod
- For a CLM presentation, admins must create Content\_Group\_Content\_vod records for the presentation and each of its associated key messages.
  - Create **Content\_Group\_Content\_vod** records with the **CLM\_Presentation\_vod** record type and populate at least the following fields:

**Note:** Sub-presentations are treated the same as CLM presentations and Shared Resources are treated the same as key messages. Admins must create Content\_Group\_Content\_vod records for a sub-presentation and its key messages, as well as for a Shared Resource. Veeva recommends data loading Content\_Group\_Content\_vod records for key messages (including Shared Resources) first, followed by CLM presentations (including sub-presentations).

- ◆ Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
- ◆ CLM\_Presentation\_vod - lookup to the CLM\_Presentation\_vod record
- ◆ Record\_Type\_Name\_vod - CLM\_Presentation\_vod
- For each key message in a CLM presentation, create **Content\_Group\_Content\_vod** records with the **Key\_Message\_vod** record type and populate at least the following fields:





- ◆ Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
- ◆ Key\_Message\_vod - lookup to the Key\_Message\_vod record
- ◆ Record\_Type\_Name\_vod - Key\_Message\_vod

## Creating and Managing Content Alignment using CRM and Vault

Customers can use Vault to manage the content assigned to each content group. Content groups and users must be created and managed in CRM.

To align content using CRM and Vault:

1. Define content groups. Create **Content\_Group\_vod** records with the **Content\_Group\_vod** record type and populate at least the following fields:
  - Name - name of the group
  - Status\_vod - Active. Set to Inactive when deactivating but not deleting a content group. Approved\_Document\_vod\_\_Share, CLM\_Presentation\_vod\_\_Share, and Key\_Message\_vod\_\_Share records for all content are deleted and users no longer have access to that content.
  - External\_Id\_vod - unique ID of the group

**Note:** Define a naming convention and use optional fields, for example, Country\_vod, Description\_vod, and Language\_vod, to provide additional context for the content group, which may be useful across teams.

2. Assign users to each content group. Create **Content\_Group\_User\_vod** records with the **User\_vod** record type and populate at least the following fields:



- Content\_Group\_vod - lookup to the Content\_Group\_vod record, usually the External ID of the content group
  - User\_vod - lookup to the User record
3. Sync the content groups to Vault via the CRM Vault Metadata Sync in CRM. Content groups cannot be created directly in Vault.
  4. Assign content to content groups.
    - To assign Approved Email content to a content group, content admins in Vault can select one or more content groups for the **crm\_content\_groups\_\_v** field on an Email Template or Email Fragment, or on an auto-published document.
    - To assign CLM content to a content group, content admins can select one or more content groups for the **crm\_content\_groups\_\_v** field on a Multichannel Presentation or on an auto-published document.

**Note:** If admins add more content groups to the source document of an auto-published document, the auto-published document must be generated again to include the additional content groups.

5. Sync content from Vault to CRM.
  - When CRM admins sync Approved Email content from Vault to CRM via the Approved Email Admin Console, Content\_Group\_Content\_vod records are automatically created for each Approved\_Document\_vod record assigned to a content group and linked to the appropriate Content\_Group\_vod records via the Content\_Group\_vod lookup field.
  - When CRM admins sync CLM content from Vault to CRM via the CLM Admin Console, Content\_Group\_Content\_vod records are automatically created not only for each CLM\_Presentation\_vod record assigned to a content group, but also for each of its associated Key\_Message\_vod records, including shared resources, and sub-



presentations. These records are automatically linked to the appropriate Content\_Group\_vod records via the Content\_Group\_vod lookup field.

CRM admins can view the content alignment successes and failures from the last seven days in the Content Alignment Process History sections in the CLM Admin Console and Approved Email Admin Console. Admins receive notification emails after each sync with information about the successes and failures.

**Note:** Admins must use the CLM Admin Console to manage CLM content alignment and the Approved Email Admin Console to manage Approved Email content alignment.

## Creating and Managing Content Alignment using Align, CRM, and Vault

Customers can use Align to manage content groups and users, and Vault to manage the content assigned to each content group. CRM admins manage the integrations between Align and CRM, and CRM and Vault.

To align content using Align, CRM, and Vault:

1. Create content groups and assign users in Align. Admins in Align manually create content groups and the users are automatically assigned to each group based on territory assignments. Admins then sync the content groups and users to CRM. In CRM, Content\_Group\_vod and Content\_Group\_User\_vod records are automatically created and linked based on the content groups synced from Align.

**Note:** When a user is moved from one territory to another, the content groups to which they are assigned are also updated accordingly.

2. Sync the content groups and users from Align to CRM.
3. Sync the content groups to Vault via the CRM Vault Metadata Sync in CRM. Content groups cannot be created directly in Vault.



#### 4. Assign content to content groups.

- To assign Approved Email content to a content group, content admins in Vault can select one or more content groups for the **crm\_content\_groups\_\_v** field on an Email Template or Email Fragment, or on an auto-published document.
- To assign CLM content to a content group, content admins can select one or more content groups for the **crm\_content\_groups\_\_v** field on a Multichannel Presentation or on an auto-published document.

**Note:** If admins add more content groups to the source document of an auto-published document, the auto-published document must be generated again to include the additional content groups.

#### 5. Sync content from Vault to CRM.

- When CRM admins sync Approved Email content from Vault to CRM via the Approved Email Admin Console, Content\_Group\_Content\_vod records are automatically created for each Approved\_Document\_vod record assigned to a content group and linked to the appropriate Content\_Group\_vod records via the Content\_Group\_vod lookup field.
- When CRM admins sync CLM content from Vault to CRM via the CLM Admin Console, Content\_Group\_Content\_vod records are automatically created not only for each CLM\_Presentation\_vod record assigned to a content group, but also for each of its associated Key\_Message\_vod records, including shared resources, and sub-presentations. These records are automatically linked to the appropriate Content\_Group\_vod records via the Content\_Group\_vod lookup field.

CRM admins can view the content alignment successes and failures from the last seven days in the Content Alignment Process History sections in the CLM Admin Console and Approved



Email Admin Console. Admins receive notification emails after each sync with information about the successes and failures.

**Note:** Admins must use the CLM Admin Console to manage CLM content alignment and the Approved Email Admin Console to manage Approved Email content alignment.

## Using Content Groups

When end users in a content group sync Approved Email and CLM content to their devices, only the content assigned to their content group syncs to their devices. My Setup Products for users apply.

## Realigning Content Alignment

Admins can realign content alignment from the Content Alignment Process History sections of the CLM Admin Console or the Approved Email Admin Console to fix discrepancies in content alignment object records.

Realigning content recreates the necessary Group, GroupMember, and \_\_Share (Approved\_Document\_vod\_\_Share, CLM\_Presentation\_vod\_\_Share, Key\_Message\_vod\_\_Share) records for content alignment. For example, an admin accidentally deletes a GroupMember record automatically created in Salesforce corresponding to a Content\_Group\_User\_vod record. The admin cannot recreate the record, so they realign content to ensure the record exists again.

Admins receive email notifications when realignment jobs successfully complete or fail with errors.

## Defining Sub-Presentation Slides

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|



CLM presentations can contain a sub-presentation of a required set of slides that must be shown prior to displaying certain target slides within the main presentation.

To define a set of required slides:

1. Create a CLM presentation containing the required slides. This presentation is the sub-presentation.
2. Populate the **Sub\_Presentation\_vod** lookup on the CLM\_Presentation\_Slide\_vod record for every slide that must be preceded by the sub-presentation in the main presentation.

When a user attempts to view the main presentation slide before viewing the preceding sub-presentation, the first slide in the sub-presentation automatically displays. Once the user has viewed all required slides, they can continue to display the remaining slides in the main presentation.

Required Key Messages are only displayed once in a CLM session. Once the Key Message is viewed, it does not display again.

**Note:** A view is captured when either of the following occurs:

- the user displays the slide for more than 2 seconds
- the user selects a reaction button. The duration timer is reset for each swipe.

## Displaying HTML Content on Large Screen Devices

iPad

Content creators can set the display resolution of CLM presentations created with HTML. This allows presentations to be responsive and fit screens with higher resolution, including the following devices:



- iPad 2019 10.2 inch
- iPad Air 2019 10.2 inch
- iPad Pro 10.5 inch
- iPad Pro 11 inch
- iPad Pro 12.9 inch
- All future iPad models with screens larger than 9.7 inches

**Note:** Content creators cannot set the display resolution for PDFs, images, videos, or any CLM content generated via [auto-publishing](#) or [Create Presentation](#). These types of content automatically display in the device's default resolution.

## Configuring Display Resolution

Vault admins must ensure the **ios\_resolution\_\_v** field is active for the Multichannel Slide document type in Vault. See [Managing Document Fields](#) for more information.

To configure CLM display resolution in Veeva CRM, admins must perform the following steps:

1. Grant the following FLS permissions to the **iOS\_Resolution\_vod** field on the Key\_Message\_vod object in CRM:
  - Integration user – FLS Edit
  - End user – FLS Read
2. Activate all picklist values for the **iOS\_Resolution\_vod** field on the Key\_Message\_vod object.
3. Navigate to the **CLM Administration Console** tab.
4. Select **View Map** for the appropriate Vault in the Vault Connection Management section.
5. Select **Compare CRM to Vault** to update the field mapping.



## Viewing Responsive CLM Presentations

Content creators set the resolution of a CLM slide in Vault. See [Document Fields](#) for more information.

After admins sync the CLM content from Vault to CRM via the CLM Admin Console, the iOS\_Resolution\_vod field on the Key\_Message\_vod record corresponding to the slide is populated with the resolution value mapped from Vault.

**Note:** The iOS\_Resolution\_vod field does not apply to presentations displaying in portrait mode.

There are 3 resolution options:

- **Scale\_to\_1024x768\_vod** – content displays in fullscreen or in the center of the screen with a black border on devices with higher resolution. Swipe and pinch actions and view rotation are only supported inside the content but CLM controls display in the borders outside the content. See [Displaying CLM Content](#) for more information. Additionally, devices with logical resolution screens of 1024 by 768 pixels always display content using **Scale\_to\_1024x768\_vod**.

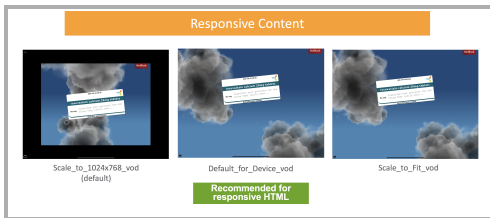
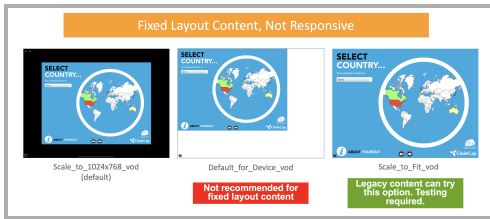
**Note:** CLM content uses **Scale\_to\_1024v768\_vod** by default.

- **Default\_for\_Device\_vod** – content displays in the device's default resolution. Veeva recommends selecting this option for responsive HTML content.
- **Scale\_to\_Fit\_vod** – content scales to display in fullscreen. Veeva does not recommend selecting this option for responsive content. This option allows fixed layout content to fill the screen. Content creators must test all content using this option to ensure the content displays appropriately. After launching a presentation, the content briefly displays in its original size before visibly scaling up to fill the screen.





The Scale\_to\_Fit\_vod option works best for content designed to display with 1024 by 768 resolution.



## Using Hidden Presentations

CRM Desktop (Mac, Windows)|iPad|iPhone|Windows Tablet|

By selecting the Hidden\_vod field on a CLM\_Presentation\_vod record, that presentation does not display in the CLM Presentations view or in the Presentation picker in the media player's navigation bar. To reach a slide within a hidden presentation, content creators must use the gotoSlide JavaScript function to link directly to a slide in the hidden presentation. See the [CLM JavaScript library](#) for more information on the gotoSlide function.

Once the user navigates to the hidden presentation, its slides are visible in the navigation bar. This allows for navigation within the hidden presentation. Once the user exits the hidden presentation, the presentation and its slides no longer display.

## Cloning Presentations

Admins can clone CLM presentation records and their associated slides within the same org. This allows new presentations with similar structures (number and order of slides) to existing presentations to be created quickly.



## Configuring the Clone Button

To allow admins to clone presentations:

1. Grant admins access to the **Clone\_Presentation\_vod** Visualforce page.
2. Add the **Clone\_Presentation\_vod** button to the CLM\_Presentation\_vod object page layout. Veeva recommends removing the standard Clone button from the layout to avoid confusion.

## Cloning Presentations

Selecting the Clone button creates an exact copy of the presentation and all its associated CLM\_Presentation\_Slide\_vod records. Admins can choose to also clone the related Key\_Message\_vod records or link to existing records. The content file for a cloned Key\_Message\_vod record is not copied.

Any sub-presentations associated with a slide are automatically referenced in the cloned presentation. If the sub-presentation is no longer required or a different sub-presentation is required in the cloned presentation, admins must manually update the Sub\_Presentation\_vod field for the cloned CLM\_Presentation\_Slide\_vod record.

## Migrating Presentations

Admins can transfer entire presentations from one org to another. When an agency completes development of a presentation in a development sandbox, that presentation can be copied to the customer's test environment for Medical, Legal, and Regulatory review. Similarly, once the presentation is reviewed and ready for migration to production, the presentation and all its components can be migrated to production.

**Note:** This functionality is not supported with the CLM Vault Integration. See [Vault Help](#) for information on how to manage CLM content in Vault.



## Configuring the Migrate Button

To allow admins to migrate presentations:

1. Grant admins access to the **Migrate\_CLM\_Presentation\_vod** Visualforce page and the following permissions:

Object	OLS	Record Types	Fields	FLS
CLM_Presentation_vod	CRU	n/a	n/a	n/a
CLM_Presentation_Slide_vod	CRUD	n/a	n/a	n/a
Key_Message_vod	CRU	n/a	n/a	n/a
Message_vod	R	n/a	n/a	n/a
Product_vod	R	n/a	External_ID_vod	Read
Survey_vod (if using <a href="#">Surveys with CLM</a> )	R	n/a	External_ID_vod	Read

2. Add the **Migrate\_vod** button to the CLM\_Presentation\_vod object page layout.

For every CLM\_Presentation\_vod record, any associated CLM\_Presentation\_Slide\_vod and Key\_Message\_vod records are migrated to the target org. If any of the objects exist in the target org, they are overwritten. Duplicates are identified using each record's external ID. The external ID must be populated on each of the source records for the migration to succeed. The migration uses the following ID fields for the supported objects:

- CLM Presentation – Presentation\_Id\_vod
- CLM Presentation Slide – External\_ID\_vod



- Key Message – Media\_File\_Name\_vod
- Product – External\_ID\_vod
- Survey – External\_ID\_vod
- Directory – External\_ID\_vod

**Note:** In order to ensure data integrity, the fields for the CLM\_Presentation\_vod, CLM\_Presentation\_Slide\_vod, and Key\_Message\_vod objects in the source org should not be a subset of the fields on the target org. If there are more fields in the source org, the migration displays a warning that there is no place to put the values of the extraneous fields in the target org.

**Note:** Users may decide to Continue or Cancel when a migration warning displays. If there is an error, the user must fix the error in order to migrate.

## Migrating Presentations with Delegated Authentication

Customers who are using Delegated Authentication to sign in to their orgs can use the DESTINATION\_AUTHENTICATION\_ENDPOINTS Veeva Setting, which points to a corresponding Veeva Message, to configure the CLM Presentation Migration page to allow selection of additional authentication endpoints, other than the standard "Production" and "Sandbox" choices.

To enable, edit the DESTINATION\_AUTHENTICATION\_ENDPOINTS Veeva Message by adding endpoints in the following format.

- <ENDPOINT NAME1>,<AUTHENTICATION URL1>,<APPLIES TO URL1>;<ENDPOINT NAME2>,<AUTHENTICATION URL2>,<APPLIES TO URL2>;...



For customers using SAML, fill in all three parameters for the endpoint. For customers using OpenToken, set the APPLIES TO URL parameter to NULL.

**Note:** The ENDPOINT NAME displays to the end user and cannot include commas or semi-colons.

See [Delegated Authentication](#) for more information.