

CHAPTER 4

Managing Desktop Video

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Features in Digital Media Manager-Video Portal Module (DMM-VPM) are available to you if you purchased and installed the required license. For information about licensing, see the "Managing Licenses for Features and Components of Cisco DMS" section on page 2-3.

This chapter includes the following sections:

- Using Features Under the Setup Tab, page 4-1
- Using Features Under the Users Tab, page 4-7
- Using Features Under the Video Portal Tab, page 4-8
- Using Features Under the Encoders Tab, page 4-42
- Workflows for Setting Up Live Events, page 4-48

Using Features Under the Setup Tab



For information about setting up DMM-VPM on a new DMM appliance, see the *Quick Start Guide for Cisco Digital Media System 5.0* on Cisco.com.

Administrators and configuration managers use options under the Setup tab to manage the configuration and deployment settings for DMM-VPM on a DMM appliance. For information about user accounts and permissions, see the "Using Features Under the Users Tab" section on page 4-7.

This section includes the following topics:

- Configuring Administrative and Network Settings, page 4-2
- Viewing Environment Parameters, page 4-3
- Configuring the Settings to Use a Video Portal, page 4-3
- Configuring the Location Settings for Deployments, page 4-5

Configuring Administrative and Network Settings

You can configure low-level administrative and network settings for DMM-VPM.

- Step 1 Select Video Portal from the untitled list at the top far-right of any page.
- **Step 2** Select **Setup > DMM**.
- **Step 3** Enter the values that meet your requirements, as described in Table 4-1 on page 4-2.
- Step 4 To save and commit your entries, click Save Configuration Parameters.

or

To discard your entries, click Cancel.

Administrative and Network Settings

Table 4-1 describes the elements and settings for configuring administrative and network settings for DMM-VPM.

Table 4-1 Elements for Configuring Global Variables

Element	Description
Application Administrator Contact Email	The e-mail address that receives help requests from users. This field is read only in DMM-VPM, and it contains the e-mail that is specified for the superuser account in DMS-Admin.
Deployment CC Email Recipient	The e-mail address that receives a copy of every deployment and notification message that DMM sends to any user.
	Tip Use an e-mail alias to send notifications to multiple recipients.
Password Retrieval Email	The e-mail address that receives requests to retrieve and restore lost passwords from Video Portal users.
	Note If you use embedded authentication, we recommend that you enter an e-mail address to provide a password management option for users who have only Video Portal User level access. For information about Video Portal user accounts, see the "Using Features Under the Users Tab" section on page 4-7.
Metadata Checkout Duration	The duration (in minutes) that a user can lock metadata for editing.
Scheduled Deployment Interval (minutes)	The interval (in minutes) between automated cycles when DMM checks whether there are any scheduled deployments that it should process. This setting pertains only to scheduled deployments; immediate deployments start immediately.
Default Content Provider	The content provider name to assign, by default, to any new program upon its creation. For example, you might enter the name of your organization.
E-mail Server	The DNS-resolvable hostname or routable IP address of the SMTP server through which DMM sends deployment and approval e-mail messages automatically.
Application Server Base	The lowest-level HTTP URL (including the TCP port number) that points to your DMM appliance. For example: http://dmm.yourdomain.com:8080. To confirm that the URL is reachable, click Check.

Table 4-1 Elements for Configuring Global Variables (continued)

Element	Description
Upload URL	The HTTP URL (including the TCP port number) that points to the subdirectory where you keep uploaded binary files temporarily on your DMM appliance. For example: http://dmm.yourdomain.com:8080/DMM/temp/video_portal/asset. To confirm that the URL is reachable, click Check.
Upload Path on Local File System	The complete file system pathname (starting from the root directory) that points to the subdirectory where you keep uploaded binary files temporarily on your DMM appliance. For example: /dm2/apache-tomcat/webapps/DMM/temp/video_portal/asset. To confirm that the path exists, click Check .
Preview URL	The HTTP URL (including the TCP port number) that points to the private staging area on your DMM appliance. To confirm that the URL is reachable, click Check .
Preview Path on Local File System	The complete file system pathname (starting from the root directory) that points to the staging area subdirectory on your DMM appliance. For example: /dm2/apache-tomcat/webapps/DMM/temp/video_portal. To confirm that the path exists, click Check.

Viewing Environment Parameters

When you select **Setup > DMM**, the bottom of the page shows environment parameters for the DMM appliance. Table 4-2 describes the parameters.

Table 4-2 Environment Parameters

Parameter	Description
DMM version	Shows the release number for the DMM-VPM version that is installed on your DMM appliance.
Java	Shows the release number for the Java version that installed on your client system.
Database	Shows the release number for the MySQL version that is installed on your DMM appliance.
Tomcat uptime	Shows the total number of days, hours, and minutes since the most recent time that you restarted your DMM appliance.

Configuring the Settings to Use a Video Portal

You can configure settings to use DMM-VPM with a Video Portal appliance.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- **Step 2** Select **Setup > Video Portal**.
- **Step 3** Enter the values that meet your requirements, as described in Table 4-3 on page 4-4.
- Step 4 To save and commit your entries, click Save Portal Parameters.

or

To discard your entries, click Cancel.

DMM-VPM Use Settings

Table 4-2 describes the elements and settings for configuring DMM-VPM to use a Video Portal appliance.

Table 4-3 Elements for Configuring DMM-VPM to Use a Video Portal

Element	Description
Video Portal Login Prompt	The text that users see when they log in to the Video Portal; there is a 25-character limit.
Video Portal FQDN	Exactly the same DNS-resolvable hostname ¹ for your Video Portal appliance that you defined on your:
	• DNS server.
	Video Portal appliance, in its version of AAI.
Video Portal Instance	\wedge
	You must not use Cisco as the instance name. We reserve and use the Cisco name for other purposes. All of your deployments will fail if you use Cisco as the instance name.
	Exactly the same instance name that you defined for your Video Portal appliance in its version of AAI.
Video Portal Password	The password that is currently in effect for the administrative account in AAI on your Video Portal appliance. Any time that you change that password on your Video Portal appliance, you must also enter exactly the same updated password value here.
Video Portal Web Server Base	The top-level HTTP URL of the server on which your audience can find your Video Portal. To confirm that the URL is reachable, click Check .
The URL to the live	The HTTP URL that points directly to your public Video Portal.
video portal	If you click Check, you see one of these messages:
	• "URL is blank."—You have not entered any URL.
	• "Server was not found."—You entered an invalid URL.
	• "URL exists."—The URL that you entered points correctly to a Video Portal.
Default Audio Only Image	The SWF or non-progressive JPEG image to show as the thumbnail for every audio file. You must specify a file that is 100 pixels wide and 75 pixels high (or uses any proportional multiple of those dimensions, such as 400 x 300). The file must be in the same directory that you specified as the <i>Upload Path on Local File System</i> when you completed the "Configuring Administrative and Network Settings" section on page 4-2.
	Note This option applies to you <i>only if</i> —when you or an administrator used AAI to set up your Video Portal appliance—you selected FLV as the only supported file type and Flash/Sorenson as the only supported format for encoding. For more information, see Task 10 in the "Setting Up and Configuring a Video Portal Appliance" chapter in <i>Appliance Administration Guide for Cisco Digital Media System 5.0</i> on Cisco.com.
Default Preview Image	The SWF or non-progressive JPEG image to show as a placeholder thumbnail image when no other preview image is available for a video file. You must specify a file that is 100 pixels wide and 75 pixels high or use any proportional multiple of those dimensions.

Table 4-3 Elements for Configuring DMM-VPM to Use a Video Portal (continued)

Element	Description
Supported Media Formats	The formats to support. Select any combination of Flash Video, Windows Media, and MPEG4/H.264 (QuickTime).
Media Preferences by Browser	The order in which the Video Portal and embedded video players attempt to play a video.
Video Portal URL with Plugin Detector	The HTTP URL that activates the plugin detector on your Video Portal so that it automatically selects the format to use when it shows media to Video Portal audience members.
Video Portal URLs by Individual Supported Media Formats	The HTTP URL that bypasses the plugin detector on your Video Portal so that it show only one media type to your Video Portal audience members whether or not they have the required plugin to see that media type.
	Ensure that users have installed the correct plugin on their systems; otherwise, they may experience technical difficulty when accessing a video by using this URL.

^{1.} Do not use underscores or any other special characters in hostnames. DNS standards do not support these characters. Use only letters, numerals, and hyphens.

Configuring the Location Settings for Deployments

You can configure the location settings for video deployments. You must deploy files to at least one remote location because you cannot present them to audiences directly from your DMM appliance.



You must enter a deployment location for each file type that you use. You can enter a unique location for each of the different file types, or you can use one location that applies equally to every file type. Any invalid entries will cause deployments to fail.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- **Step 2** Select **Setup > Deployment Locations**.
- **Step 3** Enter the values that meet your requirements, as described in Table 4-4 on page 4-6. Valid file types are the following:
 - Flash Video—Flash (FLV) files to deploy as the Flash Video version of a video offering or to show as a video preview.
 - Windows Media Video
 Windows Media (WMV) files to deploy as the Windows Media version of a video offering.
 - MPEG4/H.264—MPEG-4 (MP4, M4V, MP4V, M4A, or MOV) files to deploy as the Quicktime version of a video offering.
 - **Support**—Any non-video binary files to deploy as supporting images, such as SWF files or non-progressive JPEG files. Any related items that content managers add to a video part for download are deployed to this support location. Also, related files that will be downloaded are deployed and stored in this support location.
- Step 4 To save and commit your entries, click Save Deployment Locations

or

To discard your entries, click Cancel.

Step 5 (**Optional**) To run a deployment now, complete the following steps:

- a. Select Video Portal > Deployments and click Schedule New Deployment.
- **b.** Select the **Video Part 1** check box in the Video Part Selection area.
- **c.** To deploy the pre-loaded content and metadata immediately, select the **Schedule Immediately** check box in the Deployment Time area.
- d. Click Create Deployment.
- **e.** To ensure that the content and metadata deployed appropriately, use another computer on your network to access the Video Portal that you installed.

Deployment Location Settings

Table 4-4 describes the settings and elements for configuring deployment locations.

Table 4-4 Elements for Configuring Deployment Locations

Element	Description
Connection type	The protocol or method for file transfer (the options are FTP, SFTP, and SCP).
	No matter which protocol you use, the connection timeout is 10 seconds on this page and 30 seconds during an actual deployment.
Host address	The DNS-resolvable hostname or routable IP address of the remote server where you will deploy files of the relevant filetype.
Login name	A user account name that has the required privileges to access the remote server.
Login password	The assigned password for the login name that you specified. If you select the SFTP option for deployments to your Video Portal appliance, the password that you enter must be exactly the same as your Video Portal admin password.
Root file directory	The absolute directory path to files that you will deploy. If you click Check , you see one of the following messages:
	• "Field is blank"—You have not entered any path.
	• "File Path Does Not Exist"—You entered an invalid path.
	• "File Path exists"—The path that you entered points correctly to a valid file.
Root URL Path	The absolute URL, where the Video Portal will host and reference your files. If you click Check , you see one of the following messages:
	• "URL is blank" — You have not entered any URL.
	• "Server was not found" — You entered an invalid URL.
	• "URL exists"—The URL that you entered points correctly to a valid file.

Using Features Under the Users Tab

Two types of user authentication that you configure in DMS-Admin: *Embedded authentication* is completely native to DMM while *LDAP authentication* causes DMS to rely on a Microsoft Active Directory server. Alternatively, you can choose no authentication; however, this option disables the requirement that Video Portal and Video Portal Reports user accounts must use authentication. For more information, see the "Managing User Accounts and Authentication Settings" section on page 2-4.

Administrators use the features under the Users tab in DMM-VPM to assign differing levels of access and permissions to users of DMM-VPM, Video Portal Reports, and Video Portal, depending on their roles and responsibilities.

This section includes the following topics:

- Working with User Accounts, page 4-7
- Viewing Your Profile, page 4-8

Working with User Accounts

User accounts are centrally managed in DMS-Admin but assigned roles in DMM-VPM. If you are an Administrator in DMM-VPM, you can assign differing levels of access and permissions for other DMM-VPM users; however, not even an administrator can change his or her own access privileges. Only another administrator can change your access privileges if you are an administrator.



Users must exist in DMS-Admin before you can assign levels of access. For more information, see the "Managing User Accounts and Authentication Settings" section on page 2-4 section.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Select Users > User Accounts.

All active users in DMS-Admin display.

Step 3 Click Edit next to the user to which you want to assign permissions, as described in Table 4-5 on page 4-7.

User Account Settings

Table 4-5 describes the elements for DMM-VPM and Video Portal users.

Table 4-5 Elements for User Accounts

Element	Description
First Name	The given name of the user for this account.
	DMM-VPM greets the user by this name when the user logs in. DMM-VPM also includes this name when it sends approval requests and e-mail notifications.
Last Name	The surname of the user.
	DMM-VPM includes this name when it sends approval requests and e-mail notifications.
Company	The company for the user.

Table 4-5 Elements for User Accounts (continued)

Element	Description
Department	The department association for the user.
Email Address	The e-mail address for the user. DMM-VPM uses this address to send approval requests and notifications.
Phone Number	The phone number for the user.
Login User Name	The assigned username of the user to log in to DMM-VPM, Video Portal, or Video Portal Reports.
Module Access Type	Lists the categories of access that you can assign to a user account. The access types are the following:
	• Administrator—Manages users, passwords, and permissions.
	• Category Manager—Creates, edits, or disables categories.
	• Approver—Approves content items.
	• Video Portal User—Views content on the Video Portal.
	• Author—Creates, edits, or disables programs, videos, video parts, and lineups.
	• Designer —Edits aspects of the Video Portal graphical user interface for audiences, including its templates, logos, background images, and links.
	• Configuration Manager—Accesses the DMM application configuration.
	Video Portal Reports User—Uses Video Portal Reports in DMM-VPM.

Viewing Your Profile

Profile information in DMM-VPM is not editable. You can edit this information only in DMS-Admin if you have Administrator or Configuration Manager permissions.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Select Users > My Profile.

The My Profile page displays information that you see when you work with user accounts, as described in Table 4-5 on page 4-7. Depending on your access level, you may not see the Module Access Type area.

Using Features Under the Video Portal Tab

Administrators and authors user the options under the Video Portal tab to create, modify or disable programs, videos, video parts and lineups.

This section contains these topics:

- Working with Programs, Videos and Video Parts, page 4-9
- Approving or Denying the Request to Approve a Video Part or Playlist, page 4-18
- Understanding the Live Event Module, page 4-18
- Understanding and Working with Synchronized Slides, page 4-18

- Understanding and Working with Audience Questions, page 4-21
- Creating and Working with Playlists, page 4-24
- Creating and Working with Content Categories, page 4-26
- Creating and Working with Tickers, page 4-31
- Creating and Working with Interstitials, page 4-28
- Creating and Working with Interstitial Sequences, page 4-30
- Customizing Your Video Portal, page 4-33
- Configuring the Settings to Manage Deployments, page 4-36



To understand the features of the Video Portal Reports option, which is also available under the Video Portal tab, see Appendix A, "Using Video Portal Reports." You must have Video Portal Reports User permissions to see this option.

Working with Programs, Videos and Video Parts

You can create programs and populate them with videos and video parts and then deliver the programs to your audiences live or on demand.

Remember the following information when you work with programs, videos, and video parts:

Requirements for Content Objects

- Programs, videos, and video parts are all *content objects*. You can create, edit, disable, and delete content objects at any time, according to your requirements.
- Although a program can contain multiple videos, you cannot add any video to more than one program.
- Each program that you create must contain at least one video before you can show it to any audience.
- Each video that you create must contain at least one video part before you can show it to any audience.

Approvals for Video Parts

You can configure DMM-VPM to track approvals for video parts. Content authors can request approval for video parts; then, a designated approver can approve or deny the requests. A designated approver is someone whose DMM-VPM user type is Approver. Not even a designated approver can approve his or her own requests. Approval and denial have *no effect* on whether a video part can be deployed. Therefore, the approval process workflow does not help you to enforce any security policy; instead, it helps your organization to formalize communication. For information about user accounts and permissions, see the "Using Features Under the Users Tab" section on page 4-7

Western European Font Support

The Video Portal can display Western European language fonts that are included in the ISO 8859-1 standard when content authors use supported language versions of their browsers, operating systems, and keyboards to enter information about videos in DMM-VPM. The information that content authors provide displays to Video Portal viewers in the language in which it was entered regardless of the language settings of their browsers. Video Portal navigational elements display in English, and Video Portal users cannot search for videos that include non-English characters in titles and descriptions.

Closed Captioning

Closed captioning enables you to display closed captioning text that is embedded in a Windows Media stream to Video Portal viewers.

- Closed captioning for VoDs—This option requires that you manually or use software tools to transcribe the audio track; synchronize the transcription with the video; and create a special SAMI file before you publish the VoD and deploy it to the Video Portal.
- Closed captioning for DME live events—This option requires that you edit the encoder profile on the DME to enable encoding of closed caption text before the event; see the documentation that came with your encoder for more information. Then, during the event, you need a stenographer-type system to provide the text and a closed caption multiplexer to insert the text into the analog video signal.

When you provide closed captioning, Video Portal viewers see a closed captioning icon that they can click to display text. For more information, see the *User Guide for Cisco Video Portal 5.0*.

To work with programs, videos, and video parts, complete the following procedure:

Step 1 Select Video Portal from the untitled list at the top far-right of any page, and then select Video Portal > Programs.

On the Programs page, you can toggle between two tables that are mostly very similar and that both show a list of DMM-VPM programs. You can move programs from one table to the other.

- **Step 2** Do one of the following:
 - Click **Active** to see in the Active table a list of all the programs that are available to show to your audience. These programs are active in the sense that you have not disabled them. If you have not created any programs or if you archived every program, the table is empty.
 - Click **Archive** to see in the Archive table a list of all the programs that you have disabled temporarily. These programs are disabled in the sense that they are not available for your audience to find or see and you cannot add them to playlists. You might choose eventually to restore or delete these programs.
- Step 3 Enter the values that meet your requirements, as described in Table 4-6 on page 4-10.
- Step 4 Click Save.

Content Object Settings

Table 4-6 describes the elements and settings that you use to configure the following content objects: programs, videos, and video parts.

Table 4-6 Elements for Configuring Content Objects

Element	Description
Add New {Program Video Video Part}	Shows the Add New {Program Video Video Part} page.
Archive Selected	Moves the content objects that you selected from the Active table to the Archive table. Note If you archive a program, the videos and video parts within it remain active. You can deploy them in a playlist, and your audiences can use a keyword search to find them on your Video Portal.

Table 4-6 Elements for Configuring Content Objects (continued)

Element	Description
Delete Selected	Caution If you delete a program, the actual effect of the deletion differs if the program is part of a playlist or is not. If you delete a program that is part of an active and deployed playlist, your audiences can still find, see, and use the program, its videos, and its video parts on your Video Portal. However, if you have not included the program in any playlist, DMM-VPM immediately deletes the program, its videos, and its video parts. They are not available for any purpose in DMM-VPM or on your Video Portal, and you cannot undo the deletion. However, VOD files are available through direct portal links until you delete the files from their content storage locations. Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the disabled or archived content objects that you selected.
Activate Selected	Moves the content objects that you selected from the Archive table to the Active table.
Select a Program Provider to Filter On	Lists the program providers. Select a provider name to filter the list of programs and display only the programs the are associated with that provider.

Table 4-6 Elements for Configuring Content Objects (continued)

Element Description columns **Untitled check box**—One of the following: • Marks a content object that you will disable, if selected, in the Active table. Marks a content object that you disabled and that you will restore or delete, if selected, in the Archive table. Name — Shows the name or title for the content object that the corresponding row describes, shows the Modify () button, and sometimes shows the Preview () button. Values in the name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Modify button, DMM-VPM loads a page where you can edit content object metadata, such as the title and description for a program. **Provider**—*Programs only.* Shows the provider who produced the program that one row describes, as specified in the program metadata. **Last Modified**—Shows the date on which the content object was last edited. Active Videos—Programs only. Shows the Active Videos (3) button and the Add New Video (button. If you click the Active Videos button, DMM-VPM loads a page where you can add videos to the program that the corresponding row describes or mark videos to remove from that program. If you click Add New Video, DMM-VPM loads the page where you can enter metadata for a new video. Active Categories—*Programs only*. Shows the Active Categories page for the program that the corresponding row describes. From the Active Categories page, you can select and add categories to associate with the program, or you can select and delete category associations from the program. Active Video Parts — Videos only. Shows the Active Video Parts (🗐) button and the Add New Video Part (1) button. If you click the Active Video Parts button, DMM-VPM loads a page where you can add video parts to the video that the corresponding row describes or mark video parts to remove from the video. **Release Date**—*Video Parts only.* Shows the release date. **Length**—Video Parts only. Shows the playback duration of the video part in days, hours, minutes and seconds. Active Related Items — Video Parts only. Shows the Active Related Items page for the video part that the corresponding row describes. If you click the Active Related Items button, DMM-VPM loads a page where you can add items, such as links to web sites or files, to the video part that the corresponding row describes or mark related items to remove from the video part. **Approval Status**—Video Parts only. To request an approval for the video part that the corresponding row describes, click **Request Approval**, select an approver from the list in the popup window, and then click **Request Approval** and **Close**. For information about approvals, see the "Approvals for Video Parts" section on page 4-9.

Table 4-6 Elements for Configuring Content Objects (continued)

Element	Description
{Add New Program Modify Program}	The metadata attributes that define the program. Enter or select the metadata after you click Add New Program or after you click the Edit button for a program. To save your work, click Save .
	Program Name —The title for the program that your audiences see on the Video Portal when they click the Program Guide tab. Only the first 25 characters that you enter will be visible on the Video Portal.
	Program Description —The description that your audiences see on the Program Guide tab, next to the corresponding program name. In addition, this description is visible in the Video Portal "More Info" text for any video that this program contains.
	Program Status —If you select Active, the program is visible to your audiences after you populate, save, and deploy it. If you select Archive, the program is not visible to your audiences.
	Program Provider —The name of your company, organization, or department. You use this information to manage and administer content; your audiences do not see it. The default provider name is whichever one you chose under the Setup tab.
	Program Categories—Your audiences can use the program guide or search feature on your Video Portal to find this program in the categories that you select. You can add or remove category associations at any time. To understand categories, see the "Creating and Working with Content Categories" section on page 4-26.
{Add New Video Modify Video}	The metadata attributes that define the video. Enter or select the metadata after you click Add New Video or after you click the Edit button for a video. To save your work, click Save .
	Video Title —The title for this video, which your audiences see on your Video Portal when they use its playlist, program guide, or search features. Only the first 33 characters are used.
	Video Status—If you select Active, you can add the video to a program that you create. If you select Inactive, you cannot add the video to any program unless you reactivate it.
	Video Description—A description for your reference. Your audiences do not see it.
{Add New Video Part Modify Video Part}	Physical and logical attributes of the file that you use as a video part. Enter or select the attributes after you click Add New Video Part or after you click the Edit button for a video part.
	Show Direct Portal Link—Shows the Video Portal URL for this video part.
	When you archive or delete a video part, the direct portal link is removed from the Video Portal listing but continues to access the VOD file from the original deployment location. We recommend that you remove the file from its content storage location to make it inaccessible.
	Video Part Description —The description that your audiences see on your Video Portal in its preview pane and in the "More Info" text under its Overview tab. Do not enter more than 72 lines of text or more than 48 characters per line. This element is visible only when you are adding or editing a video part.

Table 4-6 Elements for Configuring Content Objects (continued)

Element Description Type of Video—If VoD, the source is a file; if DME Live Event or Non-DME Live Event, the source is an encoder. Note The Non-DME Live Event option enables you to publish a live stream URL to the Video Portal and control event visibility, but you cannot control the encoder. The VoD option is available for non-DME live events, but you cannot control event visibility on the Video Portal by using this option. {Flash | Windows Media | OuickTime¹} Video (video or audio) — Shows a filename that you enter or that DMM-VPM enters automatically after you click the link to upload a new VoD file. **Restrictions**: The maximum supported file size for uploads is 2GB². If you enter the filename manually for a VoD, special requirements apply^{3, 4, 5} to each supported file type. DMM-VPM saves uploaded VoD files to the deployment location that you specified under the Setup tab. The file formats that you see are exactly the ones that you selected to support when you set up vour Video Portal. You must enter or upload one file apiece for each format that your Video Portal supports. We recommend that you encode all files to be 400 pixels wide and 300 pixels high. Closed captioning requires Windows Media. For more information, see the "Closed Captioning" section on page 4-10. If you selected the DME Live Event option⁶ as the video type, you see the following additional options: • Encoder—Lists all of the encoders that you have configured DMM-VPM to use. Select the encoder that is the source of the live stream. • Use Default Streaming Settings—Use the DMM-VPM settings exactly as they are. Advanced Settings — Configure this stream to use settings that differ from the default. Select the encoding or transcoding format⁷, publishing method (push or pull)⁸, video input method⁹, audio input method¹⁰, video input standard¹¹, whether to save a copy of the live stream as a file for later viewing as a VoD—and possibly also the DME 2000 input channel to use (🗇 🖰 🖺 🧸 If you selected the Non-DME Live Event option as the video type, you see the following additional options: • Event Status—Shows Pending, Live, or Stopped, corresponding to whether Video Portal access to the event is turned on or off. {Start | Stop | Re-Start} Live Event—Enables you to turn on and turn off Video Portal access to the event. Play Order in Video — Shows when the video will play this video part, relative to the playback sequence of all the video parts in the video.

Table 4-6 Elements for Configuring Content Objects (continued)

Element	Description
	{Release End of Life} Date/Time—Click to pick the date, select options for the hour and minute, and then select AM or PM. The release date is by default today.
	• DME Live Event and Non-DME Live Event: If you are setting up a live event, you must explicitly enter the End of Life Date/Time value. DMM-VPM does not obtain it automatically from the Release Date/Time value. If you do not enter an End of Life Date/Time value, the event will not be visible in the Encoder table; you will not be able to start the event; and the event will not be visible on the Video Portal.
	To modify the release date for a DME Live Event, see the "Modifying the Scheduled Times for DME Live Events" section on page 4-51.
	• VoD: The EoL/Date field is a placeholder to denote in DMM-VPM when content should be archived.
	Use the Archive function for the video part page in the DMM-VPM to specify that you want to remove video from the Video Portal. Then, create a new deployment to remove it.
	Duration—Describes the playback duration of the video part in hours, minutes and seconds. Use the format hh: mm: ss. If you enter only seconds, DMM-VPM corrects your entry.
	• DME Live Event and Non-DME Live Event: You can use the scheduled length of a live event as the duration of its corresponding stream. The duration that you enter does not stop your Video Portal from delivering the whole stream if the actual event runs past its scheduled time to stop; the stream continues to play in your Video Portal until you stop it or it is no longer available.
	• VoD: You must manually enter the duration for Windows Media and QuickTime video files, but this information is provided automatically for Flash video files.

Table 4-6 Elements for Configuring Content Objects (continued)

Element Description **Access restrictions**—Enables content-level viewing security, so the Video Portal displays only the content that users can view. Note Authentication must be enabled in DMS-Admin to enforce access restrictions. • None (Viewable to all user groups)—Specifies that all Video Portal users can see information about the video part and watch it. • Viewable only to select groups— Specifies that only user groups with permissions can see information about the video part and watch it. Click **Choose Group** to display the groups that the administrator created or to create or edit a group. For more information, see the "Managing User Accounts and Authentication Settings" section on page 2-4 section. Preview Content File URL—The location of a SWF file or nonprogressive JPEG¹² file (100 pixels wide and 75 pixels high, or any proportionate multiple of those dimensions) that your Video Portal should show as the preview image for this video part. To select and upload a local file, click Upload new preview video file. If you use a SWF file, we recommended that you program it to pause after 10 seconds and not loop. {Pre-Event | Post-Event} JPEG URL—Upload the JPEG image 12 to show {before | after} the live Enable Questions from the Audience—Click {On | Off} to enable or disable support for questions. For more information, see the "Understanding the Live Event Module" section on page 4-18. Slide Show—Select and upload the SWF file or ZIP¹³ archive of slides to show next to the video stream. Preview Description—A text description that your Video Portal shows to your audiences but truncates after 160 characters. If you do not enter a preview description, your Video Portal shows the first 160 characters from the video part description instead. **Keywords**—Descriptive words to make this video part searchable on your Video Portal¹⁴. Embedded Video—Provides the necessary HTML code to embed and display the live or on-demand video inside a custom website without the Video Portal interface. Embedded video requires an active Video Portal because the code checks the encoded video type and opens the correct supporting decoder software before displaying the video and basic playback controls to viewers. However, because viewers to do not log in to the Video Portal, usage statistics for this video are not available in Video Portal Reports. Because the code provides direct access to the video, do not assign access restrictions in the Video Portal. We recommend that you manage access by implementing security measures on the website or through the application that publishes the code. Tip Video Portal users can also share videos by sending direct Video Portal URLs to other users, who can watch the videos if they have permissions to access. For information about URL

sharing, see the User Guide for Cisco Video Portal 5.0 on Cisco.com.

Table 4-6 Elements for Configuring Content Objects (continued)

Element	Description	
{Add New Related Item Modify Related Item}	Links to web sites, video parts in other programs on your Video Portal, or files for your audience to download and use. Your audience sees the related items for a video part on your Video Portal if they click More Info during playback.	
	Click Add New Related Item , select the type of link, and enter the metadata. Alternatively, click the Edit button for a related item, and modify the metadata. To save your work, click Save .	
	Download—Provide files for users to download.	
	Note For proper download, video files must be inside a ZIP archive.	
	Web Link in New Default Browser—Provide a URL that opens in a standard browser.	
	Web Link in New Custom Browser—Provide a URL that opens in a browser you customize in DMM-VPM.	
	Related Video—Provide a link to another video part.	

- 1. We use the terms MPEG-4, QuickTime, and H.264 interchangeably in DMM-VPM. These formats coexist.
- 2. You cannot upload any video part that is larger than 2GB. To work around this limitation, post the file to a public webserver, and enter the corresponding HTTP URL instead of entering a filename.
- 3. You must use HTTP to point to any remote Flash file that you will upload. Flash files must use {FLV | FLA} for their filename extension. You cannot select Flash as the media format for a live event because Cisco Video Portal does not support Flash video streaming.
- 4. You must use {MMS | RTSP} to point to any remote Windows Media file that you will upload. Windows Media files must use {WMV | WMA | ASF} for their filename extension.
- 5. You must use {HTTP | RTSP} to point to any remote QuickTime (or H.264) file that you will upload. These files must use {MOV | MP4 | M4V | MP4V | M4A} for their filename extension.
- 6. When you point to a live stream, a filename is not necessary. In most cases, you point instead to a directory on the streaming server. If you are unsure about the configuration that your organization uses, ask your systems administrator for details. Streaming options are available for Windows Media, but not for Flash video.
- 7. Encoding format options are 1.5M, 350K, 50K, and 768K. Transcoding format options are 1.5M, 2M, 350K, 50K, and 768K.
- 8. See Managing Push Configurations, page 4-45.
- 9. One of these:
 - Composite/RCA
 - S-Video
- 10. One of these:
 - Unbalanced (RCA)
 - XLR Balanced
- 11. One of these:
 - NTSC_M (US)
 - NTSC_M_J (Japan)
 - PAL_B
 - PAL_D
 - PAL_H
 - PAL_I
 - SECAM_B
 - SECAM_D
 - SECAM_GSECAM_H
 - SECAM_K
 - SECAM_K1
 - SECAM_L
 - SECAM_L1
- 12. Your Video Portal cannot display progressive JPEG images.
- 13. The ability to upload a slide presentation to a VoD is used for VoDs that were created from a live events. The ZIP archive that you upload must contain JPEG files that you exported from PowerPoint (or similar software), whose sequence of filenames is numbered correctly to preserve their natural order. See the "Generating and Importing the Slides to Be Synchronized" section on page 4-19.
- 14. There is no reason to enter commas, semicolons, or other word separators; your Video Portal ignores them if you do.

Approving or Denying the Request to Approve a Video Part or Playlist

After anyone submits a video part or playlist approval request, DMM-VPM sends e-mail to the designated approver. The e-mail message contains a link to preview and approve or deny the video part. For information about approvals, see the "Approvals for Video Parts" section on page 4-9 section on page 4-9.

If you receive the message, do the following:

- Step 1 Click the e-mail link to preview the video part or playlist and, when your browser loads the Approval Request page, click **Preview Now**.
- **Step 2** Watch the video part, enter comments if you have any, and use the controls at the bottom of the window to approve or deny the request.

DMM-VPM is updated immediately and notifies the requestor through e-mail that you approved or denied the request.

Step 3 To return to DMM-VPM, click Close and Return.

Understanding the Live Event Module

The Live Event Module is a separately licensed add-on to DMM-VPM that helps you to do the following:

- Synchronize presentation slides with live audio and video streams that you show on your
 Video Portal. See the "Understanding and Working with Synchronized Slides" section on page 4-18.
- Receive and work with text-based questions that remote audience members submit to you while they are viewing live events on your Video Portal. See the "Understanding and Working with Audience Questions" section on page 4-21.



Every time that you will host a live event, you must start the DME remotely from the DMM-VPM encoder dashboard. If you use any physical control on the DME chassis to start the encoder, your live events will not be available to your Video Portal audience members.

Understanding and Working with Synchronized Slides

If you have purchased a license to use the Live Event Module, the moderators at your live events can synchronize slides with their live event streams. The slide synchronization option requires that you use the Windows Media format and that you use either a DME 1000 or DME 2000 as the encoder. Windows Media and the DMEs use types of APIs that are not currently available with other encoding formats to support tight synchronization between slides and streams of audio and video.

Directory Location for Slides

For slides that are JPG files, unless a **/slides** subdirectory exists within the root directory that you specified in the Support area on the Deployment Locations page, deployments will fail for your synchronized slides. DMM-VPM creates the **/slides** subdirectory for you automatically if you use forward slashes (/) in the Root File Directory field but does not create the directory if you use back

slashes (\). If you used back slashes, you must log in to the server that you specified and create the required subdirectory manually. For information about the Deployment Locations page, see the "Configuring the Location Settings for Deployments" section on page 4-5.

For slides that are contained in a SWF file, slides are copied over to the Video Portal appliance in the <code>/appliance_name/dms/video_portal/assets/</code> directory to avoid cross-domain access issues that could prevent the SWF slides from working. Also, this setup prevents the SWF file from being overwritten during an upgrade.

For more information, see the "Generating and Importing the Slides to Be Synchronized" section on page 4-19.

VoDs Files Created From Live Events

If you chose to create a VoD from a live event, you can publish the resultant VoD file after the event is finished. You cannot edit the VoD file with Cisco DMS 5.0 and maintain the slide synchronization commands that were created during the live event because the synchronization data is stored inline with the video data. Therefore, the data is lost if you use third-party tools that create and edit videos, such as Windows Movie Maker, to render and encode the file again.



To edit video duration, you can use a third-party tool that enables you to trim the length of a video clip and transfer the synchronization data to the header, such as Windows Media File Editor.

This section contains the following topics:

- Generating and Importing the Slides to Be Synchronized, page 4-19
- Operating a Slide Show, page 4-21
- What Video Portal Audiences See When You Use Synchronized Slides, page 4-21

Generating and Importing the Slides to Be Synchronized

In most cases, the synchronized slides that you show during live events will be derived from Microsoft PowerPoint presentations that your organization prepared for this purpose. Alternatively, your organization might use similar software from another vendor to develop its presentation slides.

- Best Practices for Creating and Importing Slides, page 4-19
- Creating and Importing a ZIP File for Synchronization, page 4-20
- Creating and Importing a SWF File for Synchronization, page 4-20

Best Practices for Creating and Importing Slides

Creating Slides

There are two ways to create your slides for use with the Live Event Module.

• You can export sequentially numbered JPEG files from a presentation and save those exported images inside a ZIP archive, which you import. One advantage to this method is that it does not require your organization to buy any additional software. However, the exported images might not provide a high-quality viewing experience for your audience members who opt to view the slides in their own resizeable window on the Video Portal. See the "Creating and Importing a ZIP File for Synchronization" section on page 4-20.

• You can use a third-party add-on that converts a presentation into a SWF file, which you can then import. The advantages to using this method are that it generates only a single file to be distributed and offers a potentially higher-quality viewing experience when viewers select the option to open the slides in a new window and re-size this window. See the "Creating and Importing a SWF File for Synchronization" section on page 4-20.

Importing Slides

If you will show synchronized slides during a live event, we recommend that you create the live event and upload the slides for it no later than 30 minutes before the live event should start. This best practice allows sufficient time in most cases for the slides to reach and be cached on all of the web servers and content delivery devices that your organization has configured in support of live streaming.

Creating and Importing a ZIP File for Synchronization

The following procedures assume that PowerPoint is your preferred software.

- **Step 1** After you finish preparing your PowerPoint slide deck, select **File > Save As**.
- **Step 2** From the Save as type list, select **JPEG file Interchange Format** (*.jpg).
- **Step 3** Using a method that your operating system provides for this purpose, create and name a new folder where the exported JPEG versions of your slides should be saved. The name that you enter should not contain any spaces.
- **Step 4** To start exporting your slides, click **OK**.
- **Step 5** When a prompt asks you, "Do you want to export every slide in the presentation or only the current slide?", click **Every Slide**.

PowerPoint then extracts each slide and saves it as a separate JPEG file in the folder that you created and named. Each JPEG file receives an ascending number as its filename.

Step 6 After PowerPoint is finished saving all of the JPEG versions of your slides, compress the folder that contains them so that it is the basis for a new ZIP archive.

Creating and Importing a SWF File for Synchronization

After you finish preparing your PowerPoint slide deck, use a third-party application or a separately purchased PowerPoint plug-in to convert your slides into a single SWF file. Ensure that you remove all intra-slide and slide-to-slide transitions before you convert to a SWF file.

Operating a Slide Show

For most live events, a designated synchronization operator will use one of the two provided consoles to synchronize slides with the actions of the live presenter. When the presenter advances by one slide in a presentation, for example, the synchronization operator uses the synchronization console to do the same. There are two supported ways to synchronize slides.

- **Simple**—The first synchronization method uses a simple, full-screen interface that shows each slide. To change or synchronize a slide, the synchronization operator or presenter presses the right or left arrow keys on a keyboard to move forward or backward through a presentation one slide at a time. This method is ideal for small events or in-studio events where the presenter (not a separate synchronization operator) manages slides.
- Advanced—The second method uses a more advanced view that includes slide selection controls along its right side. By using this method, a synchronization operator or presenter can choose to selectively skip slides and move quickly forward or backward to any slide in the slide deck.

Each time that a slide is synchronized, the Live Event Module inserts a command into the stream:

- If you converted presentation slides into a sequence of numbered JPEG images that you uploaded inside a ZIP archive, the command in the stream instructs your Video Portal to fetch the relevant JPEG file and display it to audience members.
- If you converted presentation slides into a SWF file, the command in the stream instructs your Video Portal to find the relevant section in the SWF file and display it to audience members.

This process ensures that slides are tightly synchronized to streams.

Each time a slide synchronization takes place, the action is noted in the encoder console event window.

What Video Portal Audiences See When You Use Synchronized Slides

When you associate synchronized slides with a live event or a VoD, changes occur automatically in the user interface that Video Portal audience members see. By default, video is displayed on the left and synchronized slides are on the right. Audience members can choose to view slides inside a resizeable popup window, which is useful to them if information on a slide is not easily readable at the default size.

The popup view also provides audience members with an option to review past slides that were already presented. To select a past slide to view at full size, audience members click its thumbnail preview in a scrolling list on the right.

Understanding and Working with Audience Questions

If you have purchased a license to use the Live Event Module, your Video Portal audience members can submit text-based questions during the live events in which you have enabled this feature.

During a live event, audience members who click the Ask Question button on the Video Portal will open a new window where they can enter and submit questions for the presenters. All of the submitted questions appear first in the Question Manager console in DMM-VPM, which your live event moderators can monitor. At selected times during a live event, your moderators can submit prescreened questions to the presenters either in the Presenter console or verbally. The presenters are then able to answer questions from remote audience members during the live event. Submitted questions are not visible to audience members, and audience member names are not associated with their questions or displayed to live event moderators and presenters.

Because the live events that you show on your Video Portal can have thousands of audience members and it might be difficult for just one moderator to prescreen all of the submitted questions, multiple moderators can open and manage multiple instances of the Question Manager console simultaneously. After the event is finished, you can export all of the submitted questions and, if necessary, publish them on a separate server.

Moderators and presenters at live events use the Question Manager console in DMM-VPM to work with questions from Video Portal audience members.

This section contains the following topics:

- Moderating Questions, page 4-22
- Answering Questions, page 4-24

Moderating Questions

If you are a moderator for a live event, you can prescreen questions for the presenters.

Step 1 Select Video Portal from the untitled list at the top far-right of any page.

Step 2 Use your preferred method to open the moderation features:

Me	Method 1		Method 2	
a.	Select Encoders > Encoder Dashboard.	a.	Select Video Portal > Programs.	
b.	In the list of encoders, find and click the icon () in the encoder that your live event	b. c.	Click the Active tab. On the Active Programs page, click the Active	
	will use. DMM-VPM shows ad-hoc streaming controls		Videos () button that corresponds to the relevant program.	
C.	for the encoder that you clicked. Click View Audience Questions.	d.	On the Active Videos page, click the Active Video Parts () button that corresponds to the relevant video.	
		e.	On the Active Video Parts page, click the Modify () button that corresponds to the relevant live event stream.	
		f.	For more information, see the "Working with Programs, Videos and Video Parts" section on page 4-9.	
		g.	Scroll to the bottom of the displayed page, then click Review Audience Questions .	

Step 3 Enter the values that meet your requirements, as described in Table 4-7 on page 4-23.

Settings for Moderating Live Events

Table 4-7 describes the settings for moderating live events.

Table 4-7 Elements for Moderating Live Events

Element	Description
Questions tab	Shows a scrolling list of the questions that audience members have submitted. The list is updated in real time whenever new questions arrive.
	{Show Hide} Filters—Toggle that shows or hides options for configuring and applying text string filters to the list of active questions. There are two filter types:
	• Show Questions—Click On to enable, or click Off to disable, filtering against a text string that you enter. While enabled, the filter constrains the list so that it <i>includes</i> only the questions that contain your text string.
	• Auto-remove Questions—Click On to enable, or click Off to disable, filtering against a text string that you enter. While enabled, the filter constrains the list so that it <i>excludes</i> all questions that contain your text string.
	Note If you enable both of the filters and enter the identical text string for both of them to use, the filters become mutually exclusive. In this case, all questions are moved under the Removed Questions tab. To restore them to the list of active questions, click Removed Questions , and then click Reactivate All .
	Export Questions —Creates a delimited text file that contains all the questions and other data, including timestamps, that are visible in the list of active questions. If you have configured your browser correctly to use helper applications, the file will open automatically in your preferred software for editing spreadsheets.
	Columns—Information about the questions is sorted into the following columns:
	• Question—The literal text of the question, exactly as it was submitted.
	• Time Asked—The date, hour, minute, and second when the question was submitted.
	• Actions—Buttons for moderating the corresponding question. You can highlight it, send it under the Presenter View tab, or move it under the Removed Questions tab.
Removed Questions tab	Shows a scrolling list of the questions that you have hidden, at least temporarily, from the presenter. The list is updated as you add questions to it manually and as your filters remove questions automatically from the list of active questions under the Questions tab.
	Reactivate All —Moves all questions back to the list of active questions under the Questions tab.
	Columns—Information about the questions is sorted into the following columns:
	• Question—The literal text of the question, exactly as it was submitted.
	• Time Asked—The date, hour, minute, and second when the question was submitted.
	• Actions—Buttons for moderating the corresponding question. You can highlight it, send it under the Presenter View tab, or move it under the Removed Questions tab.

Answering Questions

If you are the presenter at a live event, you can see and answer the questions that your moderator has prescreened for you.



The moderator or another member of the stage crew at your live event might already have opened the Q&A Administration window for you where you can see the list of questions that await your answer. Otherwise, if no one did this for you already, complete Step 1 through Step 2c in the "Moderating Questions" procedure on page 4-22; then, click the **Presenter's View** tab.

Under the Presenter's View tab, you will see a list of the questions that the moderator has screened and edited for you to answer. The list is updated whenever your moderator adds a question to it manually. Information about the questions is sorted into the following columns:

- **Question**—The literal text of the question, exactly as it was submitted.
- **Time Asked**—The date, hour, minute, and second when the question was submitted.
- Actions—A button to move the corresponding question under the Removed Questions tab.

Creating and Working with Playlists



Each playlist must contain at least one video part before you can show it to any audience.

DMM-VPM can help you to emphasize particular content offerings by showing key videos on your Video Portal under its Featured Playlist tab.

You can also configure DMM-VPM to track approvals for playlists. The approval process workflow does not help you to enforce any security policy; instead, it helps your organization to formalize communication.

Content authors can request approval for playlists; then, a designated approver can approve or deny the requests. A designated approver is someone whose DMM-VPM user type is Approver. Not even a designated approver can approve his or her own requests. Approval and denial have *no effect* on whether a playlist can be deployed. For information about responding to requests for approval, see the "Approving or Denying the Request to Approve a Video Part or Playlist" section on page 4-18.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Select Video Portal > Playlists.

On the Playlists page, you can toggle between two tables that are mostly very similar and that both show a list of DMM-VPM playlists. You can move playlists from one table to the other.

- **Step 3** Do one of the following:
 - Click **Active** to see in the Active table a list of all the playlists that are available to show to your audience. These playlists are active in the sense that you have not disabled them. If you have not created any playlists or if you archived every playlist, the table is empty.
 - Click **Archive** to see in the Archive table a list of all the playlists that you have disabled temporarily. These playlists are disabled in the sense that they are not available for your audience to find or see. You might choose eventually to restore or delete these playlists.
- **Step 4** Enter the values that meet your requirements, as described in Table 4-8 on page 4-25.

Step 5 Click Save.

Settings for Playlists

Table 4-8 describes the elements and settings for configuring playlists.

Table 4-8 Elements for Configuring Playlists

Element	Description
Add New Playlist	Shows the Add New Playlist page.
Archive Selected	Moves from the Active table to the Archive table the playlists that you selected.
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived playlist that you selected.
Activate Selected	Moves from the Archive table to the Active table the playlists that you selected.
columns	Untitled check box—One of the following:
	Marks a playlist that you will disable, if selected in the Active table.
	• Marks a playlist that you disabled and that you will restore or delete, if selected in the Archive table.
	Name — The title of the playlist that the corresponding row describes, the Edit () button, and the Preview () button. Values in the name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Edit button, DMM-VPM loads a page where you can edit metadata, such as the title and description, for the playlist that the corresponding row describes. If you click the Preview button, your Video Portal shows to you the playlist that the corresponding row describes.
	Publish Dates —The range of dates when which the playlist is valid between the release date and the end of life date.
	Last Modified—The date on which the content object was last edited.
	Active Video Parts—Shows the Active Video Parts () button and the Add New Video Part () button. If you click the Active Video Parts button, DMM-VPM loads a page where you can add video parts to the playlist that the corresponding row describes or mark video parts to remove from the playlist.
	Current Status —Describes the approval status and helps you to request playlist approval from a DMM-VPM user with approver permissions. To request approval for the playlist that the corresponding row describes, click Request Approval , select an approver from the list in the popup window, and then click Request Approval and Close .
	Deployment Choice —Says whether the playlist that the corresponding row describes is the default playlist for deployments.

Table 4-8 Elements for Configuring Playlists (continued)

Element	Description
{Add New Playlist Modify Playlist}	Metadata attributes that define the playlist. Enter or select the metadata after you click Add New Playlist or after you click the Edit button for a playlist.
	Name—The title for this playlist.
	Status —Active or Inactive. If you select Active, the playlist is visible to your audiences after you populate, save, and deploy it. If you select Inactive, the playlist is not visible to your audiences. The default is Active.
	Description —Enter a description that is meaningful to you. The description is optional and is only for your reference.
	Make this lineup default choice for deployments?—Yes or No. To use this playlist by default in every deployment, select Yes. Otherwise, select No.
	Release Date—This date is optional and is only for your reference.
	End of Life Date—This date is optional and is only for your reference.
{Add New Video Part Modify Video Part}	Select a video part to add in the playlist that the corresponding row describes. To save your work, click Save .
	Video Part Link—The title of the video part that you selected. DMM-VPM enters the title automatically after you select the video part.
	Select Video Part—Opens or reopens a popup window where you can select a video part to add to the playlist. Select a program from the Program list, then select a video part from the Video list. The popup window then closes automatically. If you select the wrong video part, try again.
	Play Order Position —Select a playlist position for the video part, relative to the position of other video parts in the playlist.
	Status—Active or Inactive. The default is Active.

Creating and Working with Content Categories

You can categorize programs according to characteristics that they have in common, such as their topic, subject matter, target audience, featured executive, or business function. Your audiences use corresponding categories on your Video Portal to find or browse content. The videos and video parts in a program inherit their category associations automatically.

The program guide on your Video Portal describes only the programs that you have categorized. If you deploy a program but do not associate it with any categories, it is not visible in the program guide. In this case, your audiences must either perform a keyword search or use the absolute URL to find and see a video that the program contains. Therefore, to improve the user experience for your audiences, we recommend that you associate each program with at least one category.

To create and manage categories and to associate programs with them, use the Categories page.

Step 1 Select Video Portal from the untitled list at the top far-right of any page, then select Video Portal > Categories.

On the Categories page, you can toggle between two tables that are mostly very similar and that both show a list of DMM-VPM content categories. You can move categories from one table to the other.

Step 2 Do one of the following:

- Click **Active** to see in the Active table a list of all the categories that are available to associate with content objects and show to your audience. These categories are active in the sense that you have not disabled them. If you have not created any categories or if you archived every category, the table is empty.
- Click **Archive** to see in the Archive table a list of all the categories that you have disabled temporarily. These categories are disabled in the sense that they are not available for your audience to find or see and you cannot associate them with any content objects. You might choose eventually to restore or delete these categories.

Step 3 Enter the values that meet your requirements, as described in Table 4-9 on page 4-27.

Category Settings

Table 4-9 describes the elements and settings that you configure for categories.

Table 4-9 Elements for Configuring Categories

	Description
Element	
Add New Category	Shows the Add New Category page.
Archive Selected	Moves from the Active table to the Archive table the categories that you selected.
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived category that you selected.
Activate Selected	Moves from the Archive table to the Active table the categories that you selected.
columns	Untitled check box—One of the following:
	Marks a category that you will disable, if selected in the Active table.
	• Marks a category that you disabled and that you will restore or delete, if selected in the Archive table.
	Name—The name of the category that the corresponding row describes and the Modify () button. Values in the Name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Edit button, DMM-VPM loads a page where you can edit metadata, such as the name and description, for the category that the corresponding row describes.
	Last Modified—The date and time when the category was last edited.
	Date Added—The date and time when the category was created.
	# of Programs—Shows the Active Associated Programs () button. If you click the button, DMM-VPM loads a page where you can associate programs with the category that the corresponding row describes or mark programs to disassociate from the category.

Table 4-9 Elements for Configuring Categories (continued)

	Description
Element	
{Add New Category Modify Category}	Metadata attributes that define the category. Enter or select the metadata after you click Add New Category or after you click the Edit button for a category. To save your work, click Save .
	Category Name—The name for this category. Your audiences see this category name on your Video Portal when they use its the Program Guide tab to browser by category.
	Category Status—Active or Inactive. If you select Active, the category is visible to your audiences and you can associate programs with it. If you select Inactive, the category is not visible to your audiences, and you cannot associate programs with it. The default is Active.
	Associated Programs—Lists all programs, so that you can select any of them to associate with the category or deselect any of them to disassociate from the category. You must associate each category with at least one program, but there is no upper limit to the number of programs that you can associate with any category. You can add or remove category associations at any time.
	Category Description —Enter a description that is meaningful to you. The description is optional and is only for your reference.

Creating and Working with Interstitials

In DMM-VPM, an interstitial is a short segment that your Video Portal shows when you have not scheduled anything else to show. To create a new interstitial, follow these steps:

- Step 1 Select Video Portal from the untitled list at the top far-right of any page.
- **Step 2** Select **Video Portal > Interstitials**.

On the Interstitials page, you can toggle between two tables that are mostly very similar and that both show a list of DMM-VPM interstitials. You can move interstitials from one table to the other.

- **Step 3** Do one of the following:
 - Click **Active** to see in the Active table a list of all the interstitials that are available. These interstitials are active in the sense that you have not disabled them. If you have not created any interstitials or if you archived every interstitial, the table is empty.
 - Click **Archive** to see in the Archive table a list of all the interstitials that you have disabled temporarily. These interstitials are disabled in the sense that your audience will not see them. You might choose eventually to restore or delete these interstitials.
- **Step 4** Enter the values that meet your requirements, as described in Table 4-10 on page 4-29.
- Step 5 Click Save.

Interstitial Settings

Table 4-10 describes the elements and settings for configuring interstitials.

Table 4-10 Elements for Configuring Interstitials

Element	Description
Add New Category	Shows the Add New Interstitial page.
Archive Selected	Moves from the Active table to the Archive table the interstitials that you selected.
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived interstitial that you selected.
Activate Selected	Moves from the Archive table to the Active table the interstitials that you selected.
columns	Untitled check box—One of the following:
	• Marks an interstitial that you will disable, if selected in the Active table.
	• Marks an interstitial that you disabled and that you will restore or delete, if selected in the Archive table.
	Name—The Modify (
	Length—The number of seconds that the video part will play until it stops.
{Add New Interstitial Modify Interstitial}	Physical and logical attributes of the interstitial. Enter or select the attributes after you click Add New Interstitial or after you click the Edit button for an interstitial. To save your work, click Save .
	Name—The name for this interstitial. Enter a maximum of 50 characters.
	File URL —The full path and name of the file to use as an interstitial, after you a upload the file but before you deploy it. After you deploy the interstitial, this value is changed automatically to show the URL for deployment.
	Upload new Interstitial graphical media file —Uploads a SWF or nonprogressive JPEG file that is 400 pixels wide and 120 pixels high. This file acts like a button; when your audiences click it, your Video Portal shows to them the click-through segment that you specify.
	Click Through Segment—To select the video part that your Video Portal should show to someone who clicks the interstitial, click Select a Video Part.
	Play Duration—The number of seconds that the video part should play until it stops.
	Description —Enter a description that is meaningful to you. The description is optional and is only for your reference.
	Status —Active or Inactive. If you select Active, your audiences see the interstitial. If you select Inactive, the category is not visible to your audiences, and you cannot associate programs with it. The default is Active.

Creating and Working with Interstitial Sequences

In DMM-VPM, an interstitial sequence is an ordered list of interstitials that your Video Portal should play in order when you have not scheduled it to show anything else. To create a new interstitial sequence:

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page,
- **Step 2** Select **Video Portal > Interstitial Sequences**.

On the Interstitial Sequences page, you can toggle between two tables that are mostly very similar and that both show a list of sequences. You can move sequences from one table to the other.

- **Step 3** Do one of the following:
 - Click **Active** to see in the Active table a list of all the sequences that are available. These sequences are active in the sense that you have not disabled them. If you have not created any sequences or if you archived every sequence, the table is empty.
 - Click **Archive** to see in the Archive table a list of all the sequences that you have disabled temporarily. These sequences are disabled in the sense that your audience will not see them. You might choose eventually to restore or delete these sequences.
- **Step 4** Enter the values that meet your requirements, as described in Table 4-11 on page 4-30
- Step 5 Click Save.

Interstitial Sequence Settings

Table 4-11 describes the elements and settings for configuring interstitial sequences.

Table 4-11 Elements for Configuring Interstitial Sequences

Element	Description	
Add New Interstitial Sequence	Shows the Add New Interstitial Sequence page.	
Archive Selected	Moves from the Active table to the Archive table the sequences that you selected.	
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived sequence that you selected.	
Activate Selected	Moves from the Archive table to the Active table the sequences that you selected.	

Table 4-11 Elements for Configuring Interstitial Sequences (continued)

Element	Description
columns	Untitled check box—One of the following:
	• Marks a sequence that you will disable, if selected in the Active table.
	• Marks a sequence that you disabled and that you will restore or delete, if selected in the Archive table.
	Name—The Modify () button and the name of the sequence that the corresponding row describes. Values in the name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Edit button, DMM-VPM loads a page where you can edit metadata, such as the name and description, for the sequence that the corresponding row describes.
	Date Added—The date and time when the sequence was created.
	Last Modified—The date and time when the sequence was last edited.
	Active Interstitials — Shows the Active Interstitials () button and the Add New Interstitial () button. If you click the Active Interstitials button, DMM-VPM loads a page where you can add interstitials to the playlist that the corresponding row describes or mark interstitials to remove from the playlist.
	Deployment Choice —Says whether the sequence that the corresponding row describes is the default sequence for deployments.
{Add New Interstitial Sequence Modify Interstitial Sequence}	Metadata attributes that define the sequence. Enter or select the metadata after you click Add New Interstitial Sequence or after you click the Edit button for a sequence. To save your work, click Save .
	Name—The name for this sequence. Enter a maximum of 50 characters.
	Description —Enter a description that is meaningful to you. You must enter the description. Enter a maximum of 2,000 characters.
	Status —Active or Inactive. If you select Active, your audiences see the sequence. If you select Inactive, the sequence is not visible to your audiences. The default is Active.
	Make this sequence default choice for deployments?—Yes or No. To use this sequence by default when your Video Portal is not showing anything else, select Yes. Otherwise, select No.

Creating and Working with Tickers

In DMM-VPM, a ticker is scrolling text that your Video Portal shows to your audiences.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Select Video Portal > Tickers.

On the Tickers page, you can toggle between two tables that are mostly very similar and that both show a list of tickers. You can move tickers from one table to the other.

- **Step 3** Do one of the following:
 - Click **Active** to see in the Active table a list of all the tickers that are available. These tickers are active in the sense that you have not disabled them. If you have not created any tickers or if you archived every ticker, the table is empty.

- Click **Archive** to see in the Archive table a list of all the tickers that you have disabled temporarily. These tickers are disabled in the sense that your audience will not see them. You might choose eventually to restore or delete these tickers.
- **Step 4** Enter the values that meet your requirements, as described in Table 4-12 on page 4-32.
- Step 5 Click Save.

Ticker Settings

Table 4-12 describes the elements and settings for configuring tickers.

Table 4-12 Elements for Configuring Tickers

Element	Description
Clear Defaults	Stops your Video Portal from playing any ticker.
Add New Ticker	Shows the Add New Ticker page.
Archive Selected	Moves from the Active table to the Archive table the tickers that you selected.
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived ticker that you selected.
Activate Selected	Moves from the Archive table to the Active table the tickers that you selected.
columns	Untitled check box—One of the following:
	• Marks a sequence that you will disable, if selected in the Active table.
	• Marks a sequence that you disabled and that you will restore or delete, if selected in the Archive table.
	Name—The Modify () button and the name of the ticker that the corresponding row describes. Values in the name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Edit button, DMM-VPM loads a page where you can edit the ticker that the corresponding row describes.
	Launch Date—The date and time when the ticker should start.
	Expiration Date —The date and time when the ticker should stop and should no longer be visible in your Video Portal.
	Deployment Choice —Says whether the ticker that the corresponding row describes is the default ticker for deployments.

Table 4-12 Elements for Configuring Tickers (continued)

Element	Description
{Add New Ticker Modify Ticker}	Physical and logical attributes of the ticker. Enter or select the attributes after you click Add New Ticker or after you click the Edit button for a ticker. To save your work, click Save .
	Ticker Name —The name for this ticker. Enter a maximum of 50 characters.
	Ticker Description —Enter a description that is meaningful to you. You must enter the description. Enter a maximum of 2,000 characters.
	Ticker Text —Enter the text that the ticker should show on your Video Portal. Enter a maximum of 2,000 characters. The text that you enter will scroll across the bottom of your Video Portal.
	Ticker Status —Active or Inactive. If you select Active, your audiences see the ticker. If you select Inactive, the ticker is not visible to your audiences. The default is Active.
	Launch Date—Select the month, day, and year when your Video Portal should start the ticker.
	Make this ticker default choice for deployments?—Yes or No. To show this ticker by default on your Video Portal, select Yes. Otherwise, select No.
	End of Life Date—Select the month, day, and year when your Video Portal should stop the ticker.

Customizing Your Video Portal

DMM-VPM helps you to control and customize the user interface colors that your audiences see when they use your Video Portal. You can customize the coloration of backgrounds, logos, ticker messages, interstitials, and controls.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- **Step 2** Select **Video Portal > User Interfaces**.

On the User Interfaces page, you can toggle between two tables that are mostly very similar and that both show named sets of user interface customizations. You can move sets from one table to the other.

- **Step 3** Do one of the following:
 - Click **Active** to see in the Active table a list of all the customization sets that are available, meaning that you have not disabled them. If you have not created any customization sets or if you archived every set, the table is empty.
 - Click Archive to see in the Archive table a list of all the customization sets that you have disabled
 temporarily. These customizations are disabled in the sense that your audience will not see them.
 You might choose eventually to restore or delete these customization sets.
- **Step 4** Enter the values that meet your requirements, as described in Table 4-13 on page 4-34.
- Step 5 Click Save.

Customization Settings

Table 4-13 describes the elements and settings that you configure to customize the Video Portal.

Table 4-13 Elements for Customizing the Video Portal

Element	Description
Add New Interface	Shows the Add New Interface page, described elsewhere in this topic.
Archive Selected	Moves from the Active table to the Archive table the customization sets that you selected.
Delete Selected	Shows the Delete Confirmation page. See the instructions on that page that tell you how to delete the archived customization sets that you selected.
Activate Selected	Moves from the Archive table to the Active table the customization sets that you selected.
columns	Untitled check box—One of the following:
	Marks a customization set that you will disable, if selected in the Active table.
	• Marks a customization set that you disabled and that you will restore or delete, if selected in the Archive table.
	Name—The Modify () button, the Preview () button, and the name of the customization set that the corresponding row describes. Values in the name column are the basis by default for how DMM-VPM sorts the rows, but you can click the heading in any other column to re-sort the rows by the values in that column. If you click the Edit button, DMM-VPM loads a page where you can edit the customization set that the corresponding row describes. If you click the Preview button, your Video Portal shows to you the customization set that the corresponding row describes, so you can confirm that the customizations work as you expect them to before you deploy them to your Video Portal.
	Date Added—The date and time when the customization set was created.
	Last Modified—The date and time when the customization set was last edited.
	Deployment Choice —Indicates whether the customization that the corresponding row describes is the default Video Portal user interface for deployments.

Table 4-13 Elements for Customizing the Video Portal (continued)

Element	Description
{Add New Modify } Interface (Required Items)	Tip This row describes elements that you see in the <i>Required Items</i> area where you must enter or select values to add or edit a Video Portal user interface. For descriptions of other, optional values, see the next row.
	Attributes of the user interface. Enter or select these values after you click Add New Interface or after you view properties of a customized user interface. To save your work, click Save .
	Name—The name for this set of customizations. Enter a maximum of 50 characters.
	Background Image—The nonprogressive JPEG file that serves as the background image. The file that you select should be 720 pixels wide by 540 pixels high, and should not distract or detract from the content that you want to emphasize. To upload a new image, click Upload New Background Image File. Alternatively, to select a factory-default image or a file that you uploaded previously, click Existing Images.
	Video Portal Colors—Hexadecimal color values ¹ and contrast scale values for the public user interface on your Video Portal. Enter hexadecimal color values and contrast scale values for the background panel, tab text, and listing text, as well as the buttons and sliders. Alternatively, to make selections from palettes and see a preview of them in real time, click Preview Colors .
	The color-picker popup window includes a dynamic preview pane that shows the effect of your color and contrast selections in real time, exactly as audience members will see them if you use them on your Video Portal. To select colors and make selections for Video Portal user interface subcomponents, click {Panel Background Color Tab Text Color Content Listing Text Color Button and Slider Color}. The options are as follows:
	• To select a hue, drag the handle up and down the <i>color slider</i> , meaning the vertical, rectangular area that shows a gradient and is always red along both its top and its bottom edges. Alternatively, enter a number from 0 to 360 in the H field, where each value within that range signifies one of the hues that is possible, relative to RGB intensities.
	• To select a color range, click it in the <i>color space</i> , meaning the square area that shows a gradient and is always black along its bottom edge. The horizontal <i>x</i> -axis here signifies color saturation (corresponding to the S field), while the vertical <i>y</i> -axis signifies the value of color brightness (corresponding to the V field). Alternatively, to adjust the color saturation, enter a number from 0 to 100 in the S field; and, to adjust the value of color brightness, enter a number from 0 to 100 in the V field.
	• To select the numeric "intensity multiplier" for contrast, which affects the magnitude of difference between foreground luminance and background luminance, use the Contrast slider. Higher values increase the color saturation, while lower values desaturate colors.
	To save your work in the color-picker popup window and automatically populate or repopulate the corresponding fields on the {Add New Interface Modify Interface} page, click Save . Alternatively, to discard your work in the color-picker popup window, click Cancel .
	Interface Idle Duration—In seconds, the idle time that you allow after any one of your scheduled shows has stopped before your Video Portal starts to show (and loop) interstitials.
	Make this template default choice for deployments?—Yes or No. To show this user interface customization set by default on your Video Portal, select Yes. Otherwise, select No.
	Status —Active or Inactive. If you select Active, you can select the customization set as one for your audiences to see. If you select Inactive, the customization set is not selectable as one that your audiences might see. The default is Active.

Table 4-13 Elements for Customizing the Video Portal (continued)

Element	Description
{Add New Modify} Interface	This row describes elements that you see in the <i>Optional Items</i> area where you can enter or select optional values while you add or edit a Video Portal user interface. For descriptions of the other, required values, which you must enter, see the previous row.
(Optional Items)	Attributes of the user interface. Enter or select these values after you click Add New Interface or after you view properties of a customized user interface. To save your work, click Save .
	Description —Enter a description that is meaningful to you. You must enter the description. Enter a maximum of 2,000 characters.
	Header Logo —The nonprogressive JPEG file that serves as the logo for your Video Portal. The file that you select should be 470 pixels wide by 60 pixels high. The tabbed area on your Video Portal will cover and hide the lower right quarter of the image, so we recommend that quadrant not contain anything important. It is optional to use a logo. Do one of the following:
	• To upload a logo file that you have never uploaded, click Upload new Header Logo file.
	• To reuse a logo file that you uploaded previously for use in another customization set, click Existing Images .
	• If you click Check to confirm your selection to use the logo, you see one of the following messages:
	- "Field is blank"—You have not entered any path.
	- "File Path Does Not Exist"—You entered an invalid path.
	- "File Path exists"—The path that you entered points correctly to a valid file.
	Interface Links—As many as three web links that your Video Portal should show:
	• Link Text—The clickable text to show. Enter a maximum of 17 characters.
	• URL—The HTTP URL for the clickable text.
	• If you click Check to confirm that a URL is valid, you see one of the following messages:
	- "URL is blank" — You have not entered any URL.
	- "Server was not found" — You entered an invalid URL.
	- "URL exists"—The URL that you entered points correctly to a valid file.

^{1.} Hexadecimal color values in SWF files do not always match exactly the same hexadecimal color values in other file types. If your organization uses precise color values as part of its branding strategy, you might have to adjust the colors slightly for SWF files to see the intended result.

Configuring the Settings to Manage Deployments

You must deploy all additions, updates, and other changes in your content and data. You can deploy immediately or schedule deployments in advance for any time and date. You can cancel any deployment that you schedule.



You do not need to deploy video parts when you make changes to access restrictions. These changes take effect immediately.

After you schedule a deployment, the Currently Scheduled Deployments table is refreshed and shows the new deployment that you scheduled, in its chronological sequence relative to any other scheduled deployments. DMM-VPM then deploys the job to the deployment location that you specified under the Setup tab (see the "Configuring the Location Settings for Deployments" section on page 4-5). After a deployment is finished, the Currently Scheduled Deployments table is refreshed again, so it no longer includes any description of the deployment.

This section contains the following topics:

- Understanding Event Types, page 4-37
- Scheduling a New Deployment, page 4-38
- Scheduling a Pre-Event Listing, page 4-39
- Scheduling a Live Event, page 4-40
- Scheduling a Post-Event Listing, page 4-40
- Scheduling an On-Demand Deployment, page 4-41
- Learning the URL for a Deployed Video Part, page 4-41

Understanding Event Types

Live event offerings differ from on-demand offerings in the following ways:

Table 4-14 Differences Between Live and On-demand Events

Live events

Live events are scheduled to start and stop at a fixed date and time. After a live event starts, audience members who connect late see the event in progress and cannot see what came before. Each audience member sees the same thing at the same time as other audience members. Audience members cannot see a live stream before the event starts, go backward, or skip ahead. When a live event stops, it is no longer available to anyone. For information about the differences between the Live Event and Non-DME Live Event options, see the "Add New Video Part | Modify Video Part" section in Table 4-6 on page 4-10.

You can record a live event as it occurs, and then edit and upload the recording for on-demand access shortly thereafter. Live events are either *push*ed or *pulled*:

- Push—The encoder pushes the live stream to a streaming server.
- Pull—The streaming server pulls the live stream from an encoder.

Tip Using the Video Part page, you can upload a pre-event image and post-event image. These will appear in the video frame before and after the live event. Also, your encoder can simultaneously stream a live event and save it to a file. See the "Capturing a Live Stream and Publishing the Output File as Video On-Demand" section on page 4-44.

On-demand events

You schedule on-demand events to become available at any date and time that you specify and to remain available for any span of hours or dates that you specify, depending on the freshness or relevance of the content. Any audience member can start at the beginning of an event, no matter when they see it. Likewise, any audience member can rewind, skip ahead, or jump to different parts of an event at any time, assuming that your Video Portal makes these video navigation controls available. As long as an on-demand offering is available, audience members can see it at any time. You can archive an on-demand event at any time; after you archive an event, no one in your audience can see it.

Scheduling a New Deployment

To schedule a new deployment, complete the following steps:

- **Step 1** If you configured your browser to block popup windows, reenable popup windows now. You cannot complete this procedure successfully if your browser blocks popup windows.
- Step 2 Select Video Portal from the untitled list at the top far-right of any page.
- **Step 3** Select **Video Portal > Deployments**.

The Currently Scheduled Deployments page lists all of the scheduled and queued deployments, as described in Table 4-15.

Table 4-15 Elements for Deployment Scheduling

Element	Description	
Schedule New Deployments	Schedule a new deployment.	
columns	Scheduled Deployment—The date and time for which existing deployments are scheduled, listed in chronological order starting with the earliest deployment.	
	Date Added — The date and time when existing deployments were added to DMM-VPM.	
	Cancel—Cancel a deployment.	

Step 4 Click Schedule New Deployment.

The **T** Active **T** Inactive **T** Removed legend at the top of the page shows the real-time color-coding that DMM-VPM applies to entities in the list, based on change statuses:

- Active—Entities whose status has been changed to Active. All entities classified as Active are visible in the Video Portal after deployment.
- Inactive—Entities whose status has been changed to Inactive. All entities classified as inactive or removed disappear from the Video Portal after deployment.
- Removed—Entities that have been permanently deleted from DMM-VPM.
- **Step 5** In the "Video Part Selection" area, click a check box to select the corresponding **video part**.

DMM-VPM automatically lists for selection all new and modified video parts whose status is set to Active. Each video part is displayed with its corresponding videos and programs. All uploaded files, file references, and metadata associated to each Active video part are deployed with your selection. These files are deployed to the deployment location that you specified under the Setup tab.

Step 6 In the "Additional Items Included in Deployment" area, review any metadata changes that will be published with your deployment.

The following entities are identified in the Metadata Changes:

- Categories All categories whose status has changed or that were deleted.
- Programs—All programs whose status has changed or that were deleted.
- Videos—All videos whose status has changed or that were deleted.
- **Step 7** In the "Global Options" area, make selections from the following lists:
 - **Featured Playlist**—Select the playlist to publish on your Video Portal.

The list displays all Active Featured Playlists in alphabetical order by Featured Playlist Name with the Default Featured Playlist selected by default. There can only be one Featured Playlist visible in the Video Portal at any given time. See the "Creating and Working with Playlists" section on page 4-24.

• User Interface—Select the customization set to use on your Video Portal.

The alphabetical list contains all Active user interfaces customization sets with the default customization set selected by default. There can only be one user interface visible in your Video Portal at any given time. See the "Customizing Your Video Portal" section on page 4-33.

• **Ticker**—Select the ticker to publish on your Video Portal.

The list displays all Active tickers in alphabetical order by name with the default ticker selected by default. To hide the ticker, click **Don't Show a Ticker.** You can use no more than one ticker at a time on your Video Portal. See the "Creating and Working with Tickers" section on page 4-31.

• Interstitial Sequence—Select the sequence to publish on your Video Portal.

The list displays all Active Interstitial Sequences in alphabetical order by Interstitial Sequence Name with the Default Interstitial Sequence selected by default. There can only be one Interstitial Sequence visible in the Video Portal at any given time. See the "Creating and Working with Interstitial Sequences" section on page 4-30.

- **Step 8** In the "Deployment Time" area, select the deployment date and time, or check the **Schedule Immediately** check box. If you select a scheduled deployment, the default date is 7 days from today.
 Remember the following information:
 - The relevant time zone is the one that you specified when you set up your DMM appliance. If an administrator set up your DMM appliance and you cannot guess what time zone is in effect at its deployment location, contact its system administrator.
 - To conduct a live online event successfully, you must complete either three or four separate deployments in exactly the following sequence:
 - 1. Prepare the pre-event listing to tell Video Portal audience members about the upcoming live event, as described in the "Scheduling a Pre-Event Listing" section on page 4-39.
 - 2. Prepare the actual live event offering, as described in the "Scheduling a Live Event" section on page 4-40
 - **3.** Prepare the post-event listing to tell Video Portal audience members that the live event has concluded and is no longer available, as described in the "Scheduling a Post-Event Listing" section on page 4-40.
 - **4. (Optional)** Prepare the on-demand offering, which is a recorded version of the live event, as described in the "Scheduling an On-Demand Deployment" section on page 4-41.
- **Step 9** To save your work and schedule the deployment, click **Create Deployment**.

Scheduling a Pre-Event Listing

You can schedule a pre-event listing. We recommend that you use targeted e-mail messages or a web site to preannounce your live events. The notifications that you prepare can describe, for example, the event date and time, its subject matter, the speaker, and the moderator. A notification can also link directly to the pre-event listing on your Video Portal.



Ensure that your video part metadata is set appropriately for a pre-event listing.

- Step 1 If you configured your browser to block popup windows, reenable popup windows now. You cannot complete this procedure successfully if your browser blocks popup windows.
- Step 2 Complete Steps 1-6 in the "Scheduling a New Deployment" procedure on page 4-38.
- In the "Deployment Time" area, select the deployment date and time when your pre-event listing should Step 3 become available on your Video Portal. The deployment date is by default today.



The relevant time zone is the one that you specified when you set up your DMM appliance. If an administrator set up your DMM appliance and you cannot guess what time zone is in effect at its deployment location, contact the system administrator.

To schedule the deployment, click Create Deployment. Step 4

Scheduling a Live Event

You can schedule a live event.



Ensure that your video part metadata is set appropriately for a pre-event listing.

- Step 1 If you configured your browser to block popup windows, reenable popup windows now. You cannot complete this procedure successfully if your browser blocks popup windows.
- Step 2 Complete Steps 1–6 in the "Scheduling a New Deployment" procedure on page 4-38.
- In the "Deployment Time" area, select the deployment date and time when your live event should Step 3 become available on your Video Portal. The default date is 7 days from today.



The relevant time zone is the one that you specified when you set up your DMM appliance. If an administrator set up your DMM appliance and you cannot guess what time zone is in effect at its deployment location, contact the system administrator.



We recommend that your Video Portal show a countdown to the live event for 10-15 minutes and then replace the countdown with the audio-video stream when the live event actually starts.

Step 4 To schedule the deployment, click **Create Deployment**.

Scheduling a Post-Event Listing

You can schedule a post-event listing.



Ensure that your video part metadata is set appropriately for a post-event listing.

- **Step 1** If you configured your browser to block popup windows, reenable popup windows now. You cannot complete this procedure successfully if your browser blocks popup windows.
- **Step 2** Complete Steps 1–6 in the "Scheduling a New Deployment" procedure on page 4-38.
- **Step 3** In the "Deployment Time" area, select the deployment date and time when the post-event listing should become available on your Video Portal. The default date is 7 days from today.



The relevant time zone is the one that you specified when you set up your DMM appliance. If an administrator set up your DMM appliance and you cannot guess what time zone is in effect at its deployment location, contact the system administrator.

Step 4 To schedule the deployment, click **Create Deployment**.

Scheduling an On-Demand Deployment

You can schedule an on-demand deployment.



Ensure that your video part metadata is set appropriately for an on-demand deployment.

- **Step 1** If you configured your browser to block popup windows, reenable popup windows now. You cannot complete this procedure successfully if your browser blocks popup windows.
- **Step 2** Complete Steps 1–6 in "Scheduling a New Deployment" procedure on page 4-38.
- **Step 3** In the "Deployment Time" area, select the deployment date and time when the on-demand deployment should become available on your Video Portal. The default date is 7 days from today.



The relevant time zone is the one that you specified when you set up your DMM appliance. If an administrator set up your DMM appliance and you cannot guess what time zone is in effect at its deployment location, contact the system administrator.

Step 4 To schedule the deployment, click Create Deployment.

Learning the URL for a Deployed Video Part

There is no need for you to navigate through your Video Portal to find a video part after you deploy it successfully because DMM-VPM links directly to it as a convenience to you. The link is not specific to any particular media format because your Video Portal determines automatically which format to deliver to each audience member according to his or her system configuration.

- **Step 1** Select **Video Portal > Programs**.
- Step 2 Find the row that describes the relevant program, and click Active Videos () in that row.
- Step 3 Find the row that describes the relevant video, and click Active Video Parts () in that row.
- **Step 4** Find the row that describes the relevant video part; then, do one of the following:

- To play the video part, click **Preview** () in that row.
- To learn the actual URL for the video part, click **Modify** (**≥**) in that row, and click **Show Direct Portal Link**.

Using Features Under the Encoders Tab

Administrators and configuration managers use the features in the Encoders tab to manage DME 1000 and DME 2000 encoders in DMM-VPM.

This section includes the following topics:

- Adding an Encoder to DMM-VPM, page 4-42
- Testing the Ability to Publish Streams, page 4-43
- Capturing a Live Stream and Publishing the Output File as Video On-Demand, page 4-44
- Managing Push Configurations, page 4-45
- Creating and Working with Encoding Formats, page 4-46
- Managing Transcoding Jobs, page 4-47

Adding an Encoder to DMM-VPM

You can add an encoder to DMM-VPM.

- **Step 1** Set up and connect the encoder according to the procedures in its documentation.
- Step 2 Select Video Portal from the untitled list at the top far-right of any page.

Step 3 Determine whether the encoder will *push* streams to the streaming server or the streaming server will *pull* streams from the encoder; then, complete the steps Table 4-16 on page 4-43, as needed.

Table 4-16 Push and Pull Procedures

Stream Type	Procedure		
Push	In <i>push</i> configurations, the encoder pushes streams to the streaming server. Push configurations apply only to Windows Media streams.		
	Step 1	Select Encoders > Push Configurations.	
	Step 2	Enter the required values, including the streaming server URL and port number.	
	Step 3	Click Save.	
Pull	In <i>pull</i> configurations, the streaming server pulls streams from the encoder.		
	Step 1	Select Encoders > Encoders and Pull Configurations.	
	Step 2	If you do not know the encoder IP address or DNS-resolvable hostname, go to the encoder front panel, then select Menu > Setup System > Network > 100 Mbit (or 1,000 Mbit) > View Settings > IP Address(es).	
	Step 3	Enter the encoder IP address or hostname in the Encoder IP Address/Hostname field. We recommend that you use a port number that is in the range from 6000 to 7000.	
	Step 4	Click Discover Encoder . The button changes color and animates until the discovery process is finished.	
	Step 5	Enter the encoder name and description in their respective fields. For example, you might identify or describe the owner, location, or purpose of the encoder, or enter exactly the serial number text from a sticker on the encoder chassis.	
	Step 6	Select options in the "Default Encoder Input Settings" area to choose the video input, audio input, and video input standard settings that you will use most often.	
	Step 7	Select Push or Pull as your most common method to publish live events, and do one of the following:	
		• If you selected Push, select an option from the Default Push Configuration list to choose the default push configuration for this encoder. Alternatively, click Add New Push Options Here (see the "Managing Push Configurations" section on page 4-45).	
		• If you selected Pull, click Add a Pull Configuration to add the streaming server pull configurations for this encoder.	
		When you select Pull, DMM-VPM automatically creates a pull configuration called "test only (encoder-direct, port 6990)," which you can use to test streams that originate directly from the encoder	
	Step 8	To save your selections, click Save this Encoder . You should see a green box at the top of the page with the message "Successfully saved '{Encoder Name}'."	

Testing the Ability to Publish Streams

You can use DMM-VPM to test whether your encoder can publish a stream.

- **Step 1** To see the encoder dashboard, select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Click the Encoders tab.

- Step 3 In the encoder selection tree, find the encoder that you want to test, click Expand Encoder () to see the ad hoc streaming controls for it, and click Encoder Setup.
- Step 4 From the Video Format list, select the bit rate that you want to test, and select the Publish as a Streaming Video check box.
- **Step 5** Select a Push publishing configuration or a Pull publishing configuration.



Tip

To test a stream directly from the encoder, select the **test only** (**encoder-direct**, **port 6990**) pull configuration.

- **Step 6** Confirm that a live video source is connected to your encoder; then, select the options from the following lists that match your video source:
 - Video Input
 - Audio Input
 - Video Input Standard
- Step 7 Click Start Encoder.



Tip

If the Start Encoder option is not visible, check the Stop Event date for the live event video part.

The button becomes animated and the animation continues until the encoder starts. A delay that ranges from 10 to 25 seconds is normal.

- **Step 8** After the encoder starts, click **Close** in the Encoder Setup window.
- **Step 9** Do either or both of the following to test the video stream:
 - Click View Live Video. A popup window plays your current live stream.
 - To test the video stream as a static image that is updated periodically, click Click to start preview.
 Your encoder serves the static image directly, independent of your streaming server.
- Step 10 Click Stop Encoder.

Capturing a Live Stream and Publishing the Output File as Video On-Demand

Your encoder can capture and save a live stream as a file, which you can publish as video on-demand.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- **Step 2** Click the **Encoders** tab to see the encoder dashboard.
- Step 3 In the encoder selection tree, find the encoder that you will use, click Expand Encoder (to see the ad hoc streaming controls for it, and click Encoder Setup.
- **Step 4** Select the **Store as File** check box; then, enter a filename for the saved file.
- **Step 5** Confirm that a live video source is connected to your encoder and select the options from the following lists that match your video source:
 - Video Input
 - Audio Input

• Video Input Standard

Step 6 Click Start Encoder.

The button becomes animated and the animation continues until the encoder starts. A delay that ranges from 10 to 25 seconds is normal.

- **Step 7** After the encoder starts, click **Close** in the Encoder Setup window.
- Step 8 When you are ready to stop adding video from the stream to the output file that you are creating, click Stop Encoder.



The VoD file is overwritten each time that you click the Start/Stop button.

- Step 9 To retrieve the output file from your encoder, point your web browser to ftp://<encoder_IP_address>/AVFiles/Out.
- **Step 10** Right-click the filename in the directory listing and select the option to download the file.
- **Step 11** (**Optional**) Use third-party software to edit the file.



If you use a third-party software to edit the VoD file, the slide synch commands that were created during the live event will be erased, and the slides will not be synchronized for the VoD.

Step 12 Before you can deliver the downloaded output file to your Video Portal audiences as a video on-demand offering, you must deploy it as a VoD video part. See the "Working with Programs, Videos and Video Parts" section on page 4-9, and the "Scheduling an On-Demand Deployment" section on page 4-41.

Managing Push Configurations

You can manage push configurations, which apply only to Windows Media streams.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- Step 2 Select Encoders > Push Configurations.
- **Step 3** Enter the push configuration name and description in their respective fields.



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The push configuration name that you enter now will be an option that you can select from a list before you start your encoder.

- **Step 4** Enter and confirm the other values:
 - Format—Windows Media is the only supported option in this release.
 - Streaming Server Base URL—Enter the base URL and port number for your streaming server.
 - Name of Publishing Point—Enter the name of your Publishing Point.
 - Full Stream URL—Confirm that the URL is the valid URL for your publishing point.
 - User ID and Password—(Optional) Enter the username and password to push a stream to your streaming server if it requires authentication.

Step 5 Click Save.

Creating and Working with Encoding Formats

An *encoding format* is a collection of settings to specify a particular combination of media type and video dimensions and to limit video bandwidth consumption and video quality.

DMM-VPM is preconfigured with the recommended encoding formats for your Video Portal. You can recognize these predefined and preferred formats in the Encoding Formats list when you first start to use DMM-VPM because it appends the word "default" to their names. If you select other encoding formats as your defaults, the "default" label no longer signifies that any encoding format is one that Cisco defined.

You can select only one default encoding format apiece for each supported media type. For example, you might select one encoding format as the default for Windows Media and a different encoding format as the default for Flash Video.

You can add or edit an encoding format.

- **Step 1** Select **Video Portal** from the untitled list at the top far-right of any page.
- **Step 2** Select **Encoders > Encoding Formats**, and do one of the following:
 - To create and define a new encoding format, click **Add a new Encoding Format**.
 - To edit an encoding format that you saved, click its name in the list.
- **Step 3** Enter or select the required values to define the encoding format:
 - Encoding Format Name—Enter a unique and meaningful name for this encoding format.
 - **Profile Description**—Enter a description.
 - Set as a Default Format—Select the check box if DMM-VPM should use this encoding format automatically when you select the Use Default Streaming Settings option on the {Add New | Modify} Video Part page.
 - **Format**—Click a radio button to select its corresponding media format as the one that this encoding format should use.
 - **Dimensions**—Select an option from the list or select **Custom** to use dimensions that the list does not contain.
 - **Pixel Proportion**—Standard (square pixel) is the correct choice for most applications.
 - Audio Capture {On | Off}—Enable or disable audio capture.
 - Windows Media Capture Profiles—Select an option to limit bandwidth usage.

Step 4 Click Save.

Managing Transcoding Jobs

Transcoding is a process of deriving digital media files that use one codec from digital media files that use a different codec; the source file is not changed or destroyed. Because codecs are typically lossy, you might notice that the fidelity of the output file is not as high as the fidelity of the source file.

Your encoders can transcode AVI and MPEG2 files into Windows Media files. You can use DMM-VPM to manage your transcoding jobs. We recommend that you schedule your transcoding jobs so that they do not run at the same time as any other encoder tasks, such as streaming a live event or saving a live stream to a file. A transcoding job might take as long as, or possibly longer than, the duration of the source file, depending on multiple factors that include which codecs you use.

- **Step 1** Copy the source file to your encoder.
 - a. Plug a keyboard, mouse, and monitor into your encoder.
 - **b.** Add the file to a USB 2.0 hard drive or flash drive.
 - **c.** Use Windows Explorer to copy the source file from the USB drive to **D:\AVFiles\In**.
- Step 2 Log in to DMM-VPM, and select Video Portal from the untitled list at the top far-right of any page.
- Step 3 Select Encoders > Transcoding, and click Add a New Transcoding Task.
- **Step 4** Enter or select the required values to define the transcoding job:
 - Transcoding Task Name—Enter a unique and meaningful name.
 - **Encoder Name**—Select the encoder that will transcode the source file.
 - Start Date/Time—Select the date and time when the transcoding job should start.
 - **Input Encoding Format**—Select the media format that the source file uses (AVI or MPEG2).
 - Input Directory Path—Select Input Local Encoder Drive.
 - Edit—Modify the input directory path.
 - Clone—Copy the input directory path so that you can modify and add it to the list.
 - Add a Path—Add a new input directory path to the list.
 - **Input File Name**—Enter the source filename. Do not include a path.
 - Output Encoding Format—Select a format that includes the word "transcode" in its title.
 - Output Directory Path—Select Output Local Encoder Drive.
 - Output File Name—Enter the output filename, which must use WMV as its extension. Do not include a path.
- Step 5 Click Save.



Tip

In the list, a color-coded icon next to the name of your transcoding job helps you to track its status. The icon is blue (scheduled *or* postponed); animated green (in progress); solid green (completed); or red (error). To learn more, mouse over the icon.

- **Step 6** To copy the output file from your encoder, do one of the following:
 - If you plugged a keyboard, mouse, and monitor into your encoder, use Windows Explorer to copy the output file from **D:\AVFiles\Out** to the USB drive.

• Point your web browser to **ftp://**<*encoder_IP_address*>/**AVFiles/Out**, right-click the filename in the directory listing, and select the option to download the file.

Workflows for Setting Up Live Events

This section includes the following workflow checklists to help you set up live events:

- Using Your DME 1000 or DME 2000 to Set Up a Live Event, page 4-49
- Modifying the Scheduled Times for DME Live Events, page 4-51
- Setting Up Live Events Using Third-Party Live Streams, page 4-52

Using Your DME 1000 or DME 2000 to Set Up a Live Event

Use the following checklist to guide you through the required tasks to use your DME 1000 or 2000 to set up live events..



- 1. Add a live event to DMM-VPM, and enter the required values by completing the following steps:
 - **a.** Select **Video Portal** from the untitled list at the top far-right of any page; then, click the **Video Portal** tab. The Video Portal Programs page appears.
 - **b.** Create or edit the program and the video that should include the live event, as described in the "Working with Programs, Videos and Video Parts" section on page 4-9.
 - **c.** In the Add New Video Part page, enter the following values:
 - •Type of Video—Select Live Event; you must use Windows Media as the video format.
 - •Encoder From the list, select the encoder to use, then do *one* of the following: If you previously configured default streaming settings for the relevant encoder and those default settings are appropriate for this event, click Use Default Streaming Settings. If any of the default settings are *not* appropriate for this event or if you have not configured default settings for the relevant encoder, click Advanced Settings, and then make selections and enter values to define the settings for this stream:

Encoding Format—From the list, select the method to use for encoding or transcoding the live stream.

Publish via Push—Select whether the encoder should push the live stream to a streaming server.

Publish via Pull—Select whether the streaming server should pull the live stream from the encoder.

Video Input—From the list, select either Composite or SVideo.

Audio Input—Select the option to use balanced or unbalanced audio in the live stream.

Video Input Standard—From the list, select the standard that is relevant to your country and the equipment that you use.

Store as a File—Select the check box to enable automatic archiving or deselect the check box to disable automatic archiving.

Storage Bookmark and File Name—To later deploy the event as a VoD, select from the list the location on the encoder to store the file, and enter the filename, specifying .wmv as the file type.

- •Play Order in Video—From the list, select where in the video to show this video part.
- •Release Date/Time and End of Life Date/Time Enter a date in the format shown or click Show Calendar to select a date from a calendar. Then, select the hour, the minute, and AM or PM. You must explicitly enter the End of Life Date/Time value. DMS does not obtain it automatically from the Release Date/Time value. If you do not enter a End of Life Date/Time value, your live event will not occur.
- •Duration—Indicates the duration of the live event, based on the start and stop times that you set.

/ Task

- **2.** (Optional) In the Add New Video Part page, enter or select these additional values:
 - **Preview Content File URL**—The location of a SWF file or *nonprogressive JPEG*¹ file (100 pixels wide and 75 pixels high, or any proportionate multiple of those dimensions) that your Video Portal should show as the preview image for this video part. To select and upload a local file, click **Upload new preview video file**. If you use a SWF file, we recommended that you program it to pause after 10 seconds and not loop.
 - {Pre-Event | Post-Event} JPEG URL—Upload the JPEG image to show {before | after} the live event.
 - Enable Questions from the Audience—Click {On | Off} to enable or disable support for questions.
 - Slide Show—Select and upload the SWF file or ZIP² archive of slides to show next to the video stream.
 - **Preview Description**—A text description that your Video Portal shows to your audiences but truncates after 160 characters. If you do not enter a preview description, your Video Portal shows the first 160 characters from the video part description instead.
 - **Keywords**—Descriptive words to make this video part searchable on your Video Portal³.
- 3. Save your configuration entries for the live event and show a program listing for it, as follows:
 - a. Click Save.
 - **b.** When you want your Video Portal to show a program listing for this live event, see the deployment instructions in the "Scheduling a New Deployment" section on page 4-38.
- **4.** Test the live stream and start the live event by completing the following steps:

Note To modify the time of a live event, see the "Modifying the Scheduled Times for DME Live Events" section on page 4-51.

- **a.** Approximately 30 minutes before the live event, click the **Encoders** tab. The Encoder Dashboard page appears.
- **b.** In the encoder selection tree, find the encoder that you will use for this live event, and then click **Expand Encoder** (to see the *ad hoc streaming controls* for the encoder.
- **c.** Click **Encoder Setup**, enter the relevant values, click **Start Encoder**, and wait 10-to-20 seconds for it to start. The Start or Stop Encoder button starts or stops the VoD file creation, and you can start or stop the encoder multiple times to adjust cameras, test connections, and so on.



Caution

Each time that you start or stop the encoder, you overwrite the existing file. To save the file, you must rename it before you start the encoder again.

- d. After an encoder setup message confirms that the encoder started, click Close.
- e. To open a preview window that shows the live stream from your encoder, click View Live Video.

If you see the live stream, your streaming server is successfully streaming output from the encoder.

- **f.** When you are ready for the live event to start, click **Start Broadcast**. The Start Broadcast button makes the stream visible on the Video Portal and replaces the pre-event graphic. Approximately 5-to-20 seconds after you start the broadcast, the live stream should start for anyone who selected to see it.
- **g.** When you are ready to end the event, click **Stop Broadcast**, and then click **Stop Encoder**. The Stop Broadcast button replaces the video stream with the post-event graphic, and the Stop Encoder button stops the VoD file creation.

Tip If you stop the broadcast accidentally or too soon, but the encoder is still running, click **Start Broadcast** to start showing the live stream again.

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Task

- **5.** (Optional) Publish a recorded copy of the event for delivery on demand to audience members who missed the live stream, as described in the "Scheduling an On-Demand Deployment" section on page 4-41.
- 1. Your Video Portal cannot display progressive JPEG images.
- 2. The ZIP archive that you upload must contain JPEG files that you exported from PowerPoint (or similar software), whose sequence of filenames is numbered correctly to preserve their natural order. See the "Generating and Importing the Slides to Be Synchronized" section on page 4-19.
- 3. Do no enter commas, semicolons, or other word separators; your Video Portal ignores them if you do.

Modifying the Scheduled Times for DME Live Events

Use this procedure to modify the Release Date/Time on existing video parts for DME live events.

Before You Begin

Stop the encoder before you modify a pre-defined live event video part.

Procedure

- Step 1 In DMM-VPM, click Video Portal > Programs.
- **Step 2** Locate the Program and navigate to the Active Video Part for the live event.
- Step 3 Click Modify next to the name of the video part.
- Step 4 Change the Release Date/Time and click Save.
- **Step 5** Click **Video Portal > Deployments** and schedule new deployment of the video part.
- Step 6 Thirty minutes before the event, test the live stream. For information about testing, see the "Using Your DME 1000 or DME 2000 to Set Up a Live Event" section on page 4-49.

Setting Up Live Events Using Third-Party Live Streams

Use the following checklist to guide you through the required tasks to use streams from a third-party encoder to set up live events.

/	Task
	1. Create a pre-event listing to notify your audience about the upcoming event offering, as described in the "Scheduling a Pre-Event Listing" section on page 4-39.
	2. Show the actual live offering, as described in the "Scheduling a Live Event" section on page 4-40. In the "Add New Video Part" page where you configure the metadata attributes for this video part, you must select Non-DME Live Event because the Live Event option is reserved for use with the Cisco Digital Media Encoder 1000 and Digital Media Encoder 2000. Then, you must deploy this video part before the start at the event. For a Non-DME Live Event to be visible on the Video Portal, you must also click Start the Broadcast on the video part page. The offering should include information for end users to use during the live event, such as an agenda or downloadable materials.
	Note We recommend that you schedule the live event to start 10-to-15 minutes before the published start date and time. It is customary to offer live "hold" music for users who attend the event early to indicate that the event will start soon.
	3. (Optional) Create a post-event listing to notify your audience that they missed the event, and it is no longer available, as described in the "Scheduling a Post-Event Listing" section on page 4-40.
	4. (Optional) Publish a recorded copy of the event for delivery on demand to audience members who missed the live stream, as described in the "Scheduling an On-Demand Deployment" section on page 4-41.