Configuring Media Workflows

This chapter describes creating and managing the media workflows. The Media Workflow Manager allows you to create the media workflow instance for a chosen media workflow template. V2PC supports three basic types of media workflows:

- Cloud DVR (cDVR) – enables recording, storage, and playback of video program material using virtual resources.
- Video on Demand (VOD) – enables playback of recorded video content from virtual storage.
- Live – enables delivery of video content directly from a capture, encoding, and distribution pipeline.

The V2PC Media Workflow Manager lets you configure each of these media workflows through the GUI.

Configure the Media Workflow Type

<table>
<thead>
<tr>
<th>Step 1</th>
<th>From the navigation panel, choose Media Workflow Manager &gt; Media Workflow Types.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Click Add to add a new media workflow type. The Media Workflow Types dialog box opens.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose one of the available media workflow types from the Package Name drop-down list:</td>
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<tr>
<td></td>
<td>• Live: cisco-mfc</td>
</tr>
<tr>
<td></td>
<td>• VOD: cisco-vod-mfc</td>
</tr>
<tr>
<td></td>
<td>• cDVR: cdvr-mfc</td>
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</table>

Note: Before adding the media flow controller (MFC) in V2PC, the corresponding AIC and resources (service domain objects) must be created, enabled, and placed in Inservice state. See Configuring Applications, page 5-1 for details on adding an AIC.
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Creating a VOD Media Workflow

V2PC allows the user to deploy a VOD media workflow instance either from the GUI or using REST APIs. These instructions describe GUI operations. For API information, see the Cisco Virtualized Video Processing Controller API Guide.

Required Resources

The following resources are required to create a VOD media workflow:

- NAS MediaSource
- NAS Storage or COS Store
- Publish templates
Procedure

Follow these steps to configure a VOD media workflow:

**Step 1**
From the navigation panel, choose Media Workflow Manager > Media Workflow Types and create a cisco-vod-mfc media workflow type.

*Note*  The cisco-vod-mfc is already uploaded to the V2PC repository by default and it is ready to be used from the GUI.

![Choosing a VOD Media Workflow Type](Image)

**Step 2**
Confirm that AICs (cisco-ce, cisco-pe, cisco-am) are created and enabled in Application Deployment Manager and that the NAS Mediasources is created.

**Step 3**
From the navigation panel, choose Media Workflow Manager > Media Workflows, select vodcaptureplayback, and then click the + icon to add a new media workflow controller.

![Adding a Media Workflow Controller (MFC)](Image)
Step 4  On the Media Workflows page, navigate to each application by clicking its icon or using the Previous and Next buttons. In each case, select application instance and other configurations specific to the endpoint.

*Figure 7-3  Configuring a Media Workflow Application*
Step 5  After configuring all applications, click **Save**.

## Creating a Live Media Workflow

V2PC allows the user to view the channels associated with a live media workflow and to drill down on each asset to view its details.

### Required Resources

The following resources are required to create a Live media workflow:

- Channels
- Channel Lineup
- Publish Templates
Creating a Live Media Workflow

• Asset Life Cycle Policies

Procedure

Follow these steps to configure a Live media workflow:

**Step 1** On the Media Workflow Manager > Media Workflow Types page, create a cisco-mfc media workflow type.

**Step 2** Navigate to Media Workflow Manager > Media Workflows menu and select livecaptureplayback.

**Step 3** Select a media workflow checkbox and then clicking the Show Assets button to view the list of associated channels. The Assets tab in the lower half of the page list the channels.

![Figure 7-4 Configuring a Live Media Workflow](image)

Click the name of a channel in the Assets tab to view the details of the channel.

![Figure 7-5 Viewing Live Media Asset Details](image)
Creating a cDVR Media Workflow

**Note**  
Before configuring a cDVR media workflow, confirm that the MEMSQL database, Docker registry, and COS have been suitably configured by your system administrator.

**Required Resources**

The following resources are required to create a cDVR media workflow:

- Channels
- Channel Lineup
- Publish Templates

**Procedure**

Follow these steps to configure a cDVR media workflow:

1. From the navigation panel, choose Application Deployment Manager > Deployed Applications.
2. Verify that the VMR application has been added under Applications and shows inservice state.
Step 3 From the navigation panel, choose Media Workflow Manager > Media Workflow Types.

Step 4 Click the Add button at upper right to add a new media workflow.

Step 5 Choose cdvr-mfc from the Package Name drop-down list, and then click Save.

Step 6 Verify the package and version, and then return to the Media Workflows page.

Step 7 Under Media Workflows, choose the media workflow type cdvrcaptureplayback.
**Step 8**  
Click + to the right of the Workflow Type field and provide a name for the media workflow.

*Figure 7-8  Defining cDVR Media Workflow Details*

**Step 9**  
Click the Media Source icon in the media workflow diagram and choose the appropriate Application Instance and Channel Lineup from their respective drop-down lists.

*Figure 7-9  Configuring cDVR Application Instances*

**Step 10**  
Click the Capture icon in the media workflow diagram and choose the appropriate Capture app instance and configuration from their respective drop-down lists.
Step 11  Click the **Recorder** icon in the media workflow diagram and choose the appropriate Recorder app instance and configuration from their respective drop-down lists.

Step 12  Click the **Playback** icon in the media workflow diagram and choose the appropriate Playback app instance and configuration from their respective drop-down lists.

Step 13  Click **Save** to save your entries and return to the Media Workflow Manager page.

Step 14  Verify the newly created media workflow shows a status of **idle**.

Step 15  Select the media workflow checkbox and click the **Play** button.

*Figure 7-10  Activating the cDVR Media Workflow*

Step 16  Confirm that the status of the media workflow transitions from idle to **inprogress** and then to **inservice**.

*Figure 7-11  Verifying cDVR Media Workflow is InService*
If the status of the media workflow changes to **error**, check the MFC logs on the V2PC master for errors and correct as needed.

**Step 17** Click the **Show Assets** button to review and confirm the media workflow assets. Use the buttons at upper right to toggle between form view and flowchart view.

**Figure 7-12  Confirming cDVR Media Workflow Assets**
Viewing and Configuring Playback URLs

To view playback URLs for Live, VOD, and cDVR media workflows from the Media Workflows page:

**Step 1** Select a media workflow from the list of defined media workflows.

**Step 2** Click the **Show Assets** button to display a list of assets for the media workflow.

**Step 3** Select an asset and then click the **Form View** icon at top right in the GUI to display form view.

Following are examples of URLs created for media workflows.

- Live:  http://live1.pe2.v2pcops.com/live1-live/lax05/lax05.m3u8
- VOD:  http://vod1.pe3.v2pcops.com/vod1-live/VOD1/VOD1.m3u8
- cDVR: http://cdvr1.pe1.v2pcops.com/cdvr1-live/lax02/lax02.m3u8

**Configuring cDVR URLs**

Playback URLs are generated by the system and cannot be edited for playback. For cDVR playback, however, you can copy the playback URL from the GUI and update the live-content-id name with the recording ID.

For example, in the playback URL http://cdvr1.pe1.v2pcopys.com/cdvrl-live/lax02/lax02.m3u8, you would change lax02 to the recording ID.