



## Getting Started

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This chapter provides information on configuring the VDS servers. The topics covered in this chapter include:

- [Initially Configuring the Devices, page 3-1](#)
- [Logging In to the TV CDSM, page 3-2](#)
- [Initializing the VDS and Activating the Optional Features, page 3-3](#)
- [Navigating the CDSM, page 3-4](#)
- [Configuration Workflows, page 3-6](#)

This chapter assumes the VDS servers are already installed and takes you through the next steps toward configuring and monitoring the VDS.

## Initially Configuring the Devices

You must initially configure the Content Delivery Engines (CDEs) before they can participate in the VDS network. The CDE that runs the TV Content Delivery System Manager (CDSM) must be initialized first so that the CDEs running the Streamers, Vaults, and optionally Caching Nodes, or the ISVs can communicate with it.

For more information about initially configuring the CDEs, see the following as appropriate:

- *Cisco Content Delivery Engine 465 Hardware Installation Guide*
- *Cisco Content Delivery Engine 205/220/250/280/420/460/470 Hardware Installation Guide*
- *Cisco TV VDS 3.5 Installation, Upgrade, and Maintenance Guide*

Initial configuration of your CDEs includes basic network configuration settings to provide connectivity to the CDSM.



### Note

To ensure that the network interfaces are not restarted, skip configuring network settings during the initial configuration by executing the **cdsconfig** script with the **-skipnw** option.

```
# cdsconfig -skipnw
```

After the CDEs are configured with these settings, you can use the CDSM to configure and manage all the servers in the VDS.

After you have initially configured your CDEs, you must initially set up your VDS and activate any optional features. See [Initializing the VDS and Activating the Optional Features, page 3-3](#) for more information.

## Logging In to the TV CDSM

To log in to the TV CDSM, do the following:

**Step 1** Using your web browser, enter the IP address or hostname of your CDSM.

For example, if the IP address of your CDSM is 192.168.0.236, you can access it by entering `http://192.168.0.236` in the address or location text box of your browser program.



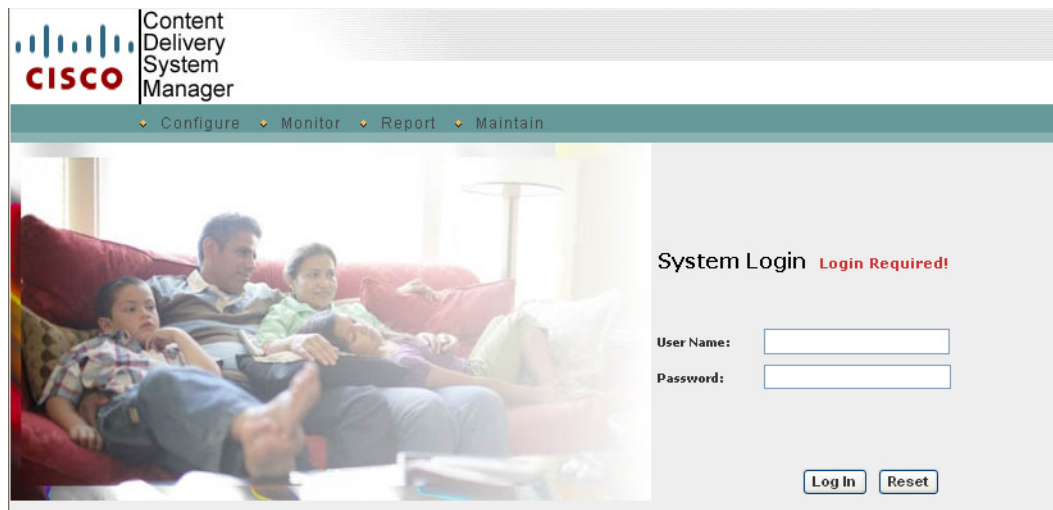
**Note** Consult your as-built documentation for the IP address of the CDSM. If you have redundant CDSMs, use the virtual IP address, not the IP addresses of the physical Ethernet interfaces.

The CDSM GUI now supports Hyper Text Transport Protocol Secure (HTTPS) as a secure way to access the browser-based interface. The `cdsconfig` script offers the following choices to access the CDSM GUI:

- HTTP
- HTTPS
- HTTP and HTTPS

The System Login page is displayed, as shown in [Figure 3-1](#).

**Figure 3-1** System Login Page



**Note** The CDSM supports Microsoft Internet Explorer version 6 or higher.

**Step 2** Enter your user name and password and click **Log In**.

The built-in user name is `admin` and the initial password is `admin`.

**Note**

We strongly recommend that you change the built-in user password as soon as possible. See [Editing User Settings, page 7-5](#) for more information.

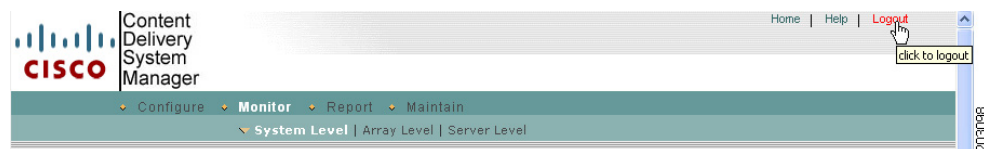
**Tip**

To navigate within the CDSM, click one of the navigation bar options (for example, Maintain), then one of the tab options (for example, Users), and then one of the left-panel menu options (for example, Add Users). Navigational directions in procedures are written as in the following example: Choose **Maintain > Users > Add Users**.

## Logging Out

To log out of the CDSM from any page, click **Logout** at the upper-right part of the page. See [Figure 3-2](#).

**Figure 3-2** Logging Out



## Initializing the VDS and Activating the Optional Features

Initial configuration of your VDS includes selecting the CServer version, the installation type, and other parameters that must be configured before you can continue the configuration process.

If the Media Scheduler or Ingest Manager are part of your deployment, you need to activate these features by entering an activation key.

To initialize your VDS or activate the Media Scheduler and Ingest Manager, do the following:

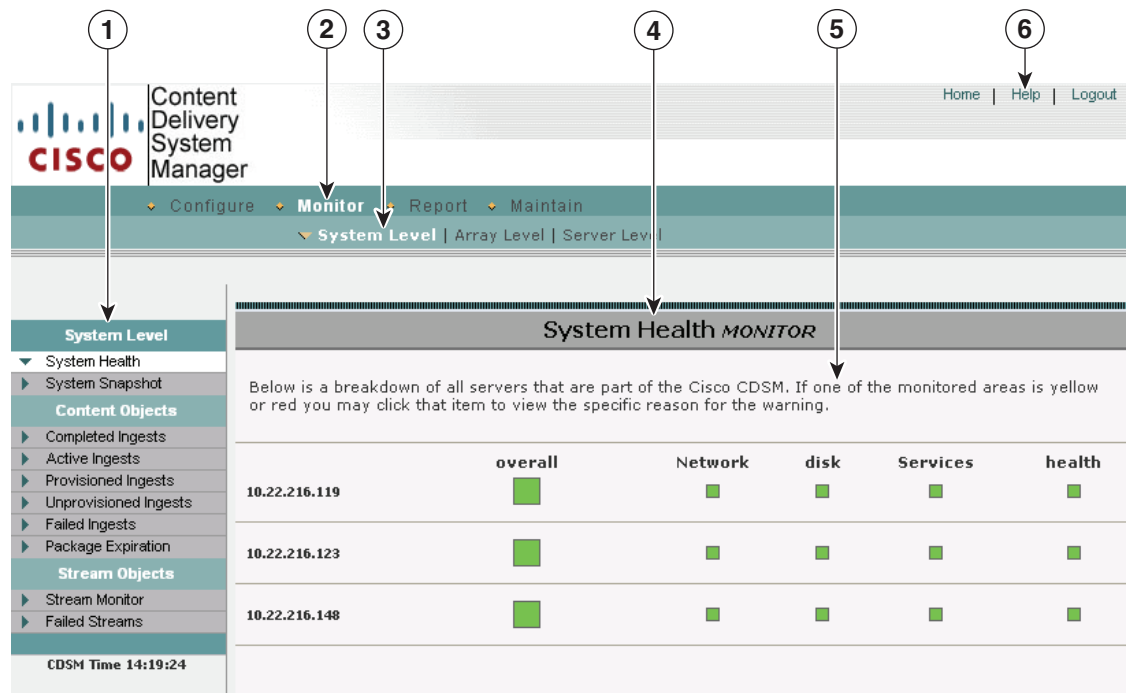
- Step 1** Log in to the CDSM as *admin*, or use another user account that has master access.
- Step 2** Add a user with engineering access.
  - a. Choose **Maintain > User > Add Users**. The Add Users page is displayed.
  - b. In the **New User** and **Password** fields, enter the user name and password for this account.
  - c. From the **Access** drop-down list, choose **Engineering**.
  - d. Click **Add User**.
- Step 3** Log out of the CDSM, and log in as the user with the Engineering access level that you specified in [Step 2](#). The CDSM Setup page is displayed.
- Step 4** Choose the options for your deployment and click **Submit**. For more information about the fields on this page, see [CDSM or VVIM Setup, page F-3](#).

- Step 5** To activate the Media Scheduler, scroll down to the Media Scheduler section, and click the **ON** radio button next to the **Media Scheduler** field.
- a. In the **Activation Key** field, enter the software access key from your Right to Use Notification for the Content Delivery Application Media Scheduler (CDAMS) product.
  - b. In the **Importer/Transformer Type** field, choose either **OCN** or **SA Tribune**. The Importer/Transformer Type specifies the expected EPG format, the fields for the Input Channels page, and the expected ADI metadata.
- Step 6** To activate the Ingest Manager, scroll down to the Ingest Manager section, and click the **ON** radio button next to the **Ingest Manager** field.
- a. In the **Activation Key** field, enter the software access key from your Right to Use Notification for the Content Delivery Application Stream Resiliency, VOD ER for Gen 1 & Gen 2 Streamers (CDATSTR2-EN) product or for the Content Delivery Application Stream Resiliency, VOD ER for Gen 3 Streamers (CDATSTR3-EN) product.
- Step 7** To activate the VOD Error Repair, scroll down to the VOD Error Repair section, and click the **Enabled** radio button next to the VOD Error Repair field.
- a. In the **Activation Key** field, enter the software access key from your Right to Use Notification for the Content Delivery Application VOD Error Repair (CDAVER) product.
- Step 8** Click **Submit**.
- Step 9** Log out of the CDSM.
- 

## Navigating the CDSM

The CDSM pages consist of the elements illustrated in [Figure 3-3](#).

Figure 3-3 CDSM User Interface



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1	Left panel menu	4	Page title
2	Tabs	5	Main panel
3	Tab options	6	Tools (Home, Help, and, Logout)

The tabs are accessible from any page in the CDSM.

The tab options are used to choose the applicable level. In the Configure and Monitor pages, the tab option selected determines whether the configuration or monitoring applies to the system as a whole, to the array level, or to a specific server.

## Using Online Help

Online help is available in the CDSM. You can use it by clicking on the **Help** button in the upper-right corner of any of the pages.

Context-sensitive help is provided for the page you are viewing.

The CDSM offers several levels of help:

- Each page of the CDSM includes some basic help, normally displayed in the main panel.
- The Help button displays context-sensitive help presented in a separate browser window. The content of this page is different depending on the page of the CDSM you are viewing when you click **Help**. After you are inside the help system, you can move around to view different topics by using a variety of navigation tools:
  - Back/forward page buttons
  - Links within the page contents

- Table of Contents, accessed through the navigation panel at the left of the page.
- **Contents** icon shows and hides the Table of Contents.
- **Print** icon prints the page you are viewing.
- From the Help window, you can display the full *Cisco VDS-VR 4.1 Software Configuration Guide* by clicking the View PDF button.

## Configuration Workflows

After you have completed the initial installation and configuration of the CDEs for the VDS and you have verified connectivity to the CDSM, you are ready to configure the VDS for content delivery. The configuration workflow consists of one or more of the following:

- [VDS Configuration Workflow](#)
- [VVI Configuration Workflow](#)
- [Vault Virtualization Configuration Workflow](#)
- [TV MediaX Configuration Workflow](#)
- [TV Payout Configuration Workflow](#)

## VDS Configuration Workflow

Table 3-1 lists the basic tasks, in the recommended order, for configuring the VDS for content delivery with references to the associated sections in each chapter.

**Table 3-1 Configuration Workflow**

Task	Description	Where to Find More Information
Change administrator password	Change the administrator password for the CDSM.	<a href="#">Editing User Settings, page 7-5</a>
Interface setup	Configure the different interfaces on the VDS servers.	<a href="#">Configuring the Interfaces, page 4-65</a>
Server setup	Configure the IP addresses and ports for the interfaces, as well as other settings such as quality of service (QoS).	<a href="#">Configuring the Servers, page 4-69</a>
Route table	Route Table identifies destination subnetworks for cache, stream, and stream control interfaces. Route Table is optional.	<a href="#">Configuring the Route Table, page 4-78</a>
Stream groups setup	A Stream Group consists of one or more Streamers. Stream Groups relate to QAM gateways or destination subnetwork by the Stream Group preference.	<a href="#">Configuring Stream Groups, page 4-34</a>
Control and setup IPs	Configure the Control server and Setup server IP address for the Stream Groups.	<a href="#">Configuring the Control and Setup IPs, page 4-50</a>
QAM gateways <sup>1</sup>	Configure the QAM Gateways for the VDS.	<a href="#">Configuring QAM Gateways, page 4-4</a>

**Table 3-1 Configuration Workflow (continued)**

Task	Description	Where to Find More Information
Headend setup <sup>1</sup>	Configure service groups for gigabit Ethernet streaming, ASI streaming, and barker streams.	<a href="#">Configuring the Headend Setup, page 4-7</a>
Ingest tuning	Configure the trick-mode speeds for ingested content.	<a href="#">Configuring Ingest Tuning, page 4-15</a>

1. If the Stream Destination feature is set to IPTV, the QAM Gateway page and Headend Setup page are replaced with the Stream Destination page. A setting of Mixed for Stream Destination displays all three pages. For more information, see [Configuring Stream Destinations, page 4-9](#).

The other configuration settings, barker streams, parent/child service groups, DNS settings, and so on, can be configured in any order.

## VVI Configuration Workflow

The Virtual Video Infrastructure can be centrally managed or can use split-domain management.

### Central Management Configuration Workflow

[Table 3-2](#) lists the basic tasks, in the recommended order, for configuring the VVI with central management for content delivery with references to the associated sections in each chapter.

**Table 3-2 VVI Configuration Workflow**

Task	Description	Where to Find More Information
Change administrator password	Change the administrator password for the CDSM.	<a href="#">Editing User Settings, page 7-5</a>
Interface setup	Configure the different interfaces on the VDS servers.	<a href="#">Configuring the Interfaces, page 4-65</a>
Server setup	Configure the IP addresses and ports for the interfaces, as well as other settings such as quality of service (QoS).	<a href="#">Configuring the Servers, page 4-69</a>
Route table	Route Table identifies destination subnetworks for cache, stream, and stream control interfaces. Route Table is optional.	<a href="#">Configuring the Route Table, page 4-78</a>
Stream Groups setup	A Stream Group consists of one or more Streamers. Stream Groups relate to QAM gateways or destination subnetwork by the Stream Group preference.	<a href="#">Configuring Cache Groups, page 4-43</a>
Control and Setup IP addresses	Configure the Control server and Setup server IP address for the Stream Groups.	<a href="#">Configuring the Control and Setup IPs, page 4-50</a>
Cache Groups setup	A Cache Group consists of one or more Caching Nodes.	<a href="#">Configuring Cache Groups, page 4-43</a>
Stream to Cache map	Cache Groups are mapped to Stream Groups and given a preference.	<a href="#">Mapping Stream Groups to Cache-Fill Sources, page 4-46</a>

**Table 3-2 VVI Configuration Workflow (continued)**

Task	Description	Where to Find More Information
QAM gateways <sup>1</sup>	Configure the QAM Gateways for the VDS.	<a href="#">Configuring QAM Gateways, page 4-4</a>
Headend setup <sup>1</sup>	Associate service groups with Stream Groups.	<a href="#">Configuring the Headend Setup, page 4-7</a>
Ingest tuning	Configure the trick-mode speeds for ingested content.	<a href="#">Configuring Ingest Tuning, page 4-15</a>

1. If the Stream Destination feature is set to IPTV, the QAM Gateway page and Headend Setup page are replaced with the Stream Destination page. A setting of Mixed for Stream Destination displays all three pages, For more information, see [Configuring Stream Destinations, page 4-9](#).

## Split-Domain Management Configuration Workflow

[Table 3-3](#) lists the basic tasks, in the recommended order, for configuring the VVI with split-domain management (VVIM and Stream Manager) for content delivery with references to the associated sections in each chapter. For more information, see [Network Design, page 2-1](#) and [CDSM or VVIM Setup, page F-3](#).

**Table 3-3 VVI Split-Domain Configuration Workflow**

Task	Manager	Description	Where to Find More Information
Change administrator password	VVIM and Stream Manager	Change the administrator password for the CDSM.	<a href="#">Editing User Settings, page 7-5</a>
Interface setup	VVIM and Stream Manager	Configure the different interfaces on the VDS servers.	<a href="#">Configuring the Interfaces, page 4-65</a>
Server setup	VVIM and Stream Manager	Configure the IP addresses and ports for the interfaces, as well as other settings such as quality of service (QoS).	<a href="#">Configuring the Servers, page 4-69</a>
Route table	VVIM and Stream Manager	Route Table identifies destination subnetworks for cache, stream, and stream control interfaces. Route Table is optional.	<a href="#">Configuring the Route Table, page 4-78</a>
Stream groups setup	Stream Manager	A Stream Group consists of one or more Streamers. Stream Groups relate to QAM gateways or destination subnetwork by the Stream Group preference.	<a href="#">Configuring Stream Groups, page 4-34</a>
Control and setup IPs	Stream Manager	Configure the Control server and Setup server IP address for the Stream Groups.	<a href="#">Configuring the Control and Setup IPs, page 4-50</a>
Cache Groups setup	VVIM	A Cache Group consists of one or more Caching Nodes.	<a href="#">Configuring Cache Groups, page 4-43</a>
Stream to cache mapping	Stream Manager	Cache Groups are mapped to Stream Groups and given a preference.	<a href="#">Mapping Stream Groups to Cache-Fill Sources, page 4-46</a>
QAM gateways <sup>1</sup>	Stream Manager	Configure the QAM Gateways for the VDS.	<a href="#">Configuring QAM Gateways, page 4-4</a>



**Table 3-3 VVI Split-Domain Configuration Workflow (continued)**

Task	Manager	Description	Where to Find More Information
Headend setup <sup>1</sup>	Stream Manager	Configure service groups for gigabit Ethernet streaming, ASI streaming, and barker streams.	<a href="#">Configuring the Headend Setup, page 4-7</a>
Ingest tuning	VVIM	Configure the trick-mode speeds for ingested content.	<a href="#">Configuring Ingest Tuning, page 4-15</a>

1. If the Stream Destination feature is set to IPTV, the QAM Gateway page and Headend Setup page are replaced with the Stream Destination page. A setting of Mixed for Stream Destination displays all three pages. For more information, see [Configuring Stream Destinations, page 4-9](#).

**Note**

Before configuring the VHO ISA Settings on the Stream Manager, resubmit the Shared ISA settings on the VVIM. If the CDSM or VVIM GUI pages are not updated with respect to the ISA settings, resubmit the Shared ISA Settings page on the VVIM and the VHO ISA Setup page on the Stream Manager.

The other configuration settings, Vault Groups, Master Vault Group, Vault Redundancy Map, barker streams, parent/child service groups, DNS settings, and so on, can be configured in any order.

## Vault Virtualization Configuration Workflow

The Vault Virtualization can be configured as follows:

- ISA Regionalization (with local Vaults in headend)
- Virtual Content Store (without local Vaults in headend)
- Shared Content Store (pre-Release 2.5.2 version of Virtual Content Store)

This section consists of the configuration workflow for the following:

- [ISA Regionalization Configuration Workflow](#)
- [Virtual Content Store Configuration Workflow](#)

## ISA Regionalization Configuration Workflow

In addition to the configuration workflow for split-domain management, [Table 3-4](#) lists the basic tasks, in the recommended order, for configuring ISA Regionalization with references to the associated sections in each chapter. For more information, see [ISA Regionalization, page 2-16](#) and [CDSM or VVIM Setup, page F-3](#).

**Table 3-4 ISA Regionalization Configuration Workflow**

Task	Manager	Description	Where to Find More Information
CDSM Setup	Stream Manager (CDSM)	Configure each Stream Manager for ISA Regionalization.	<a href="#">Configuring ISA Regionalization, page F-9</a>
VVIM Setup	VVIM	Configure the VVIM for ISA Regionalization	<a href="#">Configuring ISA Regionalization, page F-9</a>
Vault groups	Stream Manager	Assign local Vault Groups, configure Vault redundancy, and assign the master Vault.	<a href="#">Configuring Vault Groups, page 4-38</a> <a href="#">Mapping Vault Groups for Redundancy, page 4-48</a> <a href="#">Configuring the Master Vault Group, page 4-49</a>

**Note**

Trick-mode settings on the VVIM and Stream Managers must be the same. To configure trick-mode settings in the CDSM GUI, choose **Configure > System Level > Ingest Tuning**.

## Virtual Content Store Configuration Workflow

In addition to the configuration workflow for split-domain management, [Table 3-5](#) lists the basic tasks, in the recommended order, for configuring Virtual Content Store with references to the associated sections in each chapter. For more information, see [Virtual Content Store, page 2-20](#) and [CDSM or VVIM Setup, page F-3](#).

**Table 3-5** *Virtual Content Store Configuration Workflow*

Task	Manager	Description	Where to Find More Information
CDSM Setup	Stream Manager (CDSM)	Configure each Stream Manager for Virtual Content Store.	<a href="#">Configuring Virtual Content Store, page F-10</a>
VVIM Setup	VVIM	Configure the VVIM for Virtual Content Store.	<a href="#">Configuring Virtual Content Store, page F-10</a>

**Note**

Trick-mode settings on the VVIM and Stream Managers must be the same. To configure trick-mode settings in the CDSM GUI, choose **Configure > System Level > Ingest Tuning**.

When Content Storage is set to **Distributed** and the VVI is set to centralized management (VVI & Stream Manager), The following configuration pages are affected:

- [Configure > System Level > Distributed ISA Setup](#) page
- [Configure > Array Level > VHO ISA Settings](#) page

Both the above pages require configuration.

## TV MediaX Configuration Workflow

[Table 3-6](#) lists the basic tasks for configuring the TV MediaX Suite CDA with references to the associated sections in each chapter.

**Note**

TV MediaX is an optional feature and requires a software activation key to enable it. For more information, see [Initializing the VDS and Activating the Optional Features, page 3-3](#).

**Table 3-6** *TV MediaX Configuration Workflow*

Task	Where to Find More Information
Specify the data feed import type used to populate the Media Scheduler, and the transformer type used to process the ADI metadata.	<a href="#">Configuring Call Signs, page 4-24</a>
Map each channel to a multicast group IP address and port, and specify the settings for every program in the channel.	<a href="#">Configuring Input Channels, page 4-26</a>

**Table 3-6** *TV MediaX Configuration Workflow (continued)*

Task	Where to Find More Information
Upload an EPG file. During the upload process, the EPG file is parsed into database records that in turn populates the Media Scheduler.	<a href="#">Uploading an EPG File, page 7-22</a>
Schedule the ingest of content. The Media Scheduler does the following: <ol style="list-style-type: none"> <li>1. Values from the EPG file are combined with the values from the Input Channels page, and the ADI metadata XML file is created.</li> <li>2. The database records are marked according to the Media Scheduler settings (scheduled, unscheduled, marked for scheduling, and so on).</li> <li>3. The ADI metadata is published to the backoffice.</li> </ol>	<a href="#">Configuring the Media Scheduler, page 4-56</a>

## TV Playout Configuration Workflow

[Table 3-7](#) lists the basic tasks for configuring the TV Playout CDA with references to the associated sections in each chapter.



### Note

TV Playout is an optional feature and is only displayed if the TV Playout feature is enabled. For more information, see [Playout Scheduler, page F-13](#).

**Table 3-7** *TV Playout Configuration Workflow*

Task	Where to Find More Information
Specify the streaming mode (active-active or active-standby) for the Barker Stream/Playlist and Playout Scheduler.	<a href="#">Configuring the TV Playout Application, page 7-20</a>
Map each channel to a multicast group IP address and port, and specify the settings for every program in the channel.	<a href="#">Configuring Input Channels, page 4-26</a>
Upload an TV Playout file. During the upload process, the file is parsed into database records that in turn populates the TV Playout Scheduler.	<a href="#">Importing a TV Playout Schedule, page 7-21</a>

The following CDSM pages are part of TV Playout CDA:

- Configure > System Level > Output Channels
- Configure > Array Level > Manual Ingest
- Configure > Array Level > Barker Stream/Playlist
- Configure > Array Level > Playout Scheduler
- Configure > Array Level > Playout Exporter
- Configure > Array Level > EPG Exporter
- Monitor > Array Level > Barker Monitor

- Monitor > Array Level > Playout Monitor
- Reports > System Level > Playout/Barker Reports (Only report available for TV Playout)
- Maintain > Users > User Default Settings
- Maintain > Services > Content Manager
- Maintain > Software > Application Configuration
- Maintain > Software > Playout Importer
- Maintain > Software > Playout Upgrade Status