

Cisco Vision Operations Guide

Dynamic Signage Director (StadiumVision Director)

CV-HD, CV-UHD, DMP-2K, SV-4K

Release 6.0

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About This Guide

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Note: Beginning in Release 6.0, Cisco StadiumVision Director is part of a new and expanded solution called Cisco Vision. Cisco StadiumVision Director is enhanced to support the new Cisco Vision solution and is renamed to Cisco Vision Dynamic Signage Director.

Where features existed prior to Release 6.0, you will continue to see references to Cisco StadiumVision Director and associated UI illustrations. Where features are introduced in Release 6.0, you will see references to the Cisco Vision Dynamic Signage Director naming and newer UI references.

This document describes how to operate Cisco Vision Dynamic Signage Director (StadiumVision Director) including the concepts and tasks that you need to understand to be able to deliver your content to a screen, run an event, and monitor and maintain the operation of Cisco Vision Director.

Revision History

[Table 1 on page xiv](#) provides information about changes to this document.

Table 1 Revision History Table

Date	Description
November 21, 2017	<ul style="list-style-type: none"> ■ Product name change from StadiumVision Director to Cisco Vision Director ■ Introducing 2 new DMPs: Cisco Vision UHD (CV-UHD) and Cisco Vision HD (CV-HD) ■ Multiple UI enhancements and redesign involving global and high-level menu navigation, the Control Panel, and Management Dashboard access ■ New Log-in Screen and Main Menu with Asset Library allowing for tagging, creating playlists, and organizing content into Folders right from the Main Menu page (role specific) ■ Command Center Monitoring is now Device Management ■ Designer app with control Widget and Template design added to Main Menu at Library ■ Touchscreen support with devices that are HID-compliant and use standard HID drivers ■ New content enhancements such as validity and playability granularity, new external channel source capabilities, addition of portrait .url content, and new display streaming (encoding) ■ Dynamic wall sizing supporting multiple video wall zones per script ■ State scheduling of script states ■ Better TV control in Device Management (CCM) ■ Support omission for the 4310G DMP
June 1, 2017	<p>Revised the default value from 2000 to 120000 (ms) for the <code>dmp.MonitorAPIDelay</code> in Serial Commands for RS-232 Communication, page 21.</p> <p>Added restriction for care when editing a scheduled script in Navigating the Scheduler Application User Interface, page 163</p> <p>Added new topic Troubleshooting Blocked Scripts, page 170</p> <p>Added "Clear a blocked script" task to Troubleshooting Event Operations, page 179.</p>
December 13, 2016	Added updates for feature support in Release 5.0.
November 1, 2016	<p>Revised Best Practices for Event Scripts, page 150.</p> <p>Revised Best Practices for Managing Backups, page 226.</p>

Date	Description
July 26, 2016	Revised several topics to correct and remove the Event Operator role from having access to CCM. Added updates to restrictions in the Replacing Content in a Playlist During an Event, page 128 .
July 1, 2016	Moved and updated the topic Running Database Maintenance, page 201 to clarify the note about requirement for restart of the Cisco StadiumVision Director software, and added a step for it in the task list.
May 16, 2016	Initial version for Cisco StadiumVision Director Release 4.1.0-419 and Cisco StadiumVision Director Remote Release 4.1.0-10.



Before You Begin

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This guide focuses on the background information and tasks for standard operation and maintenance of Cisco Vision Director. It can be used with the companion [Cisco Vision Director Operations Playbook](#) for your release, which documents a venue and role-based workflow approach with the appropriate timelines for running a Cisco Vision event.

Network administrators and those responsible for the installation and deployment of the Cisco Vision network and Cisco Vision Director system should also refer to the documents in [Table 1 on page 1](#).

Note: The links provided in [Table 1 on page 1](#) are to the cisco.com listing pages for that document type. Be sure to select the document that corresponds to your release.

Table 1 Related Documentation for Cisco Vision Dynamic Signage Director

Document	Purpose
Cisco Vision Release Notes	This document provides information about the Cisco Vision solution including hardware and software requirements, new and changed features, installation and upgrade information, known issues, and defects.
Cisco Vision Video Headend Design and Implementation Guide	This document is available to qualified Cisco Vision partners and provides information about how to design and implement a Cisco Vision video headend. It includes hardware and software requirements, recommended physical layouts, recommended configuration settings, as well as deployment caveats and considerations.
Cisco Connected Design Implementation Guide	This document is available to qualified Cisco Vision partners and provides a detailed description of the Cisco Connected Solution. This solution provides the wired infrastructure is specifically design to support the various applications used in Sports and Entertainment venues. As such, it describes the design decisions including relevant samples of configuration and accompanying descriptions of the features within the network elements.
Cisco Vision Director Software Installation and Upgrade Guide	This document describes the requirements and tasks to install and upgrade the Cisco Vision Director software and media player firmware.
Cisco StadiumVision Director Remote Installation and Upgrade Guide	This document describes the requirements and tasks to install and upgrade the software for Cisco StadiumVision Director Remote. It also includes documentation for hardware installation and configuration on the Cisco UCS C22 server, if using that hardware for your Cisco StadiumVision Director Remote server platform.

Document	Purpose
Cisco Vision Director Server Administration Guide	<p>This document describes the tasks involved in setting up and maintaining the Cisco Vision Director and Cisco StadiumVision Director Remote servers.</p> <p>The content is intended for Cisco Vision system administrators and technical field engineers who are responsible for designing and deploying Cisco Vision solutions. It is expected that readers of this document are familiar with basic IP networking and Linux.</p>
Cisco Vision SV-4K and DMP-2K Media Player Deployment Guide	<p>This document provides information about both the physical installment and initial configuration of the SV-4K and DMP-2K media player with TV displays.</p>
Cisco Vision Local Control Areas Design and Implementation Guide	<p>This document provides information about how to design and implement a Cisco Vision local control area, which includes luxury suites, clubs, bars, restaurants, and back offices. It includes hardware and software requirements, recommended physical layouts, best practice configuration settings, as well as deployment guidelines and considerations.</p>



Getting Started with Cisco Vision Dynamic Signage Director Operation

First Published: 2017-11-21

This section provides an introduction to some of the basic information to get started using Cisco Vision Director. It includes the following topics:

- [Introduction to the Cisco Vision Dynamic Signage Director User Interface](#)
- [Introduction to Cisco Vision Director APIs](#)
- [Understanding User Roles](#)

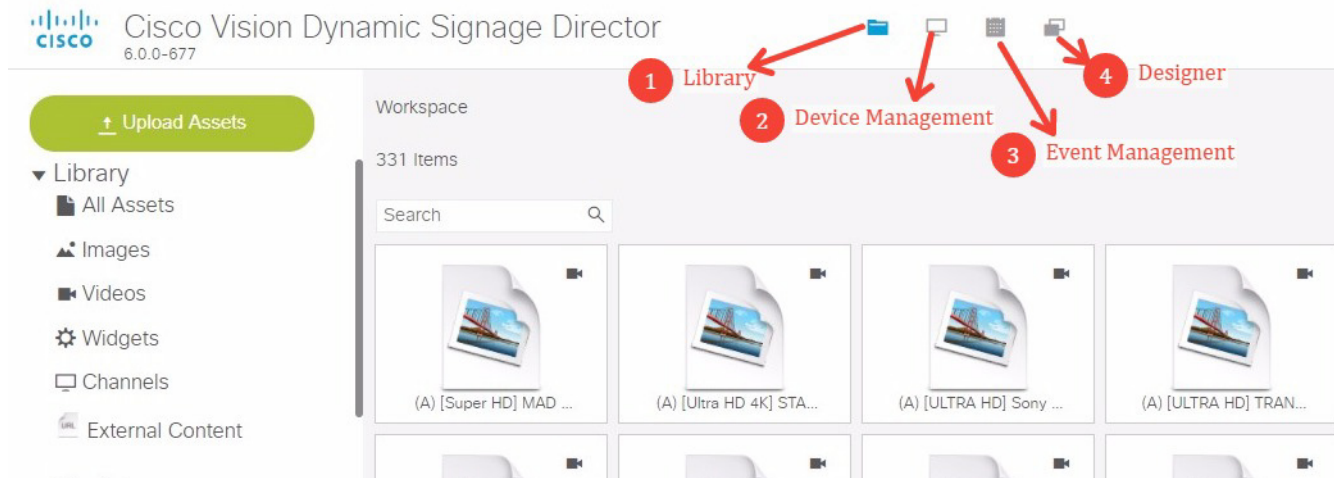
Introduction to the Cisco Vision Dynamic Signage Director User Interface

This section includes the following topics:

- [Main Menu](#)
- [Dynamic Menu Board Application](#)
- [Scheduler Application](#)
- [Device Management \(formerly Command Center Monitoring\)](#)
- [Management Dashboard](#)
- [Turn TVs Off Application](#)
- [System State Report Application](#)
- [Manage Software Application](#)

Cisco Vision Dynamic Signage Director Main Menu

When you log into Cisco Vision Director, the Main Menu serves as the entry point to different application interfaces that are used to perform a variety of tasks ([Figure 1 on page 4](#)).

Figure 1 Cisco Vision Dynamic Signage Director Main Menu

Main Menu

The Cisco Vision Director Main Menu is a web-based portal that is the central point of operation for the following four basic areas:

- Asset Library
- Device Management
- Event Management
- Designer

It is available to the Cisco Vision Dynamic Signage Director Administrator, Content Manager, and Event (and venue) Operator roles.

The Main Menu allows you to:

- Manipulate all assets (images, videos, widgets, channels, and external content)
- Schedule and create new event scripts and also copy/duplicate them to create additional event scripts for multiple events.

TIP: The Scheduler application uses a calendar interface available from the Main Menu allowing you to set start and stop times easily.
- Create unique content areas for concourses, suites, and restaurants.
- Centrally control the content, video, and ticker placement on TV displays for the designated entitlement areas.
- Centrally control the channels available to each TV as well as remotely control the TV power, volume, input, and closed captioning through the Cisco Vision Director interface.
- Centrally control the display of emergency or delay signage for designated areas.
- Import, export, tag, and log content played on TVs in the venue.
- Change content “ad hoc” on displays during such things as a touchdown or home run.
- Dynamically control the content on menu boards in the concession stands during an event.

The Main Menu allows you to import and manage content, create event scripts, schedule events, and edit screen templates.

The Main Menu also provides an interface for certain administrative tasks such as configuring channels for luxury suites, configuring devices (Cisco DMPs, Cisco IP Phones, third-party remotes, video displays), staging content, and collecting proof of play data.

Dynamic Menu Board Application

The Dynamic Menu Board (DMB) Application is a custom application within Cisco Vision Director that allows you to add your own content for display in a particular menu theme and layout. The default configuration of the DMB application provides sample menu themes. You can copy a sample theme to create menus of your own items that will use the predefined format and layout of that theme. The DMB menu themes support background graphics and both textual and graphical content depending on the predefined format for the selected theme and layout.

You can add content to a menu independently, or you can link to content that are already defined in Cisco or Point of Sale (POS) samples in Cisco Vision Director. The benefit of linking to content in a store is that you can make a change within the store, such as hiding a menu item or changing its price, and populate the change across all menus that are appropriately configured with a link to that item.

Beginning in Release 3.2 and later releases, Cisco Vision Director introduced additional ways to create menu board content using a combination of the DMB application and the External Content Integration feature.

For a summary of these menu board creation methods, see [Menu Board Content](#).

Scheduler Application

The Scheduler application is introduced in Release 4.0 to provide a calendar-based script scheduling function that you access from the Cisco Vision Dynamic Signage Director Main Menu.

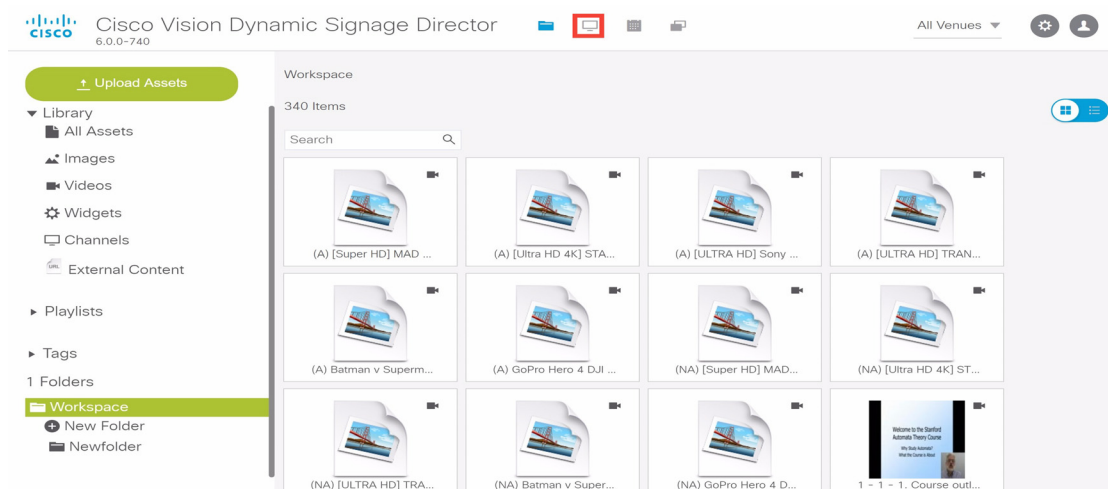
Note: The Scheduler Application is only available to Administrator and Event Operator roles.

The application opens a calendar that allows you to perform the following tasks:

- Schedule a single occurrence or recurring event series in advance.
- Modify and/or cancel a single occurrence, recurring event series, or an occurrence within a recurring event series.
- Automate the start and stop of an event script.
- Define event script parameters when scheduling an event script.
- View scheduled event scripts by day, week, and month.
- Schedule a state within a script

Device Management (formerly Command Center Monitoring)

The Command Center Monitoring (CCM) application, now known as Device Management, shows at-a-glance device status information for media players and their attached TV displays during an event.

Figure 2 Accessing Device Management

Device Management (CCM) Application Highlights

- Is accessible from the Main Menu.
- Supports multi-venue site selection.
- Polls media players every 120 seconds (default) and auto-refreshes the monitoring display.
- Supports different ways to view device status.
- Allows you to select media players that you want to monitor by group/zone or search by Location Name, Description, IP or MAC address.
- Allows you to filter the selected device list by several criteria, such as by DMP state or media player model, among others.
- Provides button for Administrator to restart a media player.

TIP: In Release 6.0, you can use the wildcard “%” to search for partial phrases or names in Device Management.

Management Dashboard

The Management Dashboard application provides a comprehensive interface for managing and monitoring the services and status of the DMPs, TVs, the Cisco Vision Dynamic Signage Director Server, and DMP-to-switch connections for your deployment.

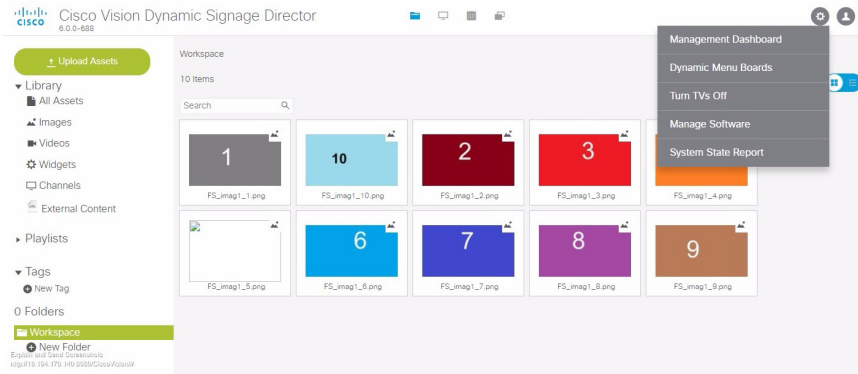
Using the Management Dashboard, you can:

- View status, configure settings, and send commands to devices to keep your network up and properly running
- Upload versions of firmware for automated distribution to DMPs
- Quickly identify issues that need your attention by observing alert icons that provide at-a-glance device status
- Mouse over an alert icon to see a tool tip with suggestions for how to resolve the issue

Additionally, detailed status for devices and monitored services is easily accessible from the Management Dashboard interface to help you pinpoint and troubleshoot issues occurring on the network.

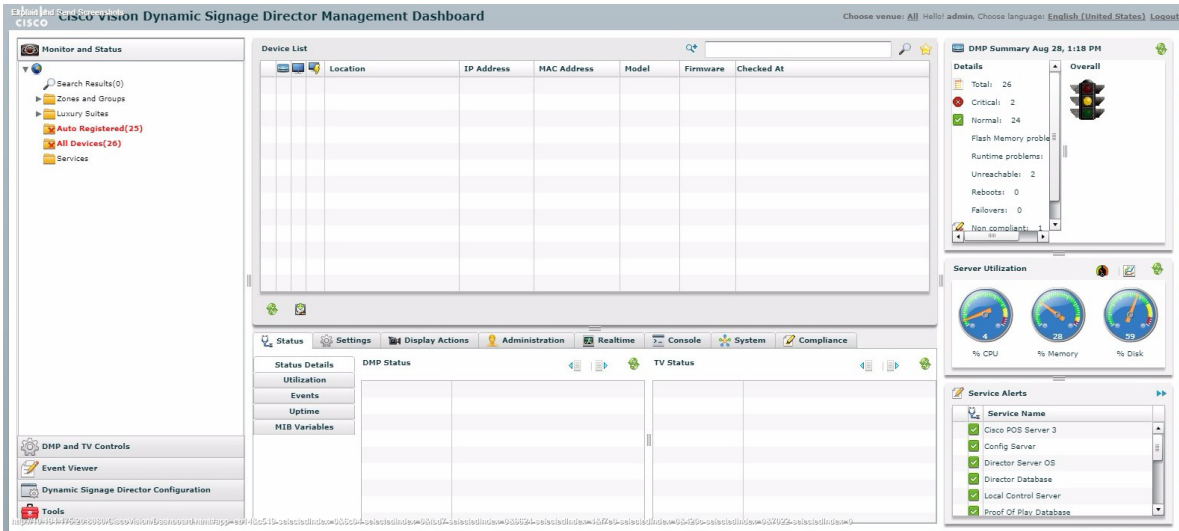
Note: Not all commands or display areas apply to all media players; some features are unique to media player type. Some areas of the Management Dashboard might not report the information for a particular device. [Figure 3 on page 7](#) shows the Management Dashboard, accessed from the **Tools** icon.

Figure 3 Navigating to the Management Dashboard Screen



[Figure 4 on page 7](#) shows the Management Dashboard when you first open the application.

Figure 4 Management Dashboard Interface



Layout of the Management Dashboard

[Figure 5 on page 8](#) shows the six primary panels available in the dashboard.

Figure 5 Areas of the Management Dashboard

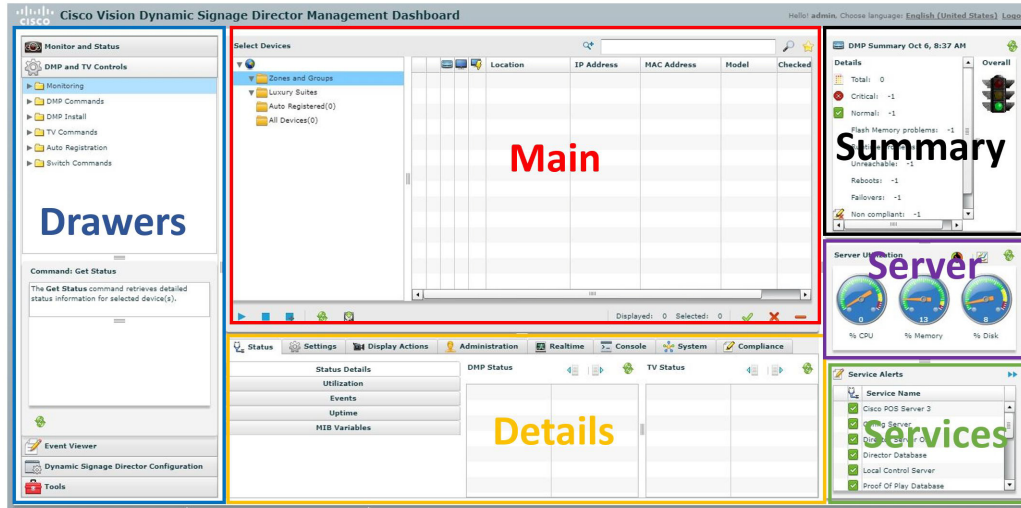


Table 1 on page 9 provides a breakdown of what each panel displays.

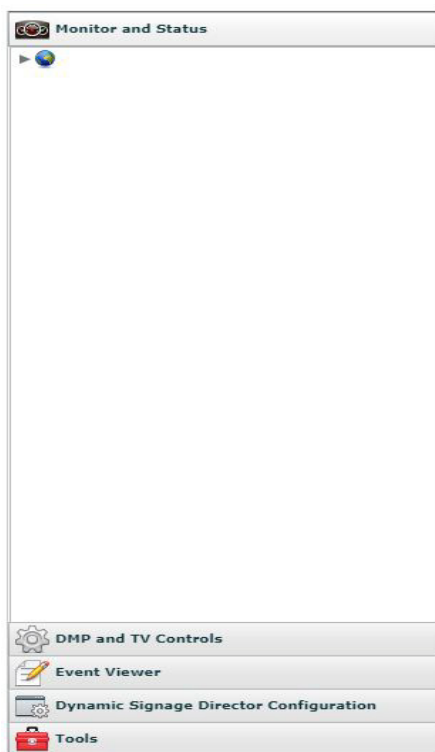
Table 1 Management Dashboard Panel Descriptions

Panel Area	Description
Drawers	Drawer panel groups operations of the Management Dashboard
Main	Shows information for the selected functions or devices and drawer area
Details	Shows details for the selected functions or devices in the Main panel
Summary	Shows how many media players you have and a summary of their overall condition
Server	Shows utilization statistics for the Cisco Vision server
Services	Displays the status of the services that control the operation of Cisco Vision

Management Dashboard Drawers

Selecting and expanding a Management Dashboard *drawer* is generally how you begin working with and navigating the Management Dashboard interface. Figure 6 on page 9 shows the set of drawers available in the Management Dashboard.

Figure 6 Dashboard Drawers



Each drawer opens a group of related commands and options for monitoring, configuring, and managing the operation of Cisco Vision hardware and software components.

Turn TVs Off Application

With so many TVs in each Cisco Vision deployment, it is important that all TVs are turned off when not in use. The Turn TVs Off application allows an Operator or Administrator to control the power to all TVs within one or more zones, or across the entire venue. Only authorized users can access the Turn TVs Off application.

The Turn TVs Off application provides the following functionality:

- Administrators can define which TVs (which zones) are to be controlled by the Turn TVs Off custom application.
- Administrators can exclude certain TVs, for example those in the back offices, from being controlled by the Turn TVs Off application.
- A non-IT person, for example the security guard, can access the portal to turn off the TVs (as defined by the Administrator).
- Email notifications can be sent to a configurable list of email addresses whenever the portal is used to turn TVs off.

When the Turn TVs Off button is clicked from the Main Menu:

- Commands to turn the TVs off are sent to the DMPs attached to all TVs in the configured zones.
- An email notification is sent to a pre-defined set of users.
- The change in TV status is logged in Cisco Vision Dynamic Signage Director.

System State Report Application

The System State Report application enables easy capture and export of system state data for the Cisco Vision Director server. This information can be sent to a remote support engineer to help troubleshoot any issues that occur with the system.

For more information, see the "[System State Reports](#)" module of the [Cisco Vision Director Server Administration Guide](#).

Manage Software Application

The Manage Software application is used only by the Administrator to:

- Install custom fonts.
- Install language packs for user interface (UI) localization.
- Upgrade Cisco Vision Director software.

For more information about how to use the Manage Software application, see the [Cisco Vision Director Software Installation and Upgrade Guide](#).

Introduction to Cisco Vision Director APIs

This section summarizes the Application Programming Interfaces (APIs) that are supported in Cisco Vision Director.

- [Event Trigger API](#)
- [Media Planner Import API](#)
- [Point of Sale \(POS\) API](#)
- [User Control API](#)

Note: All APIs in the Cisco Vision Dynamic Signage Director are made available by special agreement. Contact your Cisco Systems representative for more information.

Event Trigger API

Cisco Vision Dynamic Signage Director supports an HTTP-based Representational State Transfer (REST) API that a software or hardware contact closure source can use to trigger one or more actions by the Cisco Vision Dynamic Signage Director software.

For more information about support for external input triggers, see the [Configuring Cisco Vision Director for External Triggers](#) guide. Event Trigger API is not supported by Cisco Technical Assistance Center personnel.

Note: If you want to control external triggers from a software application, you can contact your Cisco Systems representative to obtain the Event Trigger API that is made available by special agreement. “TriggerSVD” is an example of a third-party demo application for the Event Trigger API on iOS (supporting Apple iTouch, iPhone, and iPad products) and is available as a free download from the iTunes store.

Media Planner Import API

Cisco Vision Director supports the Media Planner Import API that is used to import external, third-party generated playlists. The API can be used to support automatic updates to an already imported playlist that has been placed in a script, or an external playlist can be manually imported.

The Media Planner API supports the following features:

Import Playlist Functionality

- Automatically creates playlist and populates it with existing content.
- Automatically links missing content to playlist after each missing content item is uploaded.
- Updates to playlists tied to a script that have all content items requires no human intervention.

Special User Interface Indications

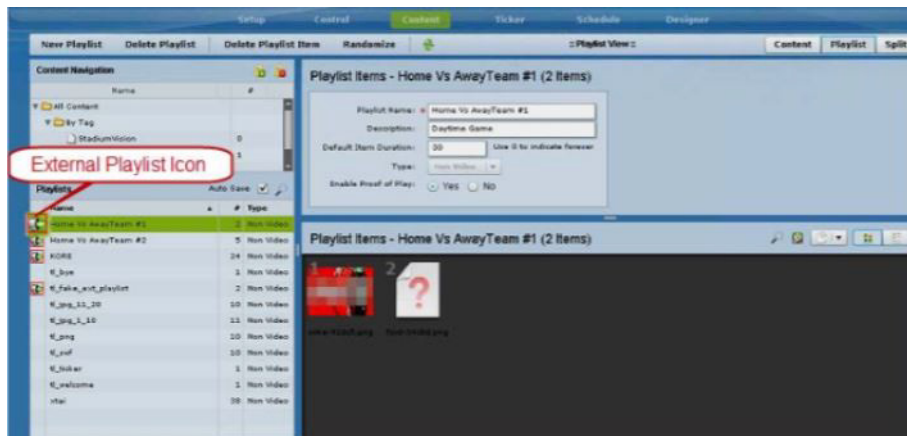
- Imported playlist are easily identifiable as “external playlist.”
- Indicates playlist with missing content.
- Warn user when trying to assign a missing content playlist to template.
- Warn user when starting a script with missing content playlist.

Proof of Play Addition

- Works in the same way as a manually created playlist, but with more granularity.
- Automatic insertion of Proof of Play (POP) tag for each time slot play.

User Interface Example

The API automatically creates the playlist, which you can easily identify by an icon that tags it as an external playlist source ([Figure 7 on page 12](#)).

Figure 7 External Playlists in Control Panel Content Screen

The playlist is populated with existing content in Cisco Vision Director, and you are alerted to any missing content in the playlist by a red box around the external playlist icon on the Content screen. The missing content item is identified with a question mark. Once you import any missing content, it is automatically linked to the external playlist.

Current proof of play reporting is fully supported for external playlist sources and PoP tags are automatically created for specified sponsor IDs. Any missing content is not included in the PoP report.

Point of Sale (POS) API

In Cisco StadiumVision Director Release 3.2 and later releases (now Cisco Vision Director), the POS API can be used to support integration of Point of Sale (POS) vendor data for use in the External Content Integration feature. This method of POS data integration provides a more flexible way of creating and updating menu boards using the Widgets tool independent of the legacy Dynamic Menu Board (DMB) application.

The DMB application currently supports a more tightly-coupled integration with Micros and Quest POS vendors that allows for dynamic content updates along with support of in-suite ordering capabilities. The POS API does not support in-suite ordering, but would allow for more open integration of POS data from other POS vendors that can conform to the XML schema supported by Cisco Vision Director.

For more information about how to use the POS integration with Data Integration, see the [Cisco Vision Director Data Integration Guide](#).

User Control API

Cisco Vision Director supports the in-suite API, which allows querying as well as sending control information to Cisco Vision Director.

The API supports the following areas:

- [HDMI-In Control](#)
- [Information Retrieval](#)
- [Security](#)
- [TV Control](#)

HDMI-In Control

The following API HDMI-In controls are available on the DMPs:

- Start HDMI-In streaming
- Stop HDMI-In streaming

Information Retrieval

The API information capabilities include:

- Query of which suites that can be controlled.
- Query of all players that can be controlled.
- Query of all players with in a suite that can be controlled.
- Query control features that exist within all suites.
- Query control features that exist within a specific suite.
- Query control features that exist for all players.
- Query control features that exist for a specific player.
- Query A/V inputs that exist for all players.
- Query A/V inputs that exist for a specific player.
- Query of closed captioning capabilities of Vision Director.
- Query the channel guide for a specific suite. If a channel is marked as a favorite, the favorite order is included.
- Query the status of all players that can be controlled.
- Query the status of a specific player.
- Detailed HTTP POST response messages in XML.

Security

The API security capabilities include:

- Unique permanent PIN for each suite in order to access and control the devices within.
- Temporary PIN for each suite that changes per event script run, can be displayed on TV. The temporary PIN is changed every day at 4 a.m. (default) based on the default scheduled task in Cisco Vision Director. It also can be changed on demand using the UI.
- Common master PIN for administrative control.

TV Control

The API TV control capabilities include:

- Power on and off of the TV.
- Channel change to a channel within the guide.
- Channel change up or down from the current channel in the guide.
- Channel favorites and favorite order.
- Volume change to a specific value.
- Volume change up or down from current value.
- Mute the audio with a specific on or off.

Understanding User Roles

- Mute and unmute the audio with a toggle.
- Closed caption on with specific CC setting.
- Closed caption off.
- A/V input change with specific input setting.
- Show and hide of the information banner on the TV.

Video Replay

Beginning in Cisco Vision Dynamic Signage Director Release 5.0, the User Control API is enhanced to support video replay functions on suite TVs using a mobile application.

The API video replay capabilities include:

- Start the replay application.
- Stop the replay application.
- Load the replay application on multiple DMPs or group of DMPs.
- Start playback of the replay video from encoded URL on specified devices.
- Stop playback of the replay video on specified devices.
- Pause playback of currently running replay video.
- Resume playback of currently running replay video.

Understanding User Roles

Before you begin to work with Cisco Vision Director, it is important that you understand Role-Based Access Control (RBAC).

Cisco Vision Director deployments normally have a team of people who are responsible for different aspects of the site setup and event operation. For example, in addition to a system administrator, there is usually an event operator, a content manager, and a technical support person, among other personnel. Each person has different skills and needs for working with the Cisco Vision Director software.

The Cisco Vision Director software implements Role-Based Access Control (RBAC) to control permissions and user access to only the portions of the system for which they are trained and authorized to use. More than one user can be assigned to the same role in the software. However, only a single role can be assigned to each username.

For more details about RBAC in a multi-venue environment, see [Role-Based Access Control for Hierarchical Management of Multiple Venues](#) in the [Cisco Vision Administration Guide: Dynamic Signage Director, 6.0](#).

Administrator Role

Note: This section describes the primary (or central) Administrator role in a Cisco Vision Director system. In Release 5.0, an additional administrative role called the **Venue Administrator** is introduced. A Venue Administrator has a subset of administrative permissions that are authorized on a per-venue basis.

The primary Administrator role has unrestricted access to the Cisco Vision Director software, and is the only role that can add users and assign RBAC privileges to them. The Administrator role is pre-configured in Cisco Vision Director and cannot be deleted. However, you can change the password. You also can have more than one user assigned with Administrator privileges.

Understanding User Roles

The Cisco Vision Administrator is the person who is responsible for deploying the Cisco Vision solution throughout the venue.

Note: Administrators have global access to all venues in a multi-venue environment. *Venue Administrators* only have access to those venues for which they are authorized by a primary Cisco Vision Director Administrator.

The primary administrator has sufficient permissions to do all functions, and is the only role able to do the following tasks:

- Using the Software Manager to install language packs, fonts, or upgrade software on Cisco Vision Director servers.
- Configuring multiple venue support and Cisco Vision Director Remote servers.
- Associating objects to venues.
- Creating additional users and assigning roles.
- Adding devices to Cisco Vision Director.
- Configuring local control areas such as luxury suites, back offices, and bars.
- Configuring Point of Sale (POS).
- Configuring the Dynamic Menu Board (DMB) application.
- Configuring external triggers.
- Configuring Device Manager and rebooting DMPs.

RBAC Role

[Table 2 on page 16](#) provides an overview of the roles that can be assigned by the Administrator in Cisco Vision Dynamic Signage Director.

Table 2 Cisco Vision Dynamic Signage Director Roles

Role	Description
Concessionaire	<p>Concessionaires have access only to the Dynamic Menu Board application backgrounds, which allows modification of certain text-based and graphics items, and the background graphic on menus.</p> <p>All content uploaded by the concessionaire is available to all users that have sufficient permissions based on the roles assigned to them.</p> <p>The Concessionaire role does not have permissions in the Control Panel or the Management Dashboard, and they can only see the DMB themes that they create.</p>
Content Manager	<p>Content Managers are responsible for uploading content and ads provided by the creative services team. They create event scripts so that the correct content displays in the proper area of the venue and the proper area of the TV screen according to the specified schedule.</p> <p>The Content Manager role has permissions in Cisco Vision Director to configure event states/scripts, zones, groups, screen templates, playlists, and tickers.</p> <p>Content Managers can also assign widgets for custom menus and create playlists for those menus.</p>
Event Operator	<p>Event Operators run the Cisco Vision Director event scripts during an event. The event operator role has permissions to schedule scripts using the Scheduler application, start and stop scripts, and modify their states.</p> <p>They can change the transition of an event state from time-based to manual, move an event into one of the three ad hoc states (Inside Emergency, Outside Emergency, or Delay), and approve ticker content (legacy version).</p> <p>Additionally, the event operator can execute state changes and is responsible for performing the pre-game walk-through.</p> <p>Event Operators also can use the TV Off application.</p>
Facility Operator	<p>Facility Operators have access only to the TV Off application. The facility operator must access this application directly using the <code>http://ipaddress:9090/web/sv/home</code>, where <i>ipaddress</i> is the IP Address of the Cisco Vision Director server.</p>
Help Desk	<p>Help Desk users have read-only permissions to view and monitor information on the Management Dashboard and to use CCM. This role does not have permissions in the Control Panel, except to change their own password.</p> <p>For more information on the tasks performed by the help desk role, see the Vision Director Management Dashboard Guide.</p>

Table 2 Cisco Vision Dynamic Signage Director Roles

Role	Description
Support	<p>Support users are responsible for first-level technical support. They have limited access to the Management Dashboard to monitor DMP status, troubleshoot, and manage the DMPs on the Cisco Vision network. They also have access to CCM. The support role does not have permissions in the Control Panel, except to change their own password.</p> <p>For more information on the tasks performed by the help desk role, see the Cisco Vision Director Management Dashboard Guide.</p>
Venue Administrator	<p>(Release 5.0) Venue Administrators have limited permissions at the venues authorized by the central Administrator for that user, for the following areas of Cisco Vision Director:</p> <p>Control Panel—Content, Control (Script control and Staging), Schedule.</p> <p>Management Dashboard—Read-only access with limited command support.</p> <p>Command Center Monitoring—Read-only access.</p> <p>Setup—Devices (Display specifications only); Read-only access to Zones & Groups, Channels, Luxury Suites.</p>
Venue Operator	<p>(Release 3.1 and later). Venue Operators have script control for venues authorized by the administrator for that user. In the Management Dashboard, venue operators can view and monitor information on the Management Dashboard with read-only access to the venues for which permissions are granted. They also have access to CCM.</p> <p>Note: Venue Administrators and Venue Operators are the only roles that have venue-specific permissions. For more information, see Configuring Cisco Vision Dynamic Signage Director for Multiple Venue Support in the Cisco Vision Administration Guide: Dynamic Signage Director, 6.0.</p>

Note: Venue Administrators and Venue Operators are the only roles that have venue-specific permissions. For more information, see [Configuring Cisco Vision Dynamic Signage Director for Multiple Venue Support](#) in the [Cisco Vision Administration Guide: Dynamic Signage Director, 6.0](#).

Access Summary By Role

[Table 3 on page 17](#) provides a summary of the areas of access in the Cisco Vision Director software by each user role.

Table 3 Role Access Summary by Functional Area in Cisco Vision Director

Functional Area	Admin	Concessionaire	Content Manager	Event Operator	Facility Operator	Help Desk	Support	Venue Admin	Venue Operator
Control Panel - Setup Screen									
Channels	Yes	—	Yes	—	—	—	—	Read Only	—
Data Integration	Yes	—	Yes	—	—	—	—	—	—
Devices	Yes	—	—	—	—	—	—	Limited ¹	—
Menus	Yes	—	Yes	—	—	—	—	—	—
My Profile	—	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Understanding User Roles

Proof of Play	Yes	-	-	-	-	-	-	-	-
Stores	Yes	-	-	-	-	-	-	-	-
Suites	Yes	-	-	-	-	-	Limited 2	Read Only	-
Templates	Yes	-	Yes	-	-	-	-	-	-
Triggers	Yes	-	-	-	-	-	-	-	-
Users	Yes	-	-	-	-	-	-	-	-
Venues	Yes	-	-	-	-	-	-	-	-
Zones & Groups	Yes	-	Yes	Yes	-	-	-	Read Only	-
Control Panel - Other Screens									
Content	Yes	-	Yes	-	-	-	-	Limited ³	-
Control	Yes	-	-	Yes	-	-	-	Limited ⁴	Limited 4
Control/Staging	Yes	-	-	Yes	-	-	-	Yes	-
Schedule	Yes	-	Yes	-	-	-	-	Yes	-
Ticker (legacy)	Yes	-	Yes	Yes	-	-	-	-	-
Widgets	Yes	-	Yes	-	-	-	-	-	-
Other Applications									
Command Center Monitoring	Yes	-	-	-	-	-	Read Only	Read Only	Read Only Read Only
Dynamic Menu Boards	Yes	Yes	Yes	-	-	-	-	-	-
Management Dashboard	Yes	-	-	-	-	-	Limited ⁵	Yes ⁶	Limited ⁷ Limited ⁸
Scheduler	Yes	-	-	Yes	-	-	-	-	-
Software Manager	Yes	-	-	-	-	-	-	-	-
System State Report	Yes	-	-	-	-	-	-	-	-
Turn TVs Off	Yes	-	-	Yes	Yes	-	-	-	-

1. Venue Administrators can only edit the Display Specifications panel.
2. Support users can set up TV control PINs and channel guides for suites.
3. Venue Administrators can delete content associated (tagged) to the venues for which that venue admin is authorized. External content, channels, and Dynamic Menu Board (DMB) content items are global to all venues. Therefore, these global content items also can be deleted by the venue admin.
4. Venue Administrators and Venue Operators have script control only, and only for venues authorized by the Administrator for that user.
5. Help Desk users can view and monitor information on the Management Dashboard with read-only access. They also can run Get Status, Ping, Display IP, and Ping Test commands for DMPs in the Management Dashboard.
6. Support users can run Get Status, Ping, Display IP, Ping Test, TV On/Off, Set Display Input, Set Display Banner, Set Closed Captions, Set Video Channel, Cabling Test using TDR, and Show TDR Test Results commands.
7. Venue Administrators can view and monitor information on the Management Dashboard with read-only access to the venues for which permissions are granted. They also can run Get Status, Ping, Display IP, and Ping Test commands in the Management Dashboard for the DMPs in the venues at which that Venue Administrator is authorized.
8. Venue Operators can view and monitor information on the Management Dashboard with read-only access to the venues for which permissions are granted. They also can run Get Status, Ping, Display IP, and Query Syslog commands in the Management Dashboard for the DMPs in the venues at which that Venue Operator is authorized.



Working with TV Displays

First Published: 2017-11-21

User Role: Administrator, Venue Administrator

This module provides information about setting up TV displays in Cisco Vision Director.

User TV Control

Support for all methods of user TV control is enabled by default in Cisco Vision Director for all media player types. This includes control of TV displays using local control devices and applications, IP phones, touch screens and infrared remote (IR) control.

Some venues have a need to disable user TV control for certain events or suites, or to limit the TV to display a particular channel or control its volume.

TV Display Specification

Cisco Vision Director requires that you configure certain commands and attributes for the TVs used in the venue to ensure proper communication between the media player and the TV. This configuration is defined in what is called a *display specification*.

By default, Cisco Vision Director includes display specifications for several common TV display models. If your TV display model is not included in the default specifications, then you need to add and configure it.

A different display specification is required for each unique TV type, based on which commands are used to control the TVs. In some cases, all TVs from a certain manufacturer can use the same display specifications. In other cases, different TV models from the same company might require different display specifications.

Note: As a best practice, configure your TV display specifications before configuring Locations in Cisco Vision Director. You must select the “Display Spec” for the type of TV (brand/model) that is physically installed when you configure a Location.

Closed Captioning

The standard for closed captioning (CC) in North America, which all digital TV broadcasters typically follow, is the Consumer Electronics Association (CEA)-608 and CEA-708 closed captioning standard. [Figure 1 on page 20](#) shows US CC standards.

IMPORTANT: Closed Captioning will not work in Europe or anywhere outside of North America.

Figure 1 Closed Captioning Support in Cisco Vision Dynamic Signage Director



This standard is generally supported on all broadcast channels from service providers. Cisco Vision Director is automatically configured to enable closed captioning CC1-CC4 support on the Cisco SV-4K devices.

Content Orientation

The default orientation for all content in Cisco Vision Director is landscape mode.

In Release 4.1 and earlier releases, you can manually create content in vertical format (*static graphics* only) and rotate it. Release 5.0 supports auto-rotation of content in portrait mode set in the TV display specification.

Guidelines for Portrait Mode Auto-Rotation

- Supported in Release 5.0 and later releases.
- Allows DMPs to automatically rotate content for proper orientation on vertically- positioned displays.
- Supported for all content sources for a *single* TV display.
- Scaling of content across multiple display screens in portrait mode is only supported for multicast streaming video.
- Enabled using the "dmp.Portrait=true" display parameter when configuring TV display specifications in the Control Panel.

HDMI-CEC

Support for HDMI Consumer Electronics Control (CEC) is introduced in Release 5.0. It allows you to control the following three TV functions:

- Power On
- Standby (Power Off)
- Power Status

When HDMI CEC TV control is enabled, HDMI CEC is used instead of RS-232 for TV control functions. To control TVs, you can run the TV On and TV Off from the **DMP and TV Controls > TV Commands** menu in the Management Dashboard.

You can configure a TV display for HDMI-CEC TV control using one of two methods:

- Apply the HDMI/CEC Standard display specification for new TVs, where the HDMI-CEC display parameters are automatically enabled and set to default values.
- Modify an existing display specification to set the HDMI-CEC display parameters manually.

The following commands are used HDMI/CEC TV control:

- **dmp.powerQueryByCEC**—(New in Release 5.0) Enables powerQuery to get TV Power status using HDMI/CEC instead of RS-232.
- **dmp.TVControlbyCEC**—(New in Release 5.0) Enables TV control using HDMI/CEC instead of RS-232.
- **dmp.monitorAPIDelay**—Frequency of power query command sent by Dynamic Signage Director over HDMI CEC to the TV. The default is 120000 ms (2 minutes). This command is also supported when using TV control with RS-232.
- **dmp.monitorPower**—Enables Dynamic Signage Director to run a power query to the TV using the Get Status command from the Management Dashboard. This command is also supported when using TV control with RS-232.

TV Qualification for HDMI-CEC Support

Note: Not all TVs support the standard HDMI-CEC commands. Test the TV models that you plan to install for support of HDMI CEC. Turn on HDMI-CEC. TV manufacturers refer to CEC by different trade names. For example, Anynet+ (Samsung), BRAVIA Link (Sony), EasyLink (Phillips), and SimpLink (LG).

For more information about the successfully tested TV for HDMI CEC, see [Release Notes for Cisco Vision Dynamic Signage Director Release 6.0](#).

Serial Commands for RS-232 Communication

RS-232 commands can be used to control TV functions such as On/Off, mute, volume and external input. In more specialized scenarios they might also be used to configure TV tile matrix capabilities.

RS-232 responses are used to retrieve the current status of a TV. Currently Cisco Vision Director uses responses only when querying a TV for its current power on/off status.

For situations where a TV cannot be controlled via RS-232 or otherwise, volume and mute can be controlled by the media player instead. This behavior is indicated by configuring volume and mute commands that start with sigma=.

Serial Commands for RS-232 TV Control

[Table 1 on page 22](#) shows a summary of the display parameters and RS-232 commands for the SV-4K and DMP-2K with their default values. The table shows command names and values for an LG 19LH20 TV display only.

Note: Different TV display models may support only certain RS-232 commands.

Table 1 SV-4K and DMP 2K Serial Commands

Command Name	Value
dmp.Input1response	62203031204F4B303878
dmp.Input2response	62203031204F4B303278
dmp.Input3response	62203031204F4B303478
dmp.Input4response	62203031204F4B303078
dmp.volumeResponseFormat	66203031204F4B5F5F78
dmp.muteOnResponse	65203031204F4B303078
dmp.monitorAPIDelay	2000
dmp.monitorAVInput	true
dmp.monitorMute	true
dmp.monitorPower	true
dmp.monitorVolume	true
dmp.displayPwrQuery	rs232.tx_hex=6B612030312046460D
dmp.displayAVInputQuery	rs232.tx_hex=6B622030312046460D
dmp.muteQuery	rs232.tx_6B652030312046460D
dmp.volumeQuery	rs232.tx_6B662030312046460D
Input1	rs232.tx_6B622030312030390D
Input2	rs232.tx_6B622030312030320D
Input3	rs232.tx_6B622030312030340D
Input4	rs232.tx_6B622030312030300D

¹The commands in this table are supported by the LG 19LH20 TV display.

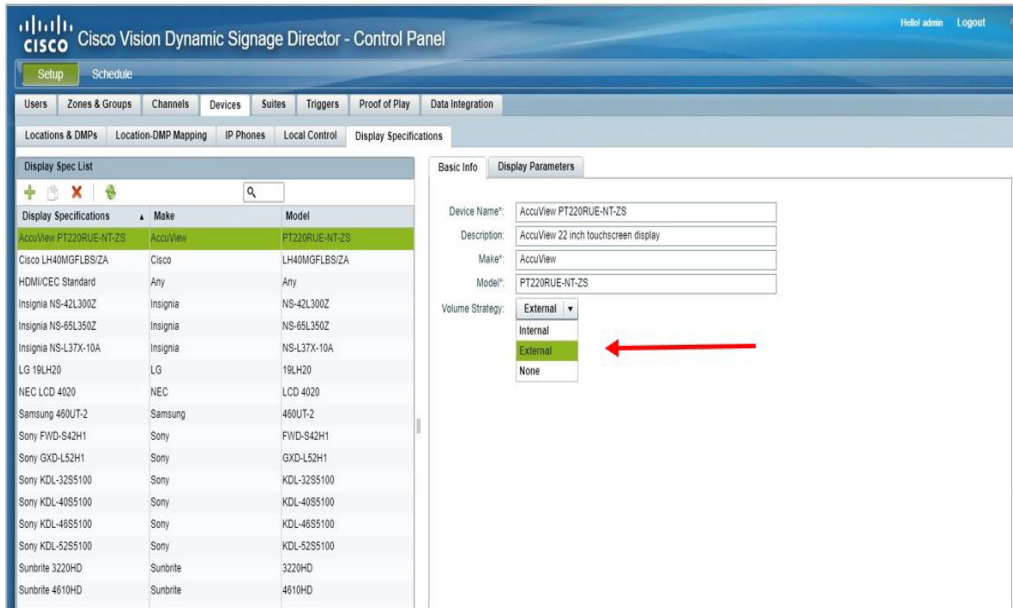
Volume Control

When properly configured in Cisco Vision Director, volume changes can be made from methods such as the IP phone, IR remote, Management Dashboard, or event script state change.

Volume changes for the primary video audio can be controlled for the SPDIF (on the SV-4K only), analog audio, and HDMI out ports only when the TV display specification volume strategy is set to *internal*.

Volume Strategy Option

Cisco Vision Director supports three Volume Strategy settings, see [Figure 2 on page 23](#).

Figure 2 Control Panel Display Specifications–Volume Strategy Option

Internal—Internal allows volume change control of the audio feed by Cisco Vision Director (such as by the IP phone, IR remote, Management Dashboard, or event script state).

External—External allows volume change control by sending serial commands from the media player to the TV (via RS-232).

Note: We recommend external volume strategy because most TVs have better audio range than the DMP and many TVs show a visual indicator of the volume as it changes. This strategy also avoids problems if someone changes the volume using the TV panel buttons or the TV remote.

None—The volume cannot be adjusted. This is useful for TVs that are used for video only where audio (if any) is provided separately (such as in a bar where an overhead system provides the audio).

How to Configure TV Display Specifications

This section includes the following topics:

- [Guidelines for RS-232 Command Configuration, page 23](#)
- [Configuring Basic Information for TV Display Specifications, on page 24](#)
- [Configuring Portrait Mode in TV Display Specifications, page 26](#)
- [Configuring Touchscreen Support, page 26](#)
- [Configuring Touchscreen Support, page 26](#)

Guidelines for RS-232 Command Configuration

Consider the following guidelines when configuring RS-232 commands in TV display specifications:

- Cisco Vision Director supports only one RS-232 command per event state.

- All RS-232 commands configured in Cisco Vision Director must use the prefix rs232.tx_hex=.
- RS-232 responses are used to retrieve the current status of a TV.
- RS-232 responses are always configured without a prefix.
- Cisco Vision Director uses responses only when querying a TV for its current power on/off status.
- For situations where a TV cannot be controlled via RS-232 or otherwise, volume and mute can be controlled by the media player instead.

Configuring Basic Information for TV Display Specifications

User Role: Administrator

To configure basic information for TV display specifications:

1. Go to **Control Panel > Setup > Devices > Display Specifications**.
2. Do one of the following:
 - Select an existing display specification.
 - Click the + icon to add a new display specification.
3. Refer to [Table 2 on page 24](#) to specify the options in the Basic Info panel.

Table 2 Basic TV Display Specification Options

Option	Description
Name	Name that appears in the Display Spec drop-down list when you are adding TV Types to Locations. TIP: Be sure that this name is unique and easily identifies the type of TV that it defines.
Description	Any text string to describe the TV display specification.
Make	TV manufacturer/brand name.
Model	Model(s) of the brand to which this display specification applies. This can be a single module type, a group of models, or "All" to specify that all TVs of this brand use the same display specification.
Volume Strategy	Specifies how the TV volume is controlled. The possible values are: Internal—Volume is controlled using IP phone, IR remote, and so on. External—Volume is controlled by sending serial commands from the media player to the TV using RS-232. None—Fixes the volume so that it cannot be adjusted. For more information, see Volume Control, page 22 .

4. Click Save.
5. Apply configuration to the DMPs:

- SV-4K and DMP-2K—Reboot the DMP(s).

Configuring HDMI-CEC TV Control in TV Display Specifications

User Role: Administrator, Venue Administrator

You can apply the HDMI/CEC Standard display specification for new TVs, or you can modify an existing display specification to add the display parameters commands independently.

If you use the HDMI/CEC Standard display specification, the four related HDMI-CEC commands for TV control are enabled and set to any corresponding default value.

To configure HDMI-CEC display parameters:

1. Go to **Control Panel > Setup > Devices > Display Specifications**
2. Select an existing display specification or add a new one.
3. Click **Display Parameters**.
4. Find and set the following parameters:

Display Parameter	Value
dmp.powerQueryByCEC	True— Enables powerQuery to get TV power status using HDMI-CEC instead of RS-232. False—Disables powerQuery using HDMI-CEC. Note: This command is not supported by all TV models.
dmp.TVControlbyCEC	True—Enables TV control using HDMI-CEC instead of RS-232. False—Disables HDMI-CEC TV control.
dmp.monitorAPIDelay	Number (in ms) for the frequency of power query command to be sent by Dynamic Signage Director. The default in HDMI/CEC Standard display specification is 12000 ms (or 2 minutes).
dmp.monitorPower	True—Enables Dynamic Signage Director to run a power query to the TV using the Get Status command from the Management Dashboard. False—Disables the option.

Note: You can run the **Get Status** command from the Management Dashboard to get the latest TV health status known to the DMP. This information can be up to two minutes old, or a few seconds depending on when the power query last ran.

If the “dmp.monitorPower” parameter is set to false then you will not get the correct TV health status.

5. Click Save.

Closed Captioning

6. Reboot the DMPs.

Configuring Portrait Mode in TV Display Specifications

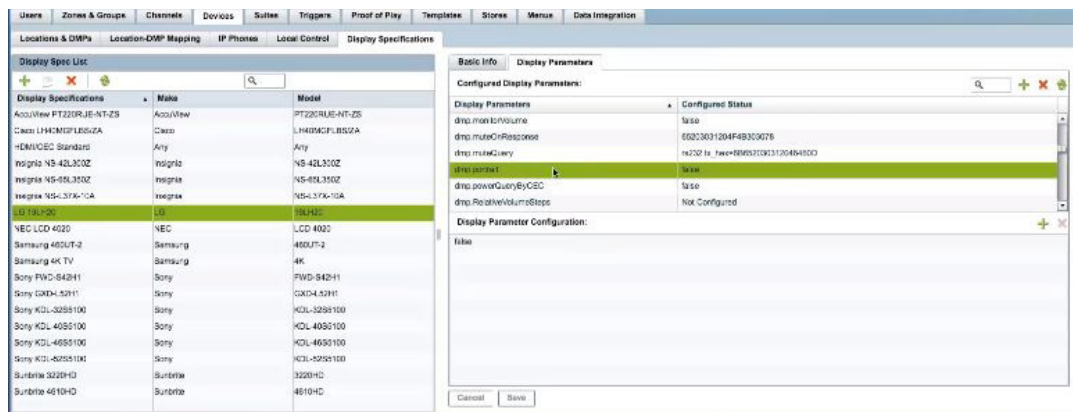
User Role: Administrator, Venue Administrator

Portrait rendering mode allows the DMPs to automatically rotate content for proper orientation on vertically-positioned displays.

To configure the portrait mode display parameter:

1. Go to: **Control Panel > Setup > Devices > Display Specifications**
2. Select an existing display specification or add a new one.
3. Click **Display Parameters**.
4. Click the + icon to add a new display parameter.
5. Where prompted to enter a new command, type **dmp.Portrait** in the box.
6. In the Configured Status box, type **true**. See [Figure 3 on page 26](#).

Figure 3 Setting Portrait Display Parameter



7. Click **Save**.
8. Reboot the DMPs.

Configuring Touchscreen Support

For proper touchscreen operation with HTML5 pages, be sure that your touchscreen devices are human interface device (HID)-compliant and are using standard HID drivers.

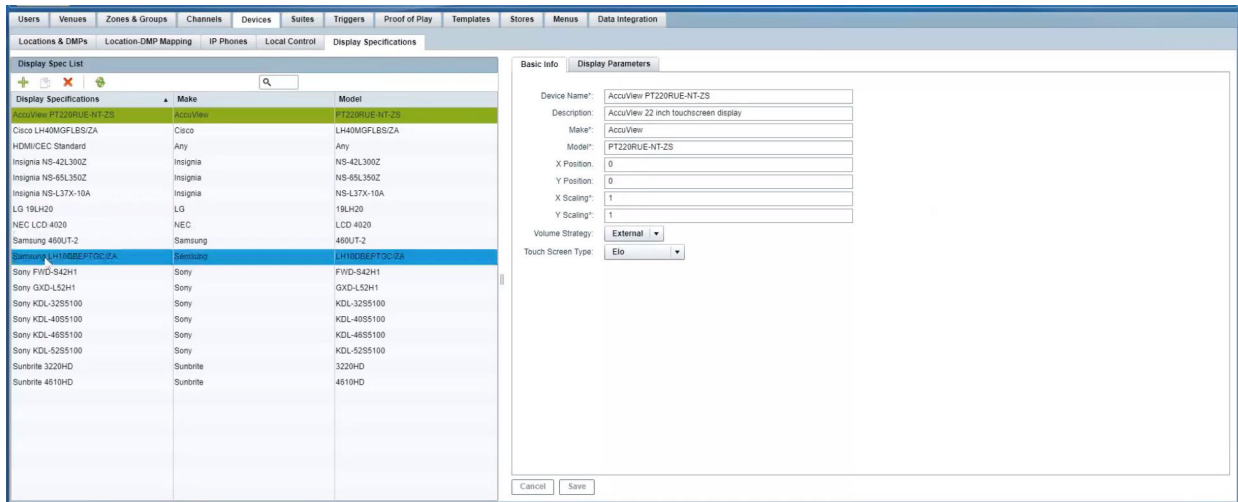
Note: Some manufacturers claim support for HID while using custom drivers. Verify that standard HID drivers are used.

By default the display parameter is set to **false** for Cisco Vision Director. To enable touchscreen capability between your device and the DMP, you must change that.

To enable touchscreen capabilities for your specific device:

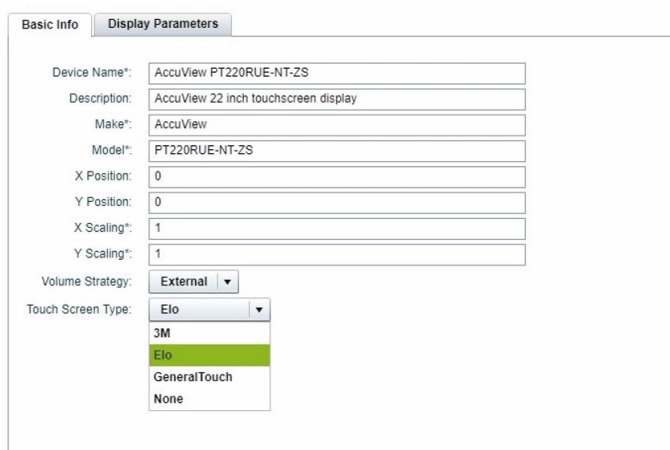
1. In Cisco Vision Director, go to **Control Panel > Setup > Devices > Display Specifications** ([Figure 4 on page 27](#)).

Figure 4 Setting Display Specifications

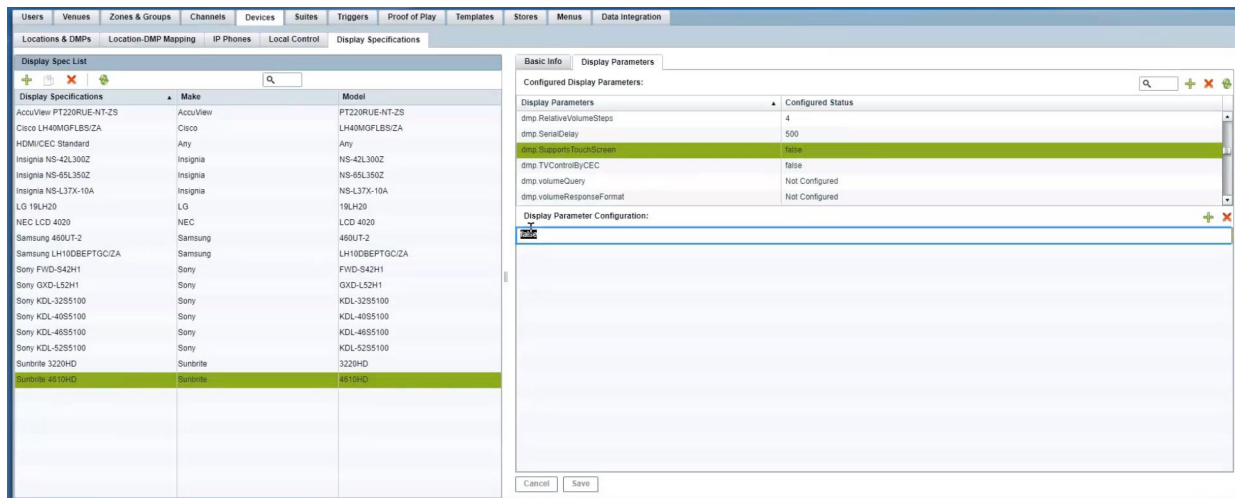


2. Create a display specification for your device screen. See the device specifications for this information. Use the green plus icon to create a new spec.
3. Choose Elo for **Touch Screen Type** from the **Basic Info** tab (Figure 5 on page 27).

Figure 5 Touch Screen Type



4. Or, scroll down the list of devices. Find your Make and Model and select it.
5. Click the **Display Parameters** tab.
6. Scroll down to **dmp.SupportsTouchScreen** and select it (Figure 6 on page 28).

Figure 6 Setting .DMPSupportsTouchScreen Parameter

7. In the Display Parameter Configuration box, change false to “true” for your device (Figure 6 on page 28).

8. Click **Save**.

By enabling this feature, you are giving touch screen support to a state or a channel to your content (generally an HTML page).

To connect the DMP to your device, use a USB A to B-type cable that connects from the DMP USB port to your device.

Configuring Serial Commands for External Volume Support

User Role: Administrator

When using the external volume strategy, you must configure RS-232 commands to send to the TV to change the volume.

Note: When using internal volume strategy, volume commands do not need to be configured.

Cisco Vision Director allows you to configure two types of volume controls:

- **Relative**—Depends on the volume increments set in the TV, which vary from model to model.
- **Absolute**—Preferred method. Defines a number of increments that are used to control the volume between the minimum and maximum volume levels.
 - For the SV-4K—Absolute volume is configured only by the series of *Volumen* commands only.

Table 3 on page 29 provides information about the serial commands used to configure the Relative and Absolute types of external volume control.

Table 3 Serial Commands for External Volume Support

Serial Command	Volume Type	Description
Volumen	Absolute	<p>Specifies the volume increment level, where n is a number from 1 to the total number of volume levels supported.</p> <p>Configure multiple Volumen commands for the number of increments being supported.</p> <p>Specify whole numbers for "n." For example specify "1" –not 01.</p> <p>TIP: The best practice is to set Volume1 to a value greater than zero. A zero volume level is treated as a mute command, and when the user adjusts the volume up, some displays show the status bar as if their volume is turned up, but the display remains muted.</p>
VolumeUp	Relative	Specifies an incremental volume setting determined by internal settings in the TV.
VolumeDown	Relative	Specifies an incremental volume setting determined by internal settings in the TV.
For some TVs, the increase/decrease in volume is very slight requiring multiple VolumeUp or VolumeDown commands to achieve the desired effect. For these TVs, use the dmp.RelativeVolumeSteps" serial command.		
dmp.RelativeVolumeSteps	Relative	<p>Specifies the number of times the RS-232 command for VolumeUp or VolumeDown is repeated each time that you press up or down on the IR remote (or on the phone). The default is 1.</p> <p>For example, if the value is set to 8, then a VolumeUp or VolumeDown command sends 8 copies of the RS-232 string.</p>
dmp.SerialDelay	Relative	<p>Specifies the delay between sending repeated serial commands from the media player. The default is 5000 ms.</p> <p>This command can be used for certain TV displays that discard repeated serial commands that are sent too close together.</p>

Table 4 on page 30 shows an example of RS-232 command strings defined for Absolute volume control using 12 increments.

Table 4 Volume Count Command Example for an LG TV Display

Serial Command	String
Volume1	rs232.tx_hex=6B662030312030350D
Volume2	rs232.tx_hex=6B662030312031300D
Volume3	rs232.tx_hex=6B662030312031350D
Volume4	rs232.tx_hex=6B662030312032300D
Volume5	rs232.tx_hex=6B662030312032350D
Volume6	rs232.tx_hex=6B662030312033300D
Volume7	rs232.tx_hex=6B662030312033350D
Volume8	rs232.tx_hex=6B662030312034300D
Volume9	rs232.tx_hex=6B662030312034350D
Volume10	rs232.tx_hex=6B662030312035300D
Volume11	rs232.tx_hex=6B662030312035350D
Volume12	rs232.tx_hex=6B662030312036300D

How to Configure the TV Display Banner

This section includes the following topics:

- [Modifying the TV Banner Duration, page 30](#)
- [Disabling the TV Display Banner, page 31](#)

Modifying the TV Banner Duration

The TV display banner is a graphical banner that temporarily appears at the top of the display to provide information about the TV that received a TV command ([Figure 7 on page 31](#)). The display banner is enabled by default with a duration of 5 seconds.

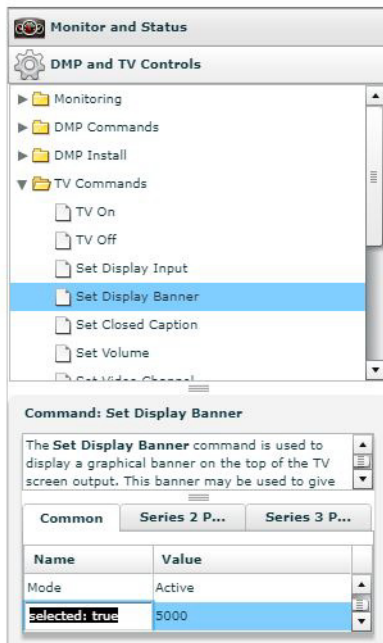
Figure 7 TV Display Banner and Screen Identification



To configure the TV display banner:

1. From the Management Dashboard, go to: **DMP and TV Controls > TV Commands> Set Display Banner.**
2. In the Duration box, set the duration in milliseconds.
3. Select the devices to which you want to apply the command.
4. Click the play button to run the command on those devices.

Figure 8 Set Display Banner–Common Panel



Disabling the TV Display Banner

User Roles: Administrator

How to Configure the TV Display Banner

For a better visual experience for video wall displays, disable the TV display banner. The TV display banner is enabled by default for all TV displays.

To disable the TV display banner globally:

1. From the Management Dashboard, go to: **Tools > Advanced> Registry**
2. In the Registry Data box, click **Add Row**.
3. In the key field, type **localControl.banner.disable**.
4. In the value field, type **true**.
5. Click **Apply**.



Working with Zones, Groups, and Locations

First Published: 2017-11-21

User Roles: Administrator, Content Manager

This module provides an overview of the Cisco Vision hierarchy of zones, groups, and locations to manage content delivery in a venue.

Information About Zones, Groups, and Locations

Cisco Vision supports reliable delivery of content to thousands of endpoints, providing venues the flexibility to place numerous TVs throughout the concourses, in locations such as:

- Bars and restaurants
- Luxury suites
- Locker rooms
- Concession areas
- Restrooms
- Back offices

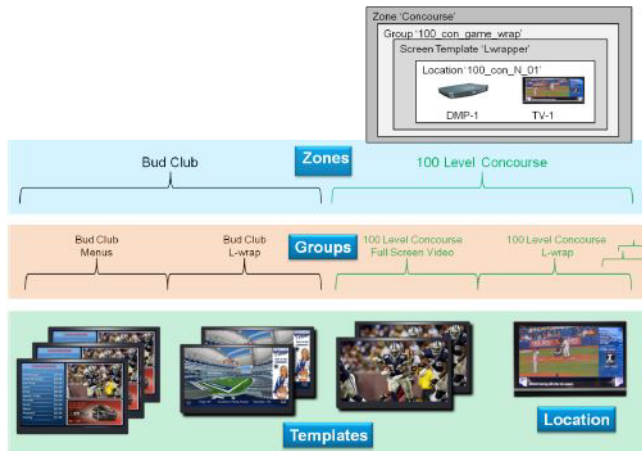
Digital content, in the form of still or animated graphics and video ad insertions, can be targeted and delivered—with accompanying event video in HD or separately—to any display or group of displays throughout the venue.

When you have hundreds or thousands of TVs on which you want to display different video signage, sponsored content, TV channels, and menus, you need a way to automate the configuration and manage the endpoint locations.

Cisco Vision Dynamic Signage Director defines a hierarchical architecture that allows you to easily identify the location of the displays and manage the content that they are playing.

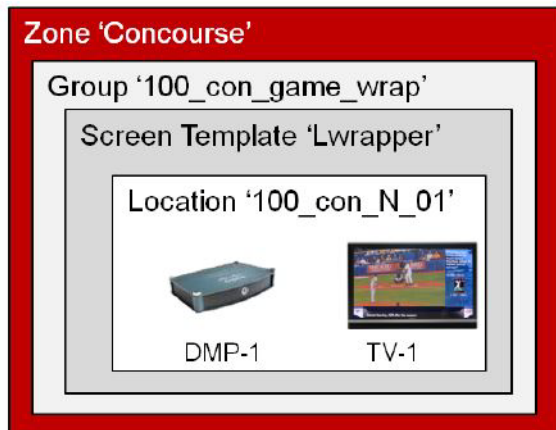
To provide a logical way of organizing the hundreds to thousands of endpoints in a venue, Cisco Vision implements a hierarchy of the following entities shown in [Figure 1, on page 34](#):

- Zones
- Groups
- Screen templates
- Locations

Figure 1 Zones, Groups, Templates, and Locations Hierarchy

Zones

A *zone* is typically a physical area in the venue. Examples of zones include concourses, clubs, and team stores. [Figure 2, on page 34](#) shows the nested hierarchy with a zone named 'Concourse' at the top level.

Figure 2 Nested Hierarchy with Zone at Top Level

Groups

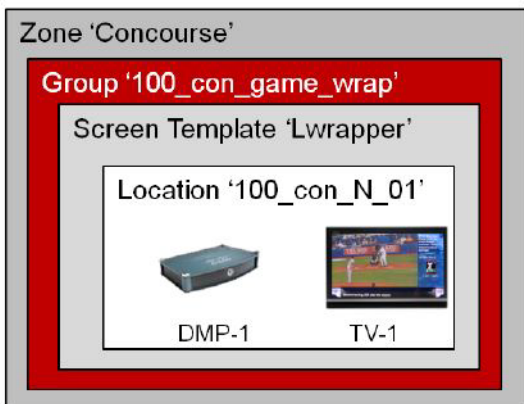
Groups are the second level in the hierarchy. You can think of groups as “children” or subsets of a zone. A *group* defines a collection of devices (DMPs/TVs) that all display the same content, using the same template. Groups consist of a set of *locations* in the hierarchy.

Example

Consider the case of TVs in a concourse area on which you want to show a game feed with sponsored advertising. Rather than configure each individual TV to show this content, you can configure them as a group and change all of the TVs with a single action. You can then associate the group to a zone to identify the area of the stadium where they are located.

[Figure 3, on page 35](#) shows a group named "100_con_game_wrap" that is part of the "Concourse" zone. As indicated by the name of the group, this is for all of the TV displays using the game wrap format (from a screen template) in Concourse 100 of the venue.

Figure 3 Group within a Zone



Screen Templates

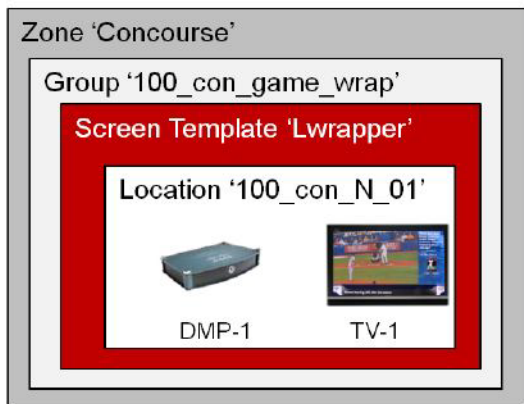
Screen templates are not technically part of the Cisco Vision device hierarchy. They define how a particular TV display is divided into regions to show different arrangements of video, signage, and advertising.

However, screen templates are an important concept to understand within the group- zone hierarchy because they are assigned to groups and zones to define the format of the displays within them.

Note: Every device belonging to the same group will display the same template.

Figure 4, on page 35 shows that a screen template named "Lwrapper" is associated with the TV display in location "100_con_N_01," which is part of the "100_con_game_wrap" device group. This example shows only one location, but if there were any number of locations within the group, the same template would apply to all of those TV displays.

Figure 4 Screen Template Associated with All Locations in a Group



Locations

Locations are the lowest level in the Cisco Vision hierarchy. A *location* is a subset of a group that defines a specific place in the venue where a TV and DMP reside.

Figure 5, on page 36 shows a location named "100_con_N_01" which indicates that the TV-1 and DMP-1 are located on the North Concourse 100 level.

Figure 5 Location Example

Locations help you keep track of exactly where a TV and DMP is physically located in the stadium. For example, if someone tells you that a TV in a restroom at the concourse 100 level is not working, you can refer to the location information to quickly find the TV and fix it.

Note: Be careful NOT to confuse the *civic location* on Cisco Catalyst switches with the DMP Location in Cisco Vision Dynamic Signage Director.

Default Zones from Legacy Cisco Vision Dynamic Signage Director Releases

Note: In older Cisco Vision Director Releases, the following default zones were provided:

- Delay_zone
- Emergency_zone
- Non-event_zone

These zones will only appear in your system if you have upgraded from a release where they were introduced, and if they were used.

Consider the following guidelines for these default zones:

- You need to assign a group to each of the default zones.
- Default zones cannot be renamed.
- If you want to assign all media players to one of these zones, you should create a new group, add all media players to that group, and then add that group to the zone.
- Any media players that do not have an action in the emergency/delay state will have proof of play disrupted in the emergency/delay state.
- All TVs assigned to the emergency_zone will display the configured Emergency message when the Emergency ad hoc state is started by the Event Operator.

DMP and Location Relationships

Under Devices in the Control Panel, Cisco Vision Director identifies three object types for DMPs and Locations.

- DMP
- Location
- DMP+Location

After DMPs are deployed, they must be linked to Locations to change their state to Ready and to be able to stage content to them.

These object types can be created manually using the Cisco Vision Director web interface or uploaded using the Bulk Administration Tool (BAT). For more information about BAT, see the [Cisco StadiumVision Director Bulk Administration Tool](#) document.

For information about adding Locations, see [Adding Locations Manually in Control Panel Setup, page 41](#)

DMP Type

The DMP object type specifies the following information about the media player. This object can be manually added or automatically created by the device auto-registration process.

- Name—If you auto-register the device, then the name is automatically created from the MAC address (e.g., Unassigned-00-0f-44-01-a5-ec or AUTO-00-0f-44-01- a5-ec).
- Description—(Optional) Any additional information about the media player.
- IP Address—IP address of the media player.
- MAC Address—MAC address of the media player.
- Disabled—Device status. A value of "Yes" disables the device.
- DMP Model—Type of media player model.

Location Type

The Location object type defines the physical location where the media player is installed in the venue, with the following information:

- Name—Location of the media player in the venue.
- Best practice is to use a naming convention that allows an operator to easily identify where the media player is physically located in the venue.
- Description—(Optional) Any additional information about the location.
- Location ID—(Optional) Identifier for the location. This field is typically not used.
- Display Spec—Type of TV display at the location.

DMP+Location Type

DMPs must be linked to Locations to establish this object type and to put the media player in Ready state. For more information, see [Linking DMPs to Locations or Ready State, page 41](#).

Zones and Groups Screen

From the Zones & Groups screen you can:

- Add, remove, and edit groups and zones.
- Add and remove multiple locations to / from groups and zones.
- View and manage zone, group, and location associations.
- View and search on the Location Name, IP Address, MAC Address, TV Details and TV Description, and number of groups to which the Location is assigned.

Information About Zones, Groups, and Locations

- Traverse the zones/groups and locations hierarchy. For example, you can view information top ↓down (from zones to groups to locations) and bottom ↑ up (from locations to groups to zones).
- Move multiple locations between groups (“re-grouping”) and move multiple groups between zones (“re-zoning”).
- View overlaps such as groups that share the same location or zones that share the same group.
- Find the group and zone to which a TV Location belongs.

The Zones & Groups screen contains navigation tabs at the top of the screen, operations controls below the navigation tabs, and a details area in the middle of the screen (Figure 6, on page 38).

The Zones & Groups screen has a dividing bar so that you can display more information on the screen at once without having to jump back and forth between separate screens. Any items with a blue underline are a hyperlink (Figure 6, on page 38.)

Figure 6 Zones and Groups Screen

The screenshot shows the 'Zones & Groups' screen with the following components:

- Navigation Tabs:** Users, My Profile, Venues, Zones & Groups (selected), Channels, Devices, Suites, Triggers, Proof of Play, Templates, Stores, Menus, Data Integration.
- Location Navigation:** Location<->Group, Group<->Zone.
- Group Navigation:** Locations, Groups.
- Groups Table:**

Group Name	Description	#Locations	#Zones	Venue
2x2_Bottom_Left		1	0	
2x2_Bottom_Right		1	0	
2x2_Top_Left		1	0	
2x2_Top_Right		1	0	
3x3_A1		1	0	
3x3_A2		1	0	
3x3_A3		1	0	
3x3_B1		1	0	
3x3_B2		1	0	
3x3_B3		1	0	
3x3_C1		1	0	
3x3_C2		1	0	
3x3_C3		1	0	
4x1_A1		1	0	
4x1_A2		1	0	
4x1_A3		1	0	
4x1_A4		1	0	
Audio Desk DMP		1	0	
Elevator Lobby		1	0	Elevator Lobby
Insignia_42		1	0	
- Locations Table:**

Name	IP Address	MAC Address	Model Name	Display Spec	#Groups	Venue
B1 2x2_Bott...	10.194.175.2...	90:ac:3f:04:0...	SV-4K	Sony-FWD-S...	1	

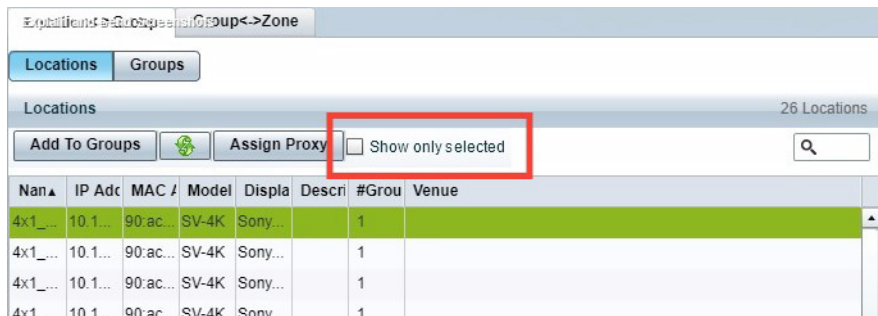
Search and Show Selected Functions

Each panel in the Zones & Groups screen includes a search feature to help you find, filter and narrow the information displayed on the screen. You can search by:

- Location, zone, or group name
- IP address
- MAC address
- TV details
- TV description

Type the search criteria (text strings or numbers) in the search box and click the magnifying glass. For example, if you type ‘bar’ in the search box on the Locations screen, all the locations with the word ‘bar’ in their name will display (Figure 7, on page 39).

Figure 7 Search and Show Functions

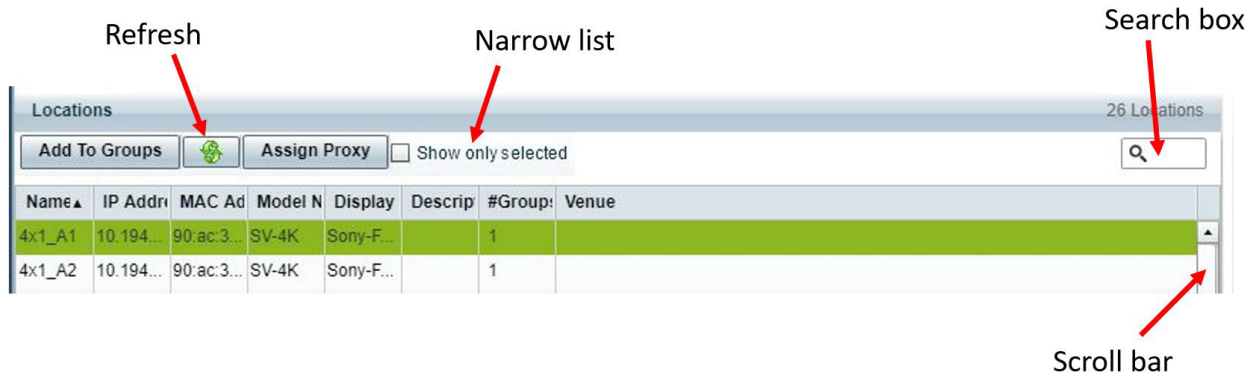


You can narrow the list and display only selected entries using the CTRL-click and SHIFT-click keyboard functions. Simply select the entries and then enable the checkbox next to 'Show only selected.'

You can also sort a list by clicking on the column headings.

To clear the search criteria and display all items on the screen, uncheck the **Show only selected** option. To refresh the list, click the refresh icon.

Figure 8 Selecting Detail



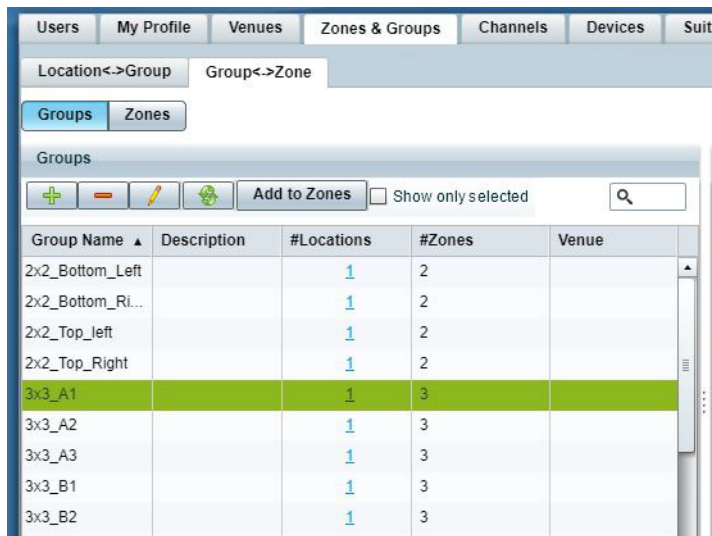
Here are a number of ways to switch the view on the Zones & Groups screen. Click the Switch View option to flip the right and left panels on the screen. Depending on the information you are looking for or the operation you are performing, this can make it easier to transcend the hierarchy and find the different relationships between a location, a group, and a zone.

Figure 9 Switch View—Zones & Groups



Another way to switch the view on the screen is to click the number links in the #Groups, #Locations, #Zones columns. For example, you can select a Location Name and then click the numbered link under #Location to show all the locations for a selected Group. Only the numbers with an underline are active links.

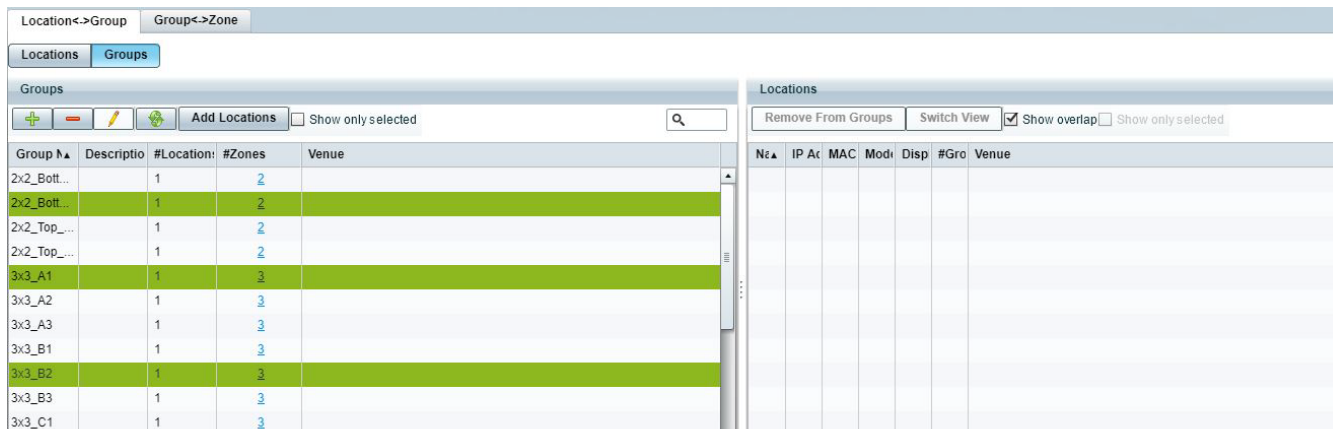
Figure 10 Switching the View on the Zones & Groups Page



Showing Overlaps

You can easily see whether a zone, group, or location contains the same DMPs by selecting multiple entries and clicking the **Show Overlap** checkbox. This is useful to identify and resolve conflicts that occur when actions are being assigned to DMPs that are in the same location, group, or zone. For example, in the following screen, there is no overlap between these three devices.

Figure 11 Showing Overlaps



How to Configure Locations

This section includes the following topics:

- [Guidelines for Naming Locations, page 40](#)
- [Adding Locations Manually in Control Panel Setup, page 41](#)
- [Linking DMPs to Locations or Ready State, page 41](#)

Guidelines for Naming Locations

The optimal naming convention will vary from venue to venue, depending on size and layout. However, some recommendations can be provided for how to best create a systematic naming convention.

"100-NE-020" is an example of a good Location Name for the 20th display in the North East corner of Concourse 100.

Consider the following guidelines to create a systematic Location naming convention:

- Names should only use "A-Z" "a-z," "0-9," space (), underscore (_), and dash (-).

IMPORTANT: Do not use % * , : ? = / \ " ' { } () +

- Include floor or concourse levels.
- Include directional references such as (N) North, (S) South, (E) East and (W) West.
- Use a numeric suffix to differentiate between otherwise identical locations.
- Use generic names that are unlikely to change over time.

TIP: Use the Location Description if you want to refer to sponsor and room names. You can modify the description at any time without affecting the Location-to-Group mappings.

- Attach labels with Location Name to each TV in the venue. This simplifies identifying a problem TV and searching for it in the Cisco Vision Dynamic Signage Director Management Dashboard.

TIP: Print the Location Name on the label as both text and in bar code so the label can be scanned during installation.

Adding Locations Manually in Control Panel Setup

User Roles: Administrator, Content Manager, Event Operator

TIP: As a time saver, use the Bulk Administration Tool (BAT) to manage multiple configuration changes at once. For more information, see the Cisco Vision Director Bulk Administrator Tool document.

To add Locations manually in Control Panel Setup:

1. Go to **Control Panel > Setup > Devices**.
2. Click **Locations & DMPs**.
3. Click **+Add**.
4. In the Create New dialog box, complete the following fields:
 - a. Type—Select **Location**.
 - b. Name—Naming convention for the location of the media player in the venue.

IMPORTANT: Do not use % * , : ? = / \ " ' { } () +

For more information, see [Guidelines for Naming Locations, page 40](#).

- c. Description—(Optional) Any additional information about the location, or more readable form of the naming convention used in the Name field.
 - d. Location Id—(Optional) Identifier for the location. This field must be unique per location.
 - e. Display Spec—Select the type of TV display at the location.
5. Click **OK**. The added groups or locations are displayed in the adjoining panel view.

Linking DMPs to Locations or Ready State

User Role: Administrator, Content Manager, Event Operator

Linking or mapping a DMP with a Location is the final step in preparing a DMP to be able to stage content. Once a DMP is linked, it goes to “Read” state. Then, when content is staged it changes to “In Production” state.

This task describes how to manually link media players to locations. A faster method when you have multiple media player/location updates is to use the Bulk Administration Tool (BAT). For more information about BAT, see the [Cisco Vision Director Bulk Administration Tool](#) document.

Note: Mapping an AUTO DMP to a Location that already has a DMP mapped will overwrite the existing mapped DMP/Location assignment. The former mapped DMP will then return to the pool of AUTO/unassigned DMPs.

To manually link DMPs to Locations:

1. Go to **Control Panel > Setup > Devices**.
2. Click **Location-DMP Mapping**.
3. In the Available Devices list, select the MAC address of the DMP that you need to link.
4. In the Locations list, select the Location Name that you want to link to the selected DMP.
5. Click the Link device button (between the Available Devices and Locations Panels).

Figure 12 Linking Devices

The screenshot shows the 'Location-DMP Mapping' interface. On the left, the 'Available Devices' panel contains a table with the following data:

MAC Address
90.ac:3f:0b:16.ec

On the right, the 'Locations' panel contains a table with the following data:

Location Name	Location Id	Assigned Device
4x1_A1		90.ac:3f:04:02:4e
4x1_A2		90.ac:3f:05:2f:53
4x1_A3		90.ac:3f:04:02:44
4x1_A4		90.ac:3f:04:01:fc
A1 2x2_Top_left		90.ac:3f:03:d2:18
A1 3x3_Top_Left		90.ac:3f:03:d3:06
A2 2x2_Top_Right		90.ac:3f:03:d3:16
A2 3x3_Top_Center		90.ac:3f:04:ab:3a

A red box highlights the 'Link' button located between the two panels.

Unlinking DMPs from Locations

User Role: Administrator, Content Manager, Event Operator

Unlinking DMPs from their assigned locations is required when you need to replace a failed device. For details about how to replace a failed device during an event, see [Replacing a Failed Media Player While an Event Script is Running](#), page 218.

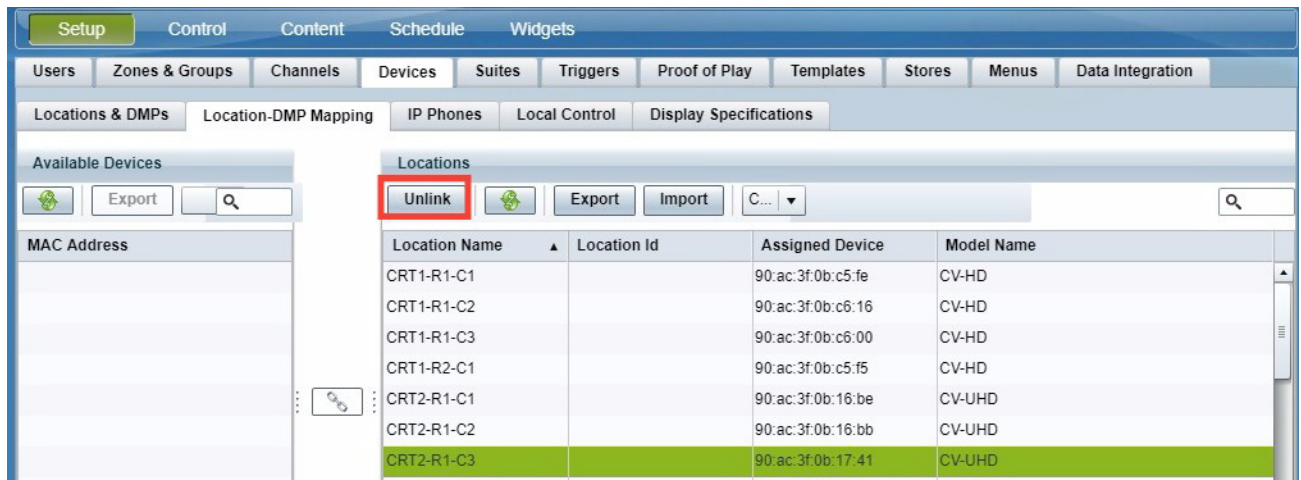
This task describes how to manually unlink media players to locations. A faster method when you have multiple media player/location updates is to use the Bulk Administration Tool (BAT). For more information about BAT, see the [Cisco StadiumVision Director Bulk Administration Tool](#) document.

To manually unlink DMPs from Locations:

1. Go to **Control Panel > Setup > Devices**.
2. Click **Location-DMP Mapping**.

3. In the Locations list, select the Location Name from which you want to unlink an associated DMP.
4. Click **Unlink**.

Figure 13 Unlinking Devices from Locations



Associating Venues to Locations for Multiple Venue Support

Locations can be associated with venues in a multi-venue environment.

For details about configuring multiple venue support in Cisco Vision Director, including associating locations to venues, see the "Configuring Cisco Vision Director for Multiple Venue Support" module of the Cisco Vision Director Server Administration Guide.

How to Configure Zones and Groups

You can create a zone and group hierarchy and event script before you have added a single device in Cisco Vision Director. The Locations and templates can be associated later. This can be useful as usually you will know where devices will be before they are actually installed, allowing you to organize your TV Locations in parallel with installation.

This section includes the following topics:

- [Best Practices for Zones and Groups, page 44](#)
- [Guidelines for Zones and Groups, page 45](#)
- [Guidelines for Naming Zones and Groups, page 45](#)
- [Limits for Deploying Zones and Groups, page 47](#)
- [Accessing the Zones and Groups Screen, page 48](#)
- [Adding Zones, page 48](#)
- [Adding Groups, page 48](#)
- [Adding Groups to Zones, page 49](#)
- [Removing Groups from Zones, page 49](#)
- [Adding Locations to Groups, page 50](#)

Best Practices for Zones and Groups

Here are some helpful tips:

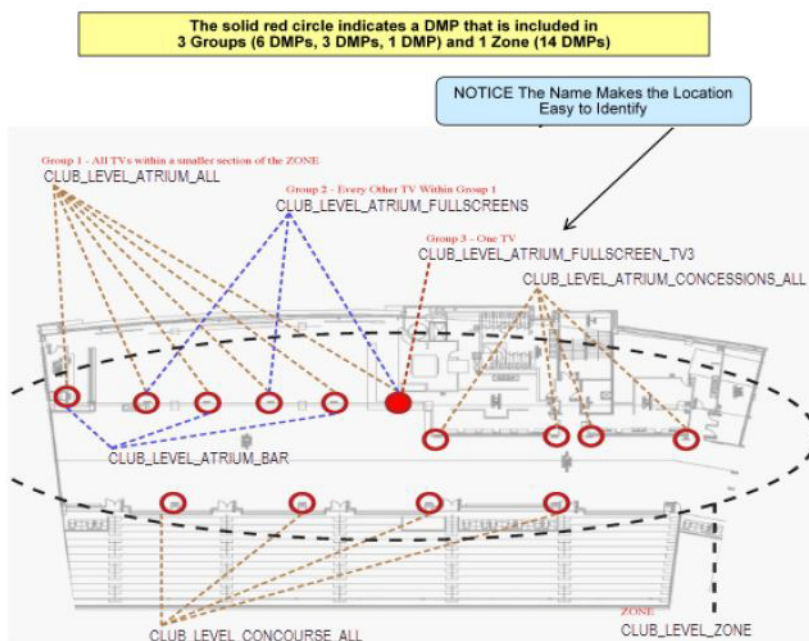
- The more groups and zones you have, the more complicated the deployment becomes.
- Do some careful planning to make your organization both simple and useful.
- Create groups of media players of the same model type. For example, the group contains all Cisco DMP 2Ks or all SV-4Ks.
- Create zones of like-model groups for best results. Applying the same state across multiple groups of different media player types can be problematic due to the differences in content support among different media player models.

NOTE: If you must mix model groups in a zone, be sure the content reflects the lowest common denominator of support for the devices that you are mixing. Test your content for expected behavior. Consider many things such as dual video, SWF, and video walls.

Figure 14, on page 44 shows an example of how a DMP (indicated by the solid red circle) can fit into three different groups within one zone.

NOTE: Use careful judgment when creating single-DMP groups to reduce any extra processing for Cisco Vision Dynamic Signage Director. Good cases for single-DMP groups are video walls or suites where you need to control the content on individual TV displays.

Figure 14 Group and Zone Diagram Example



- Maintain easy-to-read naming conventions for groups using a logical and systematic naming convention.

Example: CLUB_LEVEL_ATRIUM_ALL = Group containing all of the DMPs in the Pucket Atrium of the Club Level. For more details, see [Guidelines for Naming Zones and Groups, page 45](#) or the guide that corresponds to your release on Cisco.com.

- Improve your DMP names whenever you come across one that is not clear.
- Keep the number of unique advertising areas, exit directions, and welcome screens to a minimum.

Information About Zones, Groups, and Locations

- Limit the number of screen templates for a given zone.
While it is possible for a zone to have different screen templates throughout the course of an event, the more screen templates you use, the more complex the deployment and administration becomes.

Guidelines for Zones and Groups

Consider the following guidelines when creating zones and groups:

- A DMP can be in different zones during each event.
- A DMP that is in multiple zones and groups cannot have more than one action assigned to it for a given event state.
- A DMP can be in only one group at a given state. However, a DMP can switch groups when in a different event state.
- Only one DMP type should be used in any zone and in the groups belonging to any zone. This ensures all media assigned to that zone or its groups has the same media playback capabilities.
- The maximum number of groups supported in a venue is 500.
- The maximum number of groups that is supported for a zone is 20; however, typically you'll have three or four groups for a given zone.
- The maximum number of zones supported in a venue is 100; however, 20 zones is typical for a given venue.
- The background for an RSS ticker can change per group/zone.
- All zone and group names must be unique.

Guidelines for Naming Zones and Groups

With thousands of displays and hundreds of zones and groups, naming is especially important.

A good way to keep your zones and groups organized is to use a text-based convention and then assign prefixes so that you can sort by similar groups and zones in the Control Panel. This makes it easy to find devices by geographical or logical groupings.

Group Name

Make the group name the same as the DMP name so you have a ratio of 1:1 of DMPs to Groups.

Zone Name

These are truncated versions of the location names that make up the zone.

Level_Type_Name_Sec/Suite_Size (7SW_VW_CoorsBar_732_2x2 or 4NE_Con_HubBar_3x1_Menu)

Description Naming

Site specific, usually an IT naming structure or construction naming structure.

- Using long form names can complicate dashboard searches.
- An alphanumeric structure can be used here to add a second option when searching in Dashboard. (This is site specific and often used with new builds that have in depth blueprint plans.)

Playlist Naming

Each descriptor should only be used when appropriate to reduce playlist name length. (i.e., a playlist that runs all game doesn't require a "TIME" descriptor.)

- General

Information About Zones, Groups, and Locations

- Script - Type Area **Size Screen** Time (VENUE - FS Concourse Pregame)
- Video Wall
- Script - Type Area Size Screen **Time** (VENUE - VW HelixBar 3x3 A1)

Content Naming

Source_Type_Name_Subname.filename (SPON_Lwrap_COMPANYmp4 or CON_FS_HubBar_Menu.png)

- This is the basic structure for naming content. Some venues like to include dates, expiry dates, etc.
- Keeping names of content consistent and generic to the brand can assist in content replacement via upload. For example, a new piece of content for COMPANY can be uploaded to replace all running “old” content if the names are the same.

Template/Region Naming

Concession templates start with CON_ (CON_Menu_FS or CON_Menu_Right)

- Layer names are descriptors related to what content or playlist will be assigned to that layer in the script (background or widget).

VW templates can start with VW_ or just the size_ (3x3_B1).

- Layer names are the same as template names.
- Template names should include the venue in a multi-venue environment.

Examples:

100_Club_A_zone

100_Club_A _menus_group

100_Club_A _bar_group

100_Club_B_zone

100_Club_B _menus_group

100_Club_B _bar_group

If you have a very large club with hundreds of DMPs, you might have a zone called “Club A Menus” and then have individual groups with each group showing a different menu.

Consider the following guidelines to create a systematic Location naming convention:

- All group and zone names must be unique.
- Assign names to zones and groups that reflect the area where the display is located and the screen template or advertising playlist you will be using for that display.
- Names should only use “A-Z” “a-z,” “0-9,” space (), underscore (_), and dash (-).

IMPORTANT: Do not use % * , : ? = / \ “ ‘ { } () +

- When naming zones, consider adding a prefix for the concourse level at the venue.

For example, add ‘100’ to all clubs on the 100 level. This makes it easy to find and manage these clubs in Cisco Vision Director as they are sorted alphabetically.

- When naming groups, consider adding a suffix to identify where or what content will be displayed in the group.

- Add abbreviations to the group name to identify which screen template is being played by a given group.

This allows you to quickly identify what type of content is supposed to play on each group of TVs in the suite or other location in the stadium. [Figure 15, on page 47](#) shows abbreviations for identifying the different types of screen templates.

Figure 15 Abbreviation Examples for Identifying Templates in Groups



Limits for Deploying Zones and Groups

[Table 1, on page 47](#) defines the limits for deploying zones and groups.

Table 1 Limits for Deploying Groups and Zones

Specification	Limit
Maximum number of zones.	100
Maximum number of groups.	500
Maximum number of groups per zones to be supported.	20
Maximum number of event states.	50
Maximum number of templates you can have in different groups and zones for a single event state.	50
Maximum number of luxury suites.	500
Maximum number of all media player devices in the system.	5000 ¹
Maximum number of items per playlist.	1200

1. The maximum of 5000 total media players was qualified on a Platform 3 Server.

Accessing the Zones and Groups Screen

User Roles: Administrator, Content Manager, Event Operator

The Zones & Groups screen is accessible from the Cisco Vision Director Control Panel.

To access the zones & groups screen:

1. Go to **Control Panel > Setup**.
2. Click **Zones & Groups**. The Zones & Groups screen displays.

Adding Zones

User Roles: Administrator, Content Manager, Event Operator

To add a zone:

1. Go to **Control Panel > Setup > Zones & Groups**.
2. Go to the **Group<->Zone** tab.
3. Click **Zones**.
4. Click the green "plus" + icon.
5. In the New Zone dialog box, do the following:

- a. Type a name for the group.
- b. Type a description of the group.

TIP: You can leave the description for the group blank and add it later.

- c. (SV-4K only) To configure zone-based video wall synchronization, select the **Use as Video Wall** checkbox.

For more information, see [How to Configure Video Walls with the SV-4K and DMP-2K Media Player, page 142](#).

6. Click **OK**. The new zone appears in the Zone Name list.

Adding Groups

User Roles: Administrator, Content Manager, Event Operator

To add a group:

1. Go to **Control Panel > Setup > Zones & Groups**.
2. Go to either the **Location<->Group** or **Group<->Zone** tab.
3. Click **Groups**.
4. Click the green "plus" + icon.
5. In the New Group dialog box, type a name and description for the group and click **OK**. The new group appears in the Group Name List.

TIP: Do not use spaces in group names.



Adding Groups to Zones

User Roles: Administrator, Content Manager, Event Operator

To add groups to zones:

1. Go to **Control Panel > Setup > Zones & Groups**.
2. Click **Group<->Zone**.
3. Do one of the following:
 - a. To select by group(s) and add zones to those groups, click **Groups**.
 - b. To select by zone(s) and add groups to those zones, click **Zones**.
4. Select the group(s) or zone(s) depending on the panel view that you are using.

TIP:

- To narrow the display listing, use the search function.
 - To select multiple items in the list, use Ctrl-click or Shift-click keyboard/mouse sequence.
5. Do one of the following:
 - a. If using Groups view, click **Add to Zones**.
 - b. If using Zones view, click **Add Groups**.
 6. Do one of the following:
 - a. In the **Select Zones** dialog box, select the zones to which the selected group(s) are added.
 - b. In the **Select Groups** dialog box, select the groups to be added to the selected zone(s).
 7. Click **OK**. The added zones or groups are displayed in the adjoining panel view.

Removing Groups from Zones

User Roles: Administrator, Content Manager, Event Operator

To remove groups from zones:

1. Go to **Control Panel > Setup > Zones & Groups**.
2. Click **Groups**.

NOTE: Remove groups from zones by clicking **Zones** and selecting the zone and corresponding groups to be removed from that zone. Click **Remove from Zones**.

3. In the Groups panel, select the group.
4. In the Zones panel, select the zone to be removed from the group.
5. Click **Remove**.
6. In the confirmation dialog box, click **Yes**.

Adding Locations to Groups

User Roles: Administrator, Content Manager, Event Operator

IMPORTANT:

- Before you can add locations to groups and zones, you must add the device location in **Control Panel > Setup > Devices**.
- If you are migrating deployed devices from a single venue to a multi-venue system, follow the required steps for proper location association in the [Configuring Cisco Vision Dynamic Signage Director for Multiple Venue Support, page 35](#) of the Cisco Vision Director Server Administration Guide.

To add locations to groups:

1. Go to **Control Panel > Setup > Zones & Groups**.
2. Click **Location<->Group**.
3. Do one of the following:
 - a. To select by location(s) and add groups to those locations, click **Locations**.
 - b. To select by group(s) and add locations to those groups, click **Groups**.
4. Select the location(s) or group(s) depending on the panel view that you are using.

TIP:

- To narrow the display listing, use the search function.
 - To select multiple items in the list, use Ctrl-click or Shift-click keyboard/mouse sequence.
5. Do one of the following:
 - a. If using Locations view, click **Add to Groups**.
 - b. If using Groups view, click **Add Locations**.
 6. Do one of the following:
 - a. In the **Select Groups** dialog box, select the groups to which the selected location(s) are added.
 - b. In the **Select Locations** dialog box, select the locations to be added to the selected group(s).
 7. Click **OK**. The added groups or locations are displayed in the adjoining panel view.

Managing Zones, Groups, and Locations

Once you have added zones, groups, and locations in Cisco Vision Director, you can use the Zones & Groups screen to display, manage, and edit information the selected zone, group, or location as described in this section.

Editing the Name and Description of Zones and Groups

User Roles: Administrator, Content Manager, Event Operator

To edit the name and description of a zone and group:

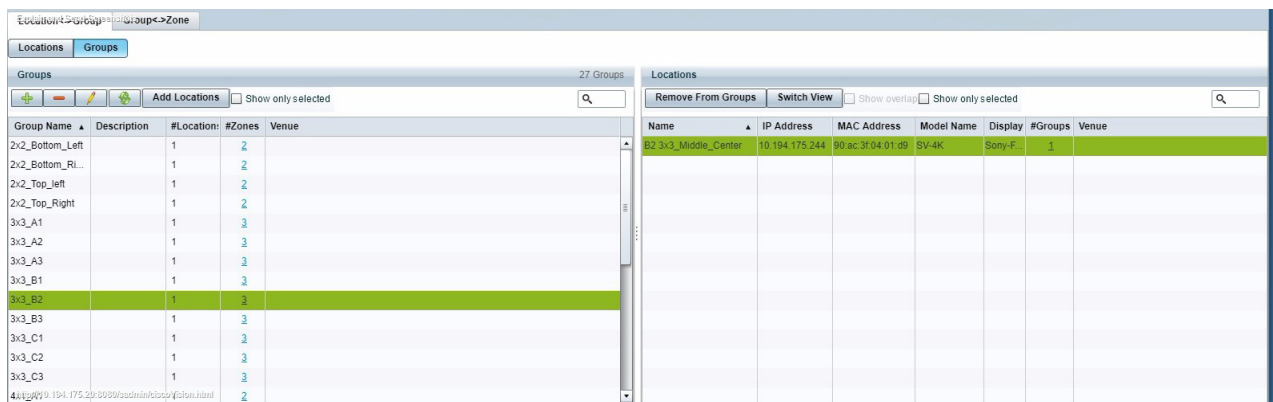
1. Go to **Control Panel > Setup > Zones & Groups**.
2. Click **Group<->Zone**.
3. Do one of the following:
 - a. To edit a group, click **Groups**.
 - b. To edit a zone, click **Zones**.
4. In the left panel view, select the group or zone that you want to edit.
5. Select the pencil icon to open the Edit dialog box.
6. Change the name and description as needed.
7. Click **Save**.

Viewing Zone, Group, and Location Associations

Click the Zones, Groups, and Locations buttons on the Zones & Groups tabs to display the zones, groups, and location lists in the left column of the Zones & Groups screen. To view information about an item in the list, simply select it. The associated information will display in the right column on the screen. The numbers in each column indicate the number of zones, groups, and locations are associated with the selected item. Numbers that are underlined in blue are hot links that you can click to display more details about the selected item. The details display in the opposite side of the screen.

In the example shown below, there are 10 locations for the `concourse1_group`. When you click the number '10' link, the screen displays the DMP Name, IP Address, MAC Address, TV Display Spec, and the number of groups for each of the 10 locations for the `concourse1_group`. The information displays in the Locations panel on the right.

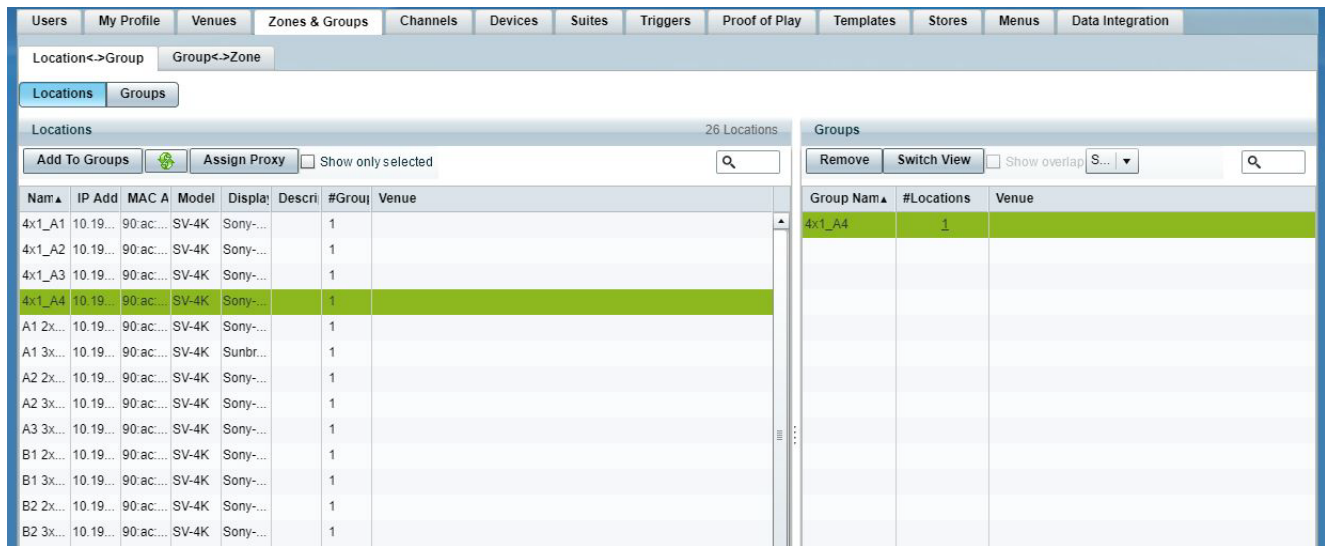
Figure 16 Locations Detail Panel



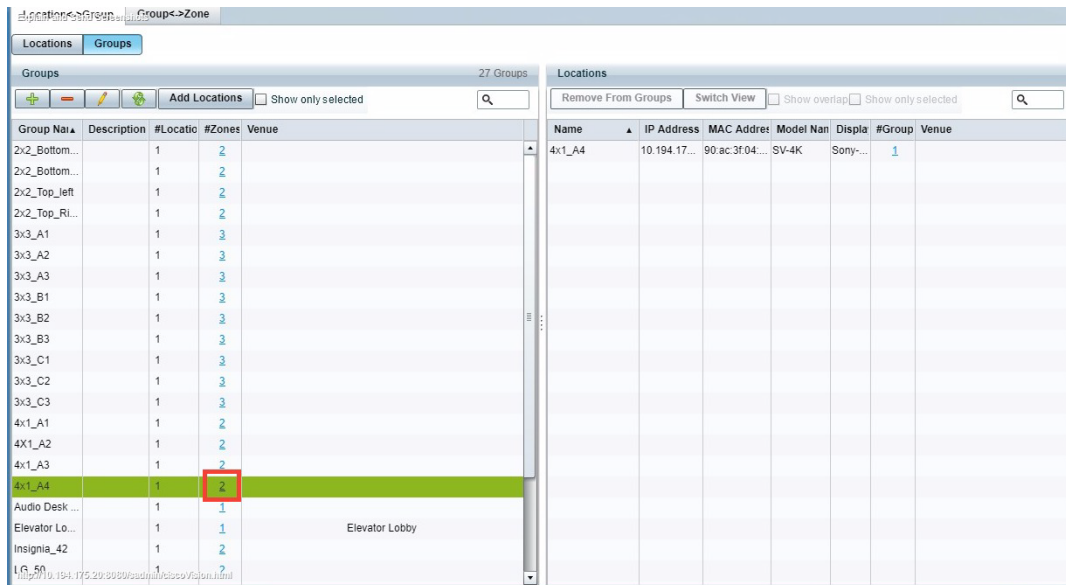
Finding the Group and Zone to Which a TV Belongs

1. Select the **Location <-> Group** tab and click the **Locations** button.
2. Select a location name. In this example, `rcdn-1` is selected. The number of groups to which this location belongs shows under the #Groups column (in this example, there is 1 group). The names of the groups to which this location belongs displays in the Groups panel at the right.

Figure 17 Finding the Group and Zone for a TV

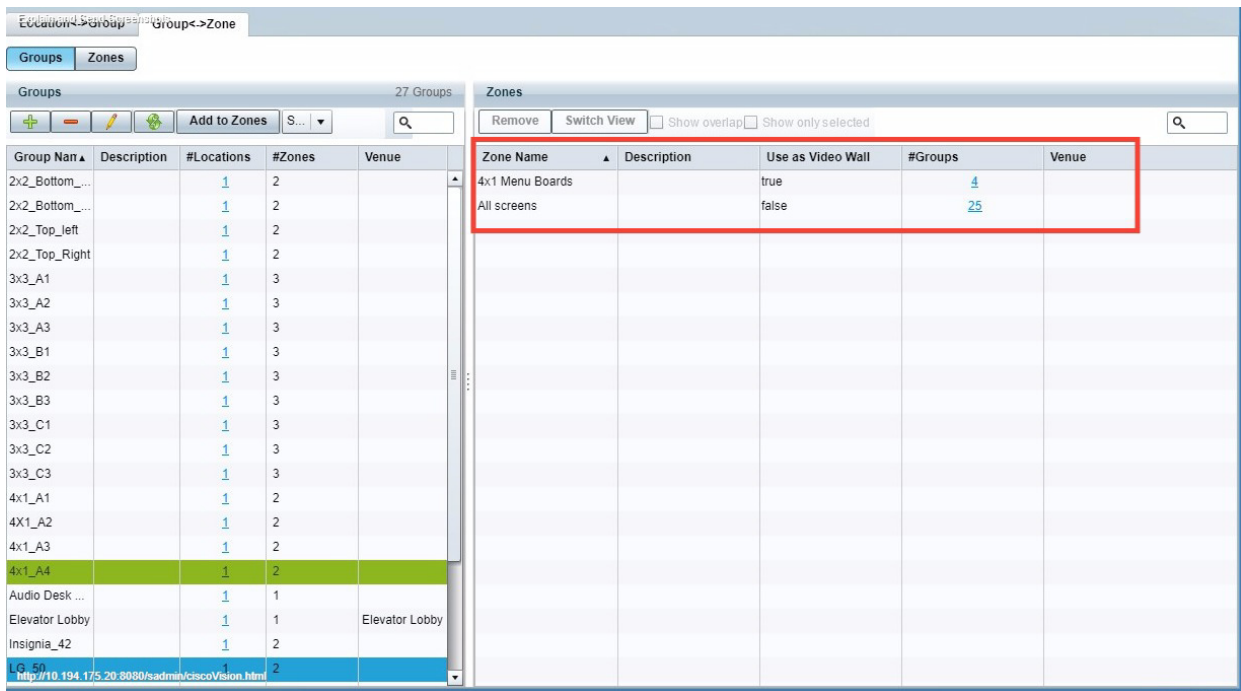


3. Select a group from the Groups panel and click Switch View. The number of zones for the selected group displays under #Zones (in this example, there are 2 zones):.



4. With the Group name selected, click on the number link in the #Zones column to show the zones to which the selected group belongs (in this example, 4X1 Menu Boards belongs to 1 zone).

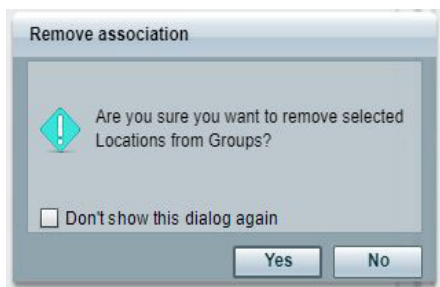
Information About Zones, Groups, and Locations



5. Open the Location<->Group tab and click the Locations button.
6. Select the locations from the left column and the groups from the right column and click **Remove**.



A conformation dialog box appears for you to confirm or cancel the operation.

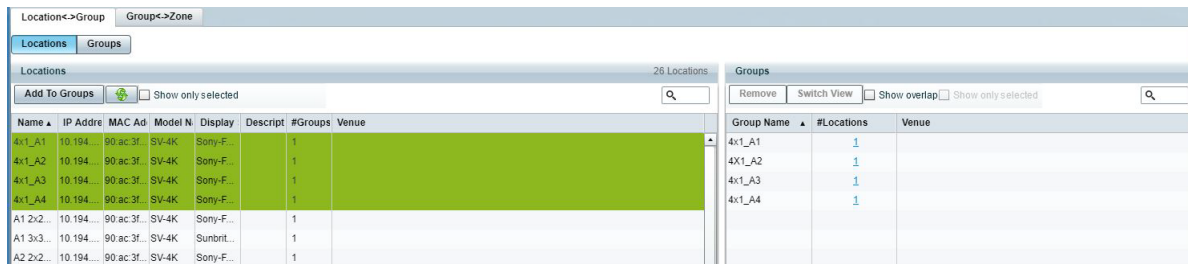


Click **Yes** to remove the locations from the selected groups. Once removed, they will no longer show in the groups list for those locations.

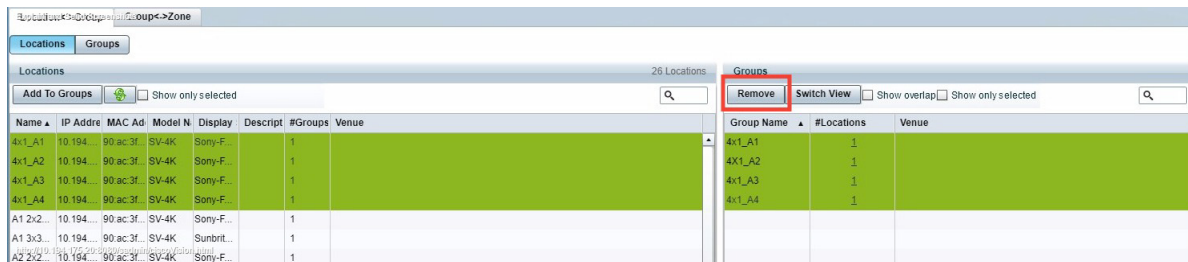
Regrouping and Rezoning Locations

Once you have added and assigned locations to groups, you can regroup them by removing all the locations from the selected groups and then re-assigning the locations to other groups as described here.

1. Select the Location<->Group tab and click the Locations button.
2. Select the locations that you want to re-group. The Groups panel on the right will display the groups assigned to the selected DMPs.



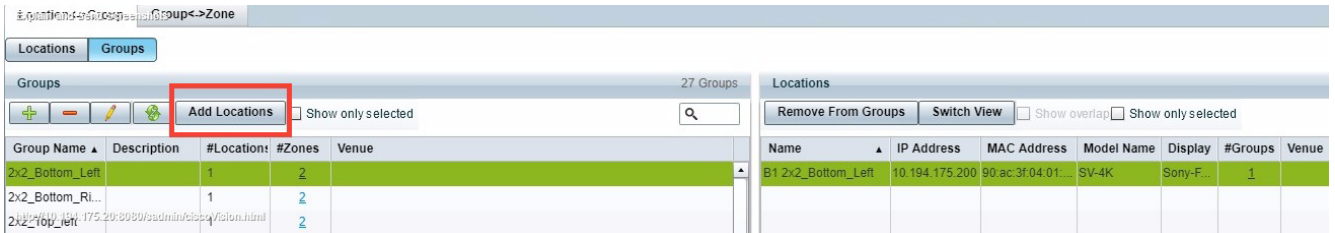
3. Select the groups from the Groups panel. You can use the shift click keyboard function to select a block of groups. The selected groups and locations are highlighted in green on both the Locations and the Groups panels.



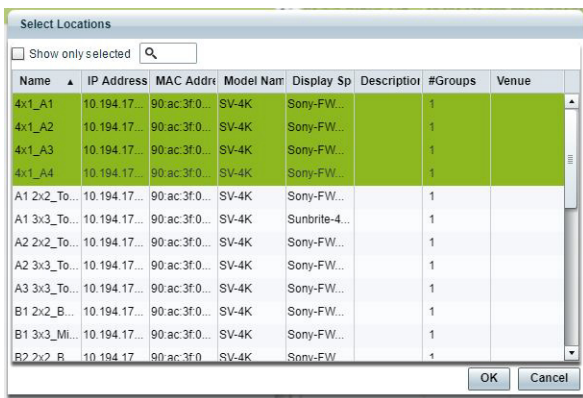
4. Click Remove to remove all the locations from the selected groups. A warning dialog displays for you to confirm or cancel the operation.
5. Click **Yes**. The selected groups will be removed from the Groups panel.



6. Select the **Location<Group>** tab and click **Groups**. Optional: click the switch view button so you can see the groups on the left and the locations on the right.
7. Select a group. You can use the search function to quickly find the group you are looking for.
8. Select the locations you want to add to the selected group from the Locations panel.
9. Click Add Locations.



10. Select the locations you want to add from the Select Locations screen and click OK. The locations are added to the list of locations for the selected group(s). The #Locations column indicates how many locations are now in the selected group.



How to Migrate Deployed Devices From a Single Venue to a Multiple Venue System

There are very specific requirements when you migrate devices that have already been deployed in a venue to a multiple venue configuration in Cisco Vision Director.

For more information, see [Configuring Cisco Vision Dynamic Signage Director for Multiple Venue Support, page 35](#) in the [Cisco Vision Director Server Administration Guide](#).



Working with Content Deployment

First Published: 2017-11-21

Cisco Vision Director provides both basic and more advanced methods of content ingestion to achieve high levels of visual impact at your venue. This module provides a high-level introduction to the content types and data sources supported in Cisco Vision Director.

Before you begin to deploy content at your venue, it is important that you understand all of the requirements for the types and methods of content that you want to deploy.

There are limitations and specifications for the content size and formats supported by Cisco Vision. These vary depending upon a number of factors including the TV display resolution, the media player used in the venue, the screen template region layout, and the TV proximity to the fans.

Note: For a full range of content planning and design services available by Cisco Systems, contact the Cisco **Creative Services** team.

Understanding Content and TV Resolution

There are several factors that determine the final resolution of your content on a TV display, including the model of media player deployed.

Physical and Signal Resolution

Physical resolution is the actual number of pixels supported by the TV display. **Signal** resolution is the resolution communicated between the media player and the TV display. These signal resolutions are negotiated between the media player and the display.

The physical resolution of the TV display and the negotiated signal resolution do not necessarily have to match. However, the signal resolution from the display and the media player must match for successful communication under almost all circumstances.

TVs smaller than 1920x1080 in physical resolution also can support a signal resolution of 1920x1080.

For TV-based tile-matrix video walls, the physical resolution is defined as the combined resolution of all of the displays. However, the signal resolution is likely to be different. For example, in a 2x2 video wall with TV displays of 1920x1080 resolution, the physical resolution of the video wall is 3840x2160, but the signal resolution would be 1920x1080.

For the SV-4K media player, you can override the negotiated signal resolution by configuring a requested signal resolution in the Cisco Vision Director Control Panel. See the [Configuring Resolution Under Control Panel Display Specifications on page 59](#).

Canvas and Template Resolution

Canvas resolution is the area on which the web browser draws, which ultimately determines what area can be shown on the display.

The canvas resolution is represented by the configurable **template** resolution in Cisco Vision Director. To be visible on the display, the template resolution must be able to fit within the canvas resolution.

Cisco Vision Director Template Resolution

Cisco Vision Director Release 4.0 supports the same template resolution on both media players:

- SV-4K–1920x1080

Canvas and Template Resolution Behavior on the SV-4K

For the SV-4K, the canvas resolution is mapped to signal resolution for resolutions below 1920x1200. For more information about signal resolution, see [Physical and Signal Resolution, page 57](#).

For example, with content resolution of 1280x720, the SV-4K canvas and signal resolution also will be 1280x720.

Any content greater than this resolution (for example, anything at pixel 1281 and beyond) will not be displayed. Higher resolution content will **not** shrink to fit the canvas.

If you are using a 1920x1080 template for a TV that has a signal resolution of 720p, the SV-4K template canvas will be cropped **not** shrunk. **Therefore, you must specify the correct template to match your signal resolution and your content must match the template.**

Guidelines for TV and Content Resolution with the SV-4K and DMP-2K Media Player

The SV-4K and DMP-2K is set to run in full high-definition (HD) 1920x1080 mode by the runtime software.

IMPORTANT: It is highly recommended that your TV supports a minimum of 1080p HD resolution. Lower resolution displays might need some additional configuration of the TV Display Specification configuration in Cisco Vision Director to attempt to optimize the display. In some cases these TVs might cut off an area of the screen.

The quality and expected resolution for video and graphics display for the SV-4K and DMP-2K can be affected by several things:

- The resolution of the TV display and its ability to negotiate to 1080p.
- The configuration of the `sv4k.videoMode` serial command in the Display Specifications area of the Cisco Vision Director Control Panel:
- When set to a resolution, this value specifies the SV-4K and DMP-2K signal resolution.
- If the resolution is set to auto-detection, then the TV negotiates the signal resolution with the SV-4K and DMP-2K as long as the TV supports negotiation.

IMPORTANT: If you are using a 4K display, you must configure a fixed resolution value of 3840x2160x60p in the `sv4k.videoMode` serial command in the TV display specification

- The template region size.
- The size of the original graphic and whether any scaling needs to happen.

Note: For more information about content and template guidelines, see the [Cisco Vision Content Creation Design and Specification Guide](#).

Restrictions for Control Panel TV Display Specifications with the SV-4K and DMP-2K Media Player

Before you configure TV display specifications for use with the SV-4K and DMP-2K media player, consider the following restrictions: The following Basic Info options are not supported:

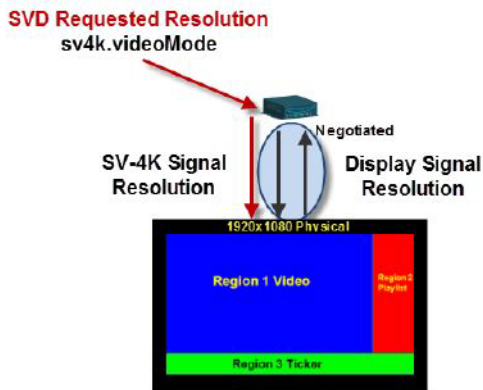
- X Position / Y Position

- X Scaling / Y Scaling

Configuring Resolution Under Control Panel Display Specifications

The Display Specification for a TV can either be configured for auto-detection of resolution by the TV, or set to a fixed resolution in the Cisco Vision Director Control Panel (see [Figure 18 on page 59](#)).

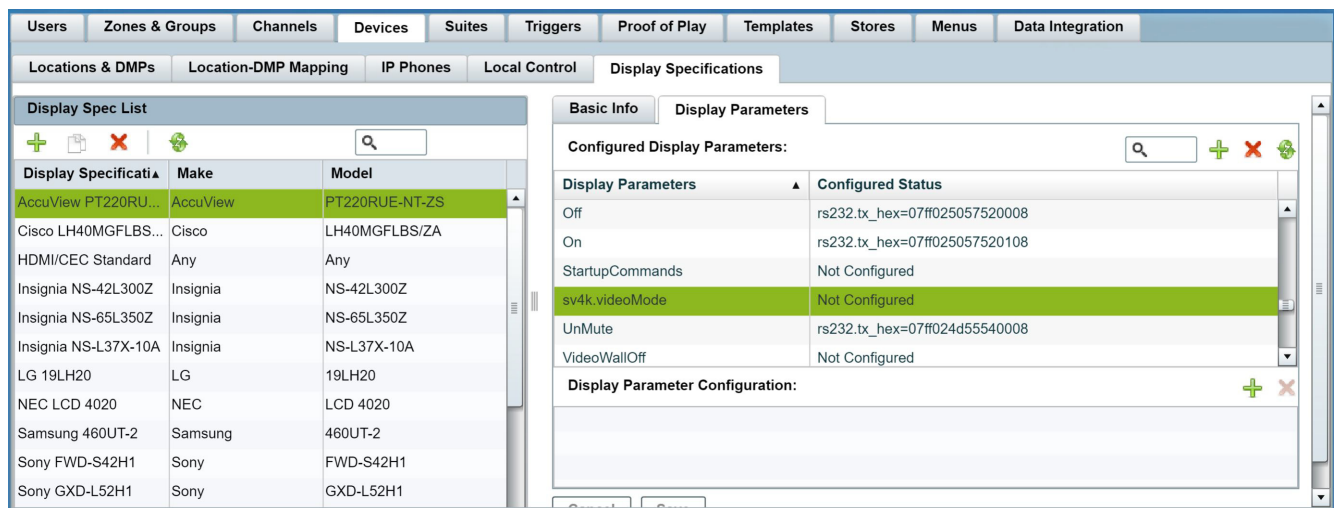
Figure 18 SV-4K and Display Signal Resolution



- If the resolution is set to auto-detection, then the TV and the SV-4K negotiate the signal resolution, as long as the TV supports auto-negotiation ([Figure 18 on page 59](#)).
- If a resolution is specified in the Control Panel, then the content is resized according to that setting. This is the requested SV-4K signal resolution shown in red in [Figure 18 on page 59](#).
- If the signal resolution of the SV-4K is set below 1920x1080 for any reason, video content will be resized according to the template in use.
- The template in use and the corresponding content must match the signal resolution.

To set the resolution for a display:

11. Go to Control Panel > Setup > Devices > Display Specifications.
12. Select the TV that you want to configure.
13. Click Serial Commands.
14. Find the sv4k.videoMode command ([Figure 19 on page 60](#)).

Figure 19 SV-4K Resolution Setting in Display Specifications

15. Specify one of the values in [Table 2 on page 60](#) according to the desired resolution behavior.

Table 2 SV-4K Resolution Values

sv4k.videoMode Value	Resolution
3840x2160x60p ¹	Fixed at 2160p
1920x1080x60p	Fixed at 1080p
1280x720x60p	Fixed at 720p
Not Configured	Auto-detected
Auto	Auto-detected

1. This specification is required for 4K TV displays in Release 4.1.

16. Click Save.

17. Reboot the SV-4K device.

Understanding Content Types and Sources in Cisco Vision Director

Content is defined as any digital media that is presented on a TV display using a digital media player in Cisco Vision Director.

Cisco Vision Director supports a variety of content types and data sources to create an impressive presentation of digital content at your venue.

External and Internal Data Sources

This section summarizes the external and internal data sources that are available using the Data Integration interface to bring additional content into Cisco Vision Director.

For more information, see the **Cisco Vision Director Data Integration Guide**.

Data Feeds

- Atom Feed
- RSS Feed (RSS 2.0)

Generic Data Sources

Cisco Vision Director also can support Generic Data Sources from the following source types:

- Database
- Supports automatic translation of MySQL and SQLServer database formats to XML data in Cisco Vision Director.
- FTP
- HTTP/HTTPS
- JSON
- TCP
- UDP

NFL Data

- National Football League (NFL) Game Statistics and Information System (GSIS) Cumulative Statistics
- NFL GSIS Game Clock

Other Data Sources

- Table Lookup (internal or external data source)
- The Table Lookup feature for data integration allows users to create multiple tables, each having multiple key-value mappings. Users can upload tables from a TSV file or create tables and mappings from the Cisco Vision Director UI.
- Once tables are created, a custom XPath function can be defined to look up values from these tables for specified keys.
- The Table Lookup feature for data integration supports the following primary use cases:
- Custom Suite Welcome Messages
- Translation of Point-of-Sale (POS) codes to names for menu boards.
- System (internal data source)

POS Data Sources

- Generic PoS
- Internal Database PoS (internal data source)
- Menu Theme (internal data source)

Scoreboard Controllers

- Daktronics All Sport 5000 Scoreboard Controller (basketball and hockey only)
- OES ISC9000 Intelligent Scoreboard Controller (basketball and hockey only)

HTML Pass-Through Content

Cisco Vision Director allows you to render simple HTML browser content (with some restrictions) on the Cisco DMP and SV-4K media players by including an external URL in a playlist and scheduling it in a script.

The content is not actually stored in the Cisco Vision Director content repository (CMS), and any changes to the content on the external site page are dynamically updated on the DMP or SV-4K when the script restarts.

Menu Board Content

IMPORTANT: The SV-4K does not support deployment of menu board data using the DMB gadget archive (GAR) or for in-suite ordering. However, stores data and DMB menu theme data can be deployed on the SV-4K using data integration and widgets.

Cisco Vision Director supports three overall methods of Point of Sale (POS) integration for menu board implementation:

- Hybrid DMB and Data Integration–POS Integration (NCR/Quest and Micros) using internal DMB data integration and widgets.
- Data Integration Only–Third-party POS vendor integration using the POS API and data integration and widgets.

For More Information

- Cisco StadiumVision Director Dynamic Menu Board and Store Configuration Guide–Describes how to work with stores, menu themes, and create menu boards in the DMB application.
- Cisco Vision Director Data Integration Guide–Describes the differences between the DMB application and using POS data sources for menu board creation, deployment guidelines and configuration tasks, and widgets tool information and examples.

RSS Ticker Feeds

A ticker is a region that displays content received from an RSS feed (news, weather, or other dynamic information) over a customizable background. RSS feeds can come from external or internal sources. Venue operators can use RSS feeds to publish their own in-house promotions or other proprietary messaging.

Data Integration Method

IMPORTANT: This is the only method supported by the SV-4K media player.

The Data Integration method was introduced in Cisco StadiumVision Director Release 3.1 (now Cisco Vision Director) to add RSS data sources and modify their layout using the Widgets tool.

For more information, see the **Cisco Vision Director Data Integration Guide**.

Static Graphic Sources

Static graphics are images used for advertisements or informational messages that do not require motion.

Static graphics can be added to Cisco Vision Director in two ways:

- Using the Import button on the Control Panel Content screen.

Video Sources

Cisco Vision supports the basic sources of video content:

- Video from the headend (in-house, terrestrial TV, satellite and cable providers feeds, typically multicast).
- Video locally stored and played through a video playlist or a mixed media playlist (beginning in Release 3.1).

- Video streamed from a laptop or other supported device connected to the HDMI-In port (SV-4K media player only beginning in Release 4.1).

Video Content Sourced Using HDMI-In on the SV-4K

Cisco Vision supports two ways to source local video content using the HDMI-In port on the SV-4K media player:

- Encoding streamed video as a channel in Cisco Vision Director.
- Encoded HDMI-In video on the SV-4K can be started and stopped using multiple local control methods, as well as within Cisco Vision Director:
 - IP phone
 - IR remote
 - Management Dashboard
 - Script states
 - User Control API
- Configuring Local HDMI-In as a video source in a region that is controlled using script states only.

IMPORTANT: The HDMI-In port on the SV-4K media player can only be supported either as a source to video region or source to encoder as a channel, but not both.

Therefore, you cannot have a script in a state which tunes to the HDMI-In as video source in a region, and then transition to the next state where you are streaming video from HDMI-In.

Workflow Summary to Deploy Content in Cisco Vision Director

Table 3 on page 63 provides a summary of the tasks and related information to deploy content in Cisco Vision Director.

Table 3 Content Deployment Task Summary

Content Deployment Task	For more information see:
Plan the type of content that you want to create.	Understanding Content Types and Sources in Cisco Vision Director, page 60
Plan where it will be deployed.	Working with Zones, Groups, and Locations, page 33
Understand the content guidelines and best practices.	<p>Cisco Vision Content Creation Design and Specification Guide</p> <p>Also refer to the related content-specific guides for the content types that you plan to support, including:</p> <p>Cisco StadiumVision Director Dynamic Menu Board and Stores Configuration Guide</p> <p>Cisco Vision Director Data Integration Guide</p>

Content Deployment Task	For more information see:
Plan and create the screen template and region sizes for your content.	Working with Screen Templates in Cisco Vision Director, page 65
Create your content and get it into Cisco Vision Director.	Getting Content Into Cisco Vision Director, page 113
Create a playlist for your content.	Working with Playlists in Cisco Vision Director, page 119
Create a script to define when your content is displayed.	Working with Event Scripts, page 147



Working with Screen Templates in Cisco Vision Director

First Published: 2017-11-21

User Role: Administrator / Content Manager

This module provides information about how to set up the layout of content on a TV display by defining regions for the screen using predefined or custom templates.

Information About Screen Templates

Screen templates define the video and non-video regions and layout of a display. Screen templates are used to create various layouts for the presentation of different types of content. Screen templates are assigned to zones or groups and apply to all locations within them.

[Figure 20 on page 65](#) shows three basic templates. The “L-wrap” template divides the screen into three sections where you have video in the top left of the screen, advertising along the side, and a ticker across the bottom that might be showing scores and a news feed.

Figure 20 Three Basic Templates



Cisco Vision Director allows you to create the following types of screen templates:

- Custom template—Specifies the size and arrangement of regions on the screen.
- Overlay template—Specifies a video region that overlaps a secondary video region (SV-4K only), or non-video region that overlaps a video region in the template.




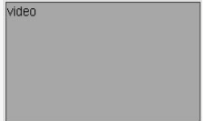
Default Screen Template Dimensions

The dimensions for the default screen templates are fixed and cannot be changed.

Alternatively, you can create custom screen templates (where you specify different sizes for the screen template regions) and overlay screen templates (where you have a non-video or video region overlapping a video or mixed media region).

[Table 4 on page 66](#) defines the default screen templates that are included with Cisco Vision Director **4.0 and later**. **Installing a full ISO image would remove previously available templates.**

Table 4 Default Screen Templates

Template Name	Content Type	Dimensions	Region Layout
Full Screen Video	Displays full-screen video.	Video: 1920x1080	
Full Screen Graphic	Displays full-screen graphic.	Graphic: 1920x1080	
3-Region L-wrapper	Displays live video footage or video replay in Region 1, a playlist of advertisements in Region 2, and a ticker with scores or news in Region 3. Also referred to as an “L-wrapper.”	Video: 1624x914 Ads: 296x914 Ticker: 1920x166	
Full Screen Dual Video	Displays a full screen video in each video region (video 1 and video 2). Using luma keying on video region 2, you can enable select areas of video region 1 content to be visible through video region 2. For video content with 4K resolution on the SV-4K media player, luma key cannot be applied. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a 4K video in the primary region. The Full Screen Dual Video template is only available to use on the SV-4K and DMP-2K media players.	Video 1: 1920x1080 Video 2: 1920x1080	

Note: Obsolete templates (such as 3-Region, Welcome, Exit, Emergency, Outside Emergency, 3-Region, 3-Region double) might still appear in your system if you have upgraded from earlier releases.

Full Screen Default Templates

The full screen templates that come with the Cisco Vision Director software are used to display full-screen video (or mixed media) or full-screen graphics. [Figure 21 on page 67](#) shows an example of a video (or mixed media) in the full screen template. [Figure 22 on page 67](#) shows an example of a graphic in the full screen template. Both are fixed screen templates and cannot be customized. [Table 5 on page 67](#) and [Table 6 on page 68](#) show the template dimensions.

Figure 21 Full Screen Video (or Mixed Media) Template Example



Table 5 Full Screen Video or Mixed Media Template Dimensions

Content Type	Dimensions
Region 1: Video or Mixed Media	Region 1: 1920x1080
Full Screen Video	1920x1080

Figure 22 Full Screen Graphic Template Example

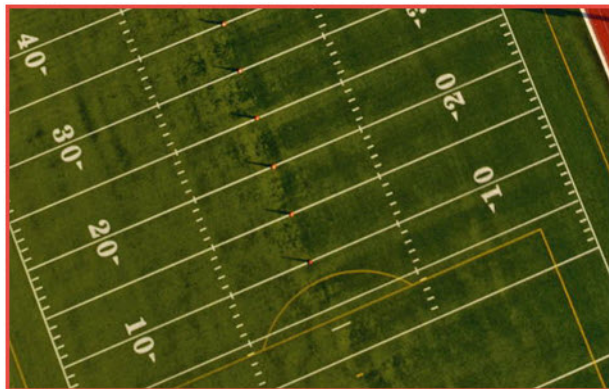


Table 6 Full Screen Graphic Template Dimensions

Content Type	Dimensions
Region 1: Graphic	Region 1: 1920x1080
Full Screen Graphic	1920x1080

3-Region LWrap with Bug Template

Figure 23 on page 68 shows an example of the content for the 3-Region Lwrap with Bug template that comes standard with Cisco Vision Director. This is a fixed screen template and cannot be customized. Table 7 on page 69 shows the template dimensions.

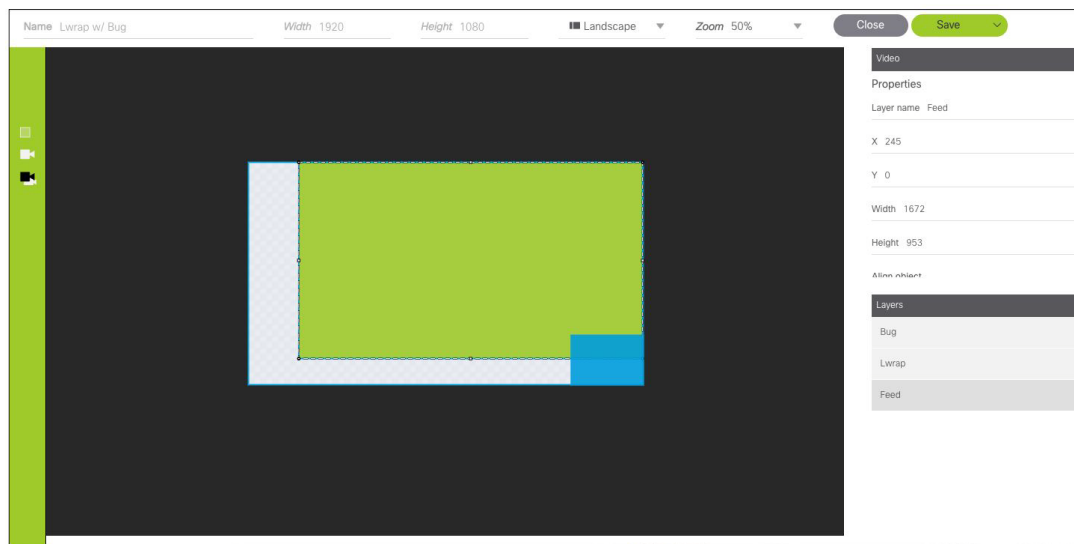
Figure 23 3-Region Lwrap with Bug Template, Feed Layer

Figure 24 3-Region Lwrap with Bug Template, Lwrap Layer

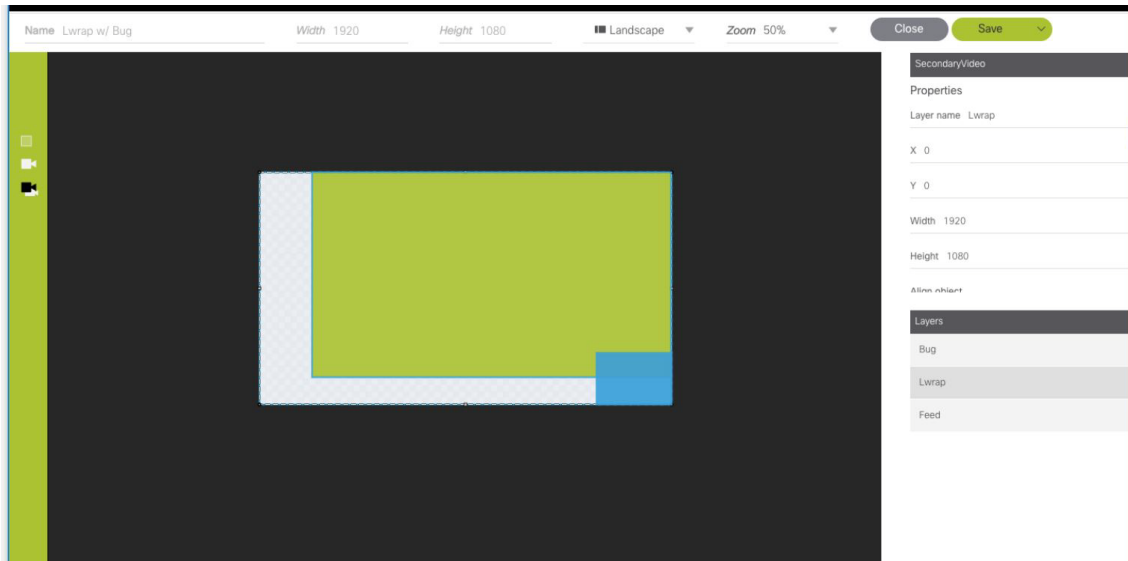


Figure 25 3-Region Lwrap with Bug Template, Bug Layer

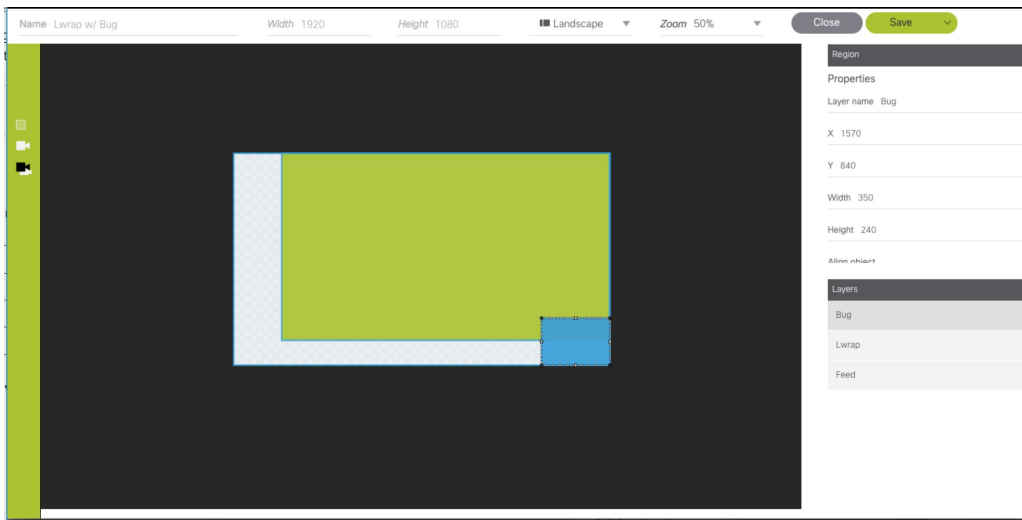


Table 7 Standard Lwrap with Bug Template Dimensions

Lwrap w/Bug	x	y	width	height
Bug	1570	840	350	240
Lwrap (video)	0	0	1920	1080
Feed (video)	245	0	1672	953

3-Region L-Wrapper Default Template

Figure 26 on page 70 shows an example of the content for the 3-Region L-wrapper template that comes standard with Cisco Vision Director. This is a fixed screen template and cannot be customized. Table 8 on page 70 shows the template dimensions.

Figure 26 3-Region L-Wrapper Template



Table 8 3-Region L-wrapper Region Template Dimensions

Content Type	Dimensions
Region 1: video or mixed media	Region 1: 1624x914
Region 2: non-video	Region 2: 296x914
Region 3: non-video	Region 3: 1920x166

Table 9 on page 71 lists the characteristics of the 3-Region L-wrapper screen template.

Table 9 3-Region L-wrapper screen template characteristics

Region	Description
Region 1	<ul style="list-style-type: none"> ■ 16:9 aspect ratio. ■ Supports live video broadcasts or video replay. For more details on video formats, refer to the Cisco StadiumVision Director Video Headend Design and Implementation Guide for your release (available to qualified Cisco Vision partners).
Region 2	<ul style="list-style-type: none"> ■ Supports playlists of advertisements. ■ Due to the small dimensions of region 2, use graphic-intensive ads rather than ads that have a lot of small text in this region.
Region 3	<ul style="list-style-type: none"> ■ Designed for displaying a graphic and/or information in the form of a ticker. ■ The ticker content can be from a compatible RSS feed approved by the venue. ■ The ticker region can be customized with the venue logo (with the ticker content playing in the remaining space).

Full Screen Dual Video Default Template (SV-4K and DMP-2K Media Players Only)

A full screen dual video default template is available for the SV-4K and DMP-2K media player. Dual video regions allow you to overlay two video regions; a secondary local or multicast video region and a primary video region.

The dual video template provides the following capabilities:

- Show two video feeds at the same time.
- Place video-based advertisements.
- Promote a moment of exclusivity during an event.
- Apply luminance (luma) keying to the secondary video region.

Note: The dual video template is only supported on the SV-4K and DMP-2K media players.

For video content with 4K resolution on the SV-4K media player, a luma key cannot be applied. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a 4K video in the primary region.

[Table 10 on page 72](#) lists the specifications of the dual video regions.

Table 10 Full Screen Dual Video Template Specifications

Region	Specification
Video 1	<ul style="list-style-type: none"> ■ Can be controlled using an infrared remote (IR) remote or local control. ■ In the template, video region 1 appears as the bottom or primary layer. ■ Supports audio. ■ Source: Local or multicast video.
Video 2	<ul style="list-style-type: none"> ■ Cannot be controlled through an IR remote or local control. ■ In the template, video region 2 fully overlaps video region 1. ■ Luminance (luma) keying is applied to second video region (it cannot be disabled or changed in the template). ■ Does not play audio. ■ Source: Local or multicast video.

Note: The luma key default is set to #ff2000. To enable luma keying, click the checkbox. To change the global luma key value from the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Audio/Video/Closed Caption**.

Custom Screen Templates

Custom screen templates allow you to change the size and arrangement of content regions on the screen to fit your sponsor and venue needs. [Figure 27 on page 72](#) shows an example of some custom screen templates.

Figure 27 Custom Screen Template Example

Custom Overlay Screen Templates

Overlay screen templates are custom templates that allow a non-video region (graphics) to overlap a video (or mixed media) region on the media players.

TIP: On the SV-4K and DMP-2K media player, you can also create a custom template that allows for dual video regions or you can use default full screen dual video template. See [Full Screen Dual Video Default Template \(SV-4K and DMP-2K Media Players Only\)](#), page 71.

This overlay feature can be assigned to any region. Using the overlay feature you can display:

- A full-screen video (or mixed media) region with a full-screen non-video (graphics) content region overlaid on top.
- A brand/graphic overlaid in a small region of the screen.
- A ghosted brand/graphic such as a transparent logo where some of the colors in the logo are transparent and others are not.

Note: When creating an overlay screen template on the SV-4K and DMP-2K media player that has a primary video and a non-video region on top, be sure the image is designed to fit on the canvas. If the image is placed off the canvas, only part of the image will appear

The recommended file format for graphics when using an overlay template is 8-bit or 24-bit PNG (transparent pixels supported). When you create the PNG file, you must make the pixels transparent for the full-size video region. JPG files are not recommended because they do not preserve transparency.

How to Configure Screen Templates

This section includes the following topics:

- [General Guidelines for All Screen Templates](#), page 73
- [Guidelines for Custom Screen Templates](#), page 74
- [Understanding the Templates Screen](#), page 75
- [Creating Custom Screen Templates](#), page 75
- [Naming Screen Templates](#), page 76
- [Setting the Size and Position of a Region on the Template Canvas](#), page 76

General Guidelines for All Screen Templates

When creating screen templates and populating content, consider the following:

- Templates are ordered by name.
- For Proof of Play, you can have more than one region with an ad playlist.
- Regions are listed from top-to-bottom layer order, where the top layer appears at the top of the list.
- Layers are numbered, if a screen template contains a non video region and a video or mixed media region, the video or mixed media region always appears at the bottom of the list.

Note: You can manually drag a video region to be on top of other regions; however, the rendering of the regions below the video region will not be predictable, and can be completely invisible.

- A plus sign icon adds a non-video region.
- A film icon adds a video or mixed media region.
- Switching a non-video region to a video region might produce a warning if there is already an existing video region.

How to Configure Screen Templates

- Saving an existing template with regions removed will produce a force dialog for confirmation. In addition, when a template that is used in an event script is edited (including when one is adding a region) a force dialog appears for confirmation. You should also edit the scripts that use the changed template to verify that the added or removed regions contain the appropriate content and changes occur as expected.

Note: Cisco StadiumVision Director Release 4.1 supports HD/SD and video content with 4K resolution (local and streaming video) on the SV-4K media player. Graphics with 4K resolution are not supported. The DMP-2K media players only support HD/SD content.

Guidelines for Custom Screen Templates

Consider the following guidelines when creating custom screen templates:

- Regions can contain non-video content (static graphics), video, or a combination of both (in a mixed media region).
- The number of allowable regions will vary based on the media player.
- Up to 5 regions are supported for each screen template, more than 5 may cause degradation. Results may vary depending on what type of non-video content is used. For example, a very simple widget may not cause degradation but a very complex widget could.

Table 11 on page 74 provides the number of content regions that you can have when creating custom templates.

Table 11 Number of Allowed Content Regions When Creating Custom Templates

Region Type	SV-4K and DMP-2K
Non-Video (Graphics)	Zero or more
Video Region 1 or Mixed Media	Up to one
Video Region 2 or Mixed Media	Up to one

- A custom template designed for SV-4K and DMP-2K media players can contain up to two video regions.

Note: The SV-4K media player does not support dual 4K video regions.

- Using luma keying on video region 2, you can enable select areas of video region 1 content to be visible through video region 2.
- You can change the order of the video regions by changing their relative layer order in the template.

- When layering regions, the non-video content (graphics, widgets, etc.) will always appear above the video content.

IMPORTANT: When layering two video/mixed media regions on the SV-4K and DMP-2K, if the playlist for the first video/mixed media region includes both video and non-video content, then the non-video content in the first region will always appear on top of the video in the second video region. Name the layers with “top” or “bottom” so that “Layer1Bottom” will be covered by “Layer2Top.”

If you must include non-video content in region 1, then a workaround is to create a local video of the static content and use that in the playlist so that it remains in the primary region.

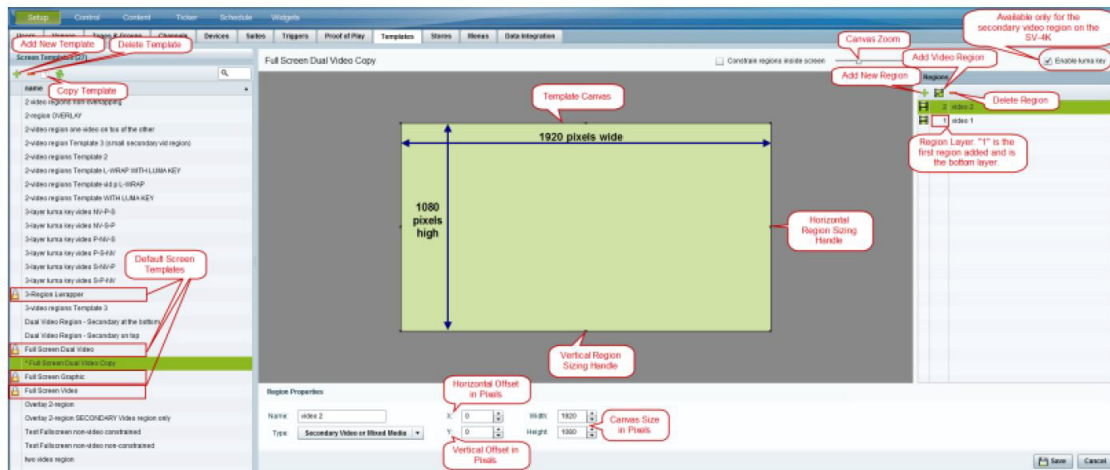
- To optimize performance, the video and graphic aspect ratio sizes should match the aspect ratio of the region. Multi-screen template stretching is not currently supported on SV-4K and DMP-2K media players.
- All regions must fit within the 1920x1080 dimensions. If you are using an overlay, then you can have two regions that are both 1920x1080.

Note: SV-4K and DMP-2K media players support negotiation to many resolutions, however when the negotiated resolution is less than 1920x1080, the template will be cropped to that lower resolution

Understanding the Templates Screen

Figure 28 on page 75 identifies several key areas of the Templates screen that you should be familiar with when creating and modifying templates.

Figure 28 Templates Screen Navigation



Creating Custom Screen Templates

Administrator / Content Manager

There are two ways that you can create new custom screen templates in Cisco Vision Director:

- Adding a brand new template for which you define all properties and regions.
- Copying from the default standard templates or another existing template to leverage the same properties and regions.
- Default templates (indicated by a gold lock icon to the left of the template name) can be copied but not modified.

Adding a New Template

To add a new template:

1. From the Control Panel, go to Setup > Templates.
2. At the top of the Screen Templates list, click the "+" icon. A new template is opened in the screen with the name "*" new template."
3. Double-click the template name and type a new name. For suggestions on naming conventions, see the [Naming Screen Templates, page 76](#).
4. Add one or more regions (up to 5).
5. Specify the region properties.
6. Save the template.

Copying From an Existing Template

An alternative way to create a new template is to copy an existing template that you have already customized, or copy from one of the default system templates.

This method saves you time and includes all of the properties from the copied template.

To copy an existing template:

1. From the Control Panel, go to Setup > Templates.
2. At the top of the Screen Templates list, click the copy icon. A new template is opened in the screen with the name " * copied-template-name Copy."
3. Double-click the template name and type a new name. For suggestions on naming conventions, see the [Naming Screen Templates, page 76](#).
4. (As required) Modify the region properties and layers.
5. Save the template.

Naming Screen Templates

When naming screen templates, use meaningful abbreviations or within the name to help you identify it. For example:

- Use "FV" in the name to indicate the screen template is for full-screen video
- Use "LW" to indicate the screen template is for an L-wrapper.

Additionally, you can include other pertinent information such as "beer" for a playlist that only has beer advertisements in it or "BrandY" for a playlist that only has BrandY products in it.

Setting the Size and Position of a Region on the Template Canvas

Administrator / Content Manager

There are several ways that you can modify the size and position of a region on the template canvas.

Resizing a Region

IMPORTANT: For the SV-4K, the Width and Height of the template canvas must match the signal resolution. For more information, see [Canvas and Template Resolution, page 57](#).

To resize a region, you can:

- Select a handle of the region box and drag it to enlarge or shrink that dimension of the region.
- For a more precise result, type the actual pixel value in the Width and Height properties.
- If you specify a region size that overlaps with another region or is outside the allowable area, an error message will display to the right of the region screen.

Repositioning a Region

TIP: X and Y values should be 0, 0 when creating fullscreen template regions. The upper left corner (0,0) position is the starting point for all templates.

To reposition a region, you can:

- Select a region (layer) and drag it on the canvas to change its position (offset).

- For a specific position, type the actual pixel offset values:
 - X–(Horizontal offset) Number of pixels to indent the content from the left side of the canvas.
 - Y–(Vertical offset) Number of pixels to indent the content from the top of the canvas.
- To change the layer order of a region on the canvas, go to the Regions list box and drag and drop the region up or down to change its order.

IMPORTANT: A multicast video layer should always be the bottom layer (Layer 1).

How to Use Luma Keying for Dual Video Templates

Note: Dual video luminance keying is only supported by the SV-4K media player.

This section includes the following topics:

- [Understanding How the Luma Key Works, page 77](#)
- [Modifying the Default Luma Key Value, page 78](#)

Understanding How the Luma Key Works

Note: The Luma key property is available only for the SV-4K and DMP-2K media player.

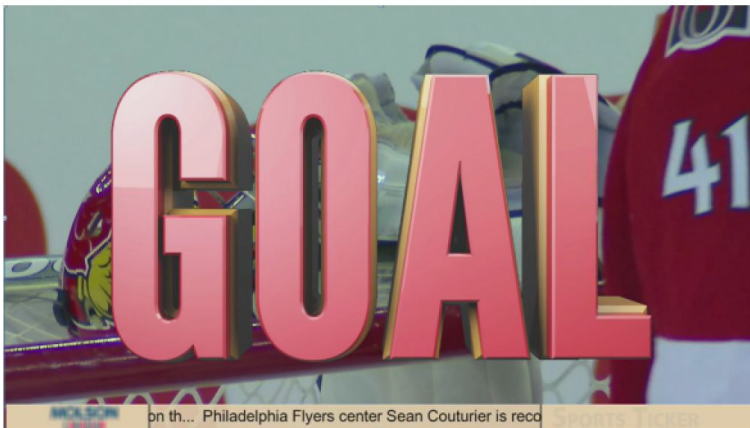
Luminance keying is used to filter the brightness level of content. Based on the key value, a range of brighter and darker pixels are filtered out and made transparent.

Luma Key Examples

Luma keys are useful when you want to overlay a moving graphic or other content over the multicast stream of a live event using dual video regions.

[Figure 29 on page 77](#) shows an example of overlaying "GOAL" to highlight a moment of exclusivity during a game.

Figure 29 Goal Overlaying Game Stream



[Figure 30 on page 78](#) shows an example of a hockey puck moving over the game stream to highlight a goal during the game.

Figure 30 Flying Hockey Puck Overlaying Game Stream After Goal

Modifying the Default Luma Key Value

Administrator

The Luma key property is set globally for all SV-4K and DMP-2K media players in the system. It can be enabled or disabled per dual video template from the Control Panel Templates screen.

TIP: Contact the Cisco Creative Services team for guidance on how to effectively use and set the luma key value for your content needs.

The Luma key property is a 6-digit hexadecimal value that is set to #fff2000 by default. [Table 12 on page 78](#) shows the format of the hexadecimal key and how the bits are interpreted.

Table 12 Luma Key Format

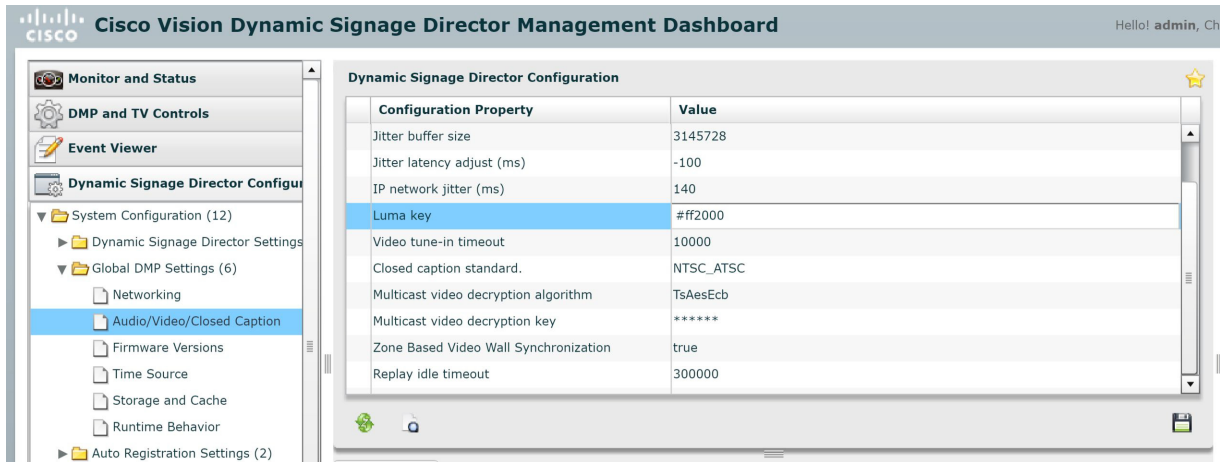
8-Bit Mask	8-Bit High Range	8-Bit Low Range
0xff	0x20	0x00

With the default value, content with the luma of 0xff is masked (left unchanged), and content with luma values in the range of 0x00 to 0x20 (the darker pixels) are filtered from the content and made transparent.

To disable the luma key property globally for all SV-4K and DMP-2Ks, leave the value blank (no spaces). If the Luma key property is blank, then no masking will be applied even if the option is set on the template.

To modify the default luma key value:

1. From the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Audio/Video/Closed Caption**.
2. In the Configuration Property box, find the **Luma key** property.



3. In the value box, type the 6-digit hexadecimal value beginning with the # sign.

4. Click the disk icon to save your changes.

TIP: You do not need to reset the media player to apply the new value. Whenever a script starts, the SV-4K and DMP-2K media player retrieves the global settings.



Working with Content in Cisco Vision Director

First Published: 2017-11-21

User Role: Administrator / Content Manager

This module provides information about how to use the Content screen to manage your content and an overview of the different content ingestion methods available in Cisco Vision Director.

This section includes the following topics:

- [Configuring the Default Video Channel, page 81](#)
- [Tuning Selected Media Players to a Multicast URL, page 82](#)
- [Defining Channels and Channel Guides, page 82](#)

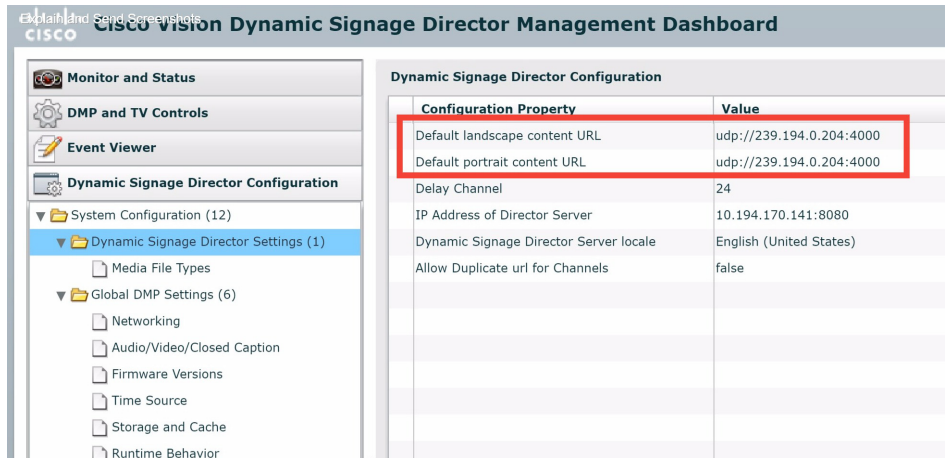
Configuring the Default Video Channel

Specifying a default video channel allows you to quickly verify that video transmission is working after provisioning a media player without running an event script.

If the default video channel is not configured properly, or if a video channel is not available, then media players not running an event script will display a black screen. This is not necessarily a problem, but it does delay verification of proper multicast operation to the DMP.

To configure the default video channel:

1. Log into Cisco Vision Director as an administrator.
2. Go to the Management Dashboard.
3. Go to **Dynamic Signage Director Configuration > System Configuration > Dynamic Signage Director Settings**.
4. In the **Configuration Property**, find the **Default landscape content url** and the **Default portrait content url**.
5. Type the URL for the video stream ([Figure 31 on page 82](#)).
6. Save the changes (click disk icon in bottom right of panel).
7. Reload the media players.

Figure 31 Configuring the Default Video Channel


The screenshot shows the Cisco Vision Dynamic Signage Director Management Dashboard. On the left is a navigation menu with categories like 'Monitor and Status', 'DMP and TV Controls', 'Event Viewer', and 'Dynamic Signage Director Configuration'. The 'Dynamic Signage Director Configuration' section is expanded to show 'Dynamic Signage Director Settings (1)'. On the right, a table titled 'Dynamic Signage Director Configuration' lists various properties and their values. A red box highlights the 'Default landscape content URL' and 'Default portrait content URL' rows, both of which are set to 'udp://239.194.0.204:4000'.

Configuration Property	Value
Default landscape content URL	udp://239.194.0.204:4000
Default portrait content URL	udp://239.194.0.204:4000
Delay Channel	24
IP Address of Director Server	10.194.170.141:8080
Dynamic Signage Director Server locale	English (United States)
Allow Duplicate url for Channels	false

Tuning Selected Media Players to a Multicast URL

User Role: Administrator

You can tune one or more media players to a specific multicast URL in the Management Dashboard. This configuration will not remain after reboot of the devices but can be used as temporary workaround to a content issue at the venue.

To tune selected media players to a multicast URL:

1. From the Management Dashboard, go to:
2. DMP and TV Controls > TV Commands > Set Video Channel
3. In the Common panel, specify the URL for the multicast group (address and port) of the video channel that you want to display on the selected media players.
4. In the Select Devices panel, select the media players whose TV displays should display this default channel.
5. Click the Play button to send the command to the selected DMP.

Defining Channels and Channel Guides

Administrator / Content Manager

Cisco Vision Director allows you to distribute in-house video and re-distribute external channels including over the air (OTA) local channels, satellite, and cable TV. Video can be in either high definition (HD) or standard definition (SD). There is no limit to how many channels you can offer. The channels you select will be available for viewing anywhere you have TVs connected to DMPs: in bars and restaurants, the back office, and in luxury suites. Users can change channels from the IP Phone or using the IR remote.

Figure 32 Channel Guide Lineup on TV and IP Phone

Channel Lineup Designation at the Headend

A combination of external and internal channels make up the “channel lineup” that is available throughout the venue.

Although the concept of a channel number doesn’t really exist in the IP world, channel numbers are typically assigned to each channel at the headend. These numbers are arbitrary, but can be numbered correspond to the top 15 channels that will show up on the IP phone control in the Luxury suites.

To enable channel selection at the endpoints:

- On the Cisco DCM, each (in-house or external) channel received is mapped to its unique multicast group address and UDP port number.
- In Cisco Vision Director, each unique multicast group/UDP port number pair is assigned a Vision channel number and a channel name.
- Cisco Vision Director uses this mapping to direct DMPs to specific channels and populate an electronic program guide which lists the available channels.

Note: For information about how to configure the channel lineup at the headend, see the [Cisco StadiumVision Video Headend Design and Implementation Guide](#) available to qualified Cisco Vision partners.

Defining the Master Channel List

Once channels have been defined at the headend, you need to define a master channel list on the Setup > Channels page in the Cisco Vision Director Control Panel.

Consider the following before you configure the master channel list:

- Channels to be offered: Decide how many in-house live video feeds you will have and which external channels you will offer.
- Channel Numbering Scheme: You may want in-house channels at the top of your numbering scheme. You may want your numbering scheme to match the area satellite or cable numbering scheme. You may choose to hide some of the channels you have in house.
- Channel Guide Appearance: Decide the channel guide descriptions that appear on the TVs in your luxury suites, bars, and restaurants and whether you want a team logo to appear on the screen.
- For each channel that should appear in the channel lineup accessed by a Cisco IP Phone or IR remote, set the “Visible in IP Phone Guide” field on the Channels panel to Yes.

- For each channel that is to appear in the channel lineup accessed by a third-party touch panel, set the “Visible in 3rd Party Guide” field on the Channels panel to Yes.

Adding Channels to the Master Channel List

Administrator / Content Manager

To add channels to the master channel list:

1. Open the Control Panel and select the Setup > Channels. The Master Channel List displays in the Master Channel List tab.
2. Click “+” at the top of the Master Channel List.
3. On the Basic Info tab, define the information listed in [Table 13 on page 84](#). The description and source ID are optional.

Note: The Channel name configured in Cisco Vision Director should be limited to 12 characters or less. Due to the space allotted for channel names on the IP Phone interface, more than 12 characters may have undesirable results.

Table 13 Adding a Channel to the Master Channel List

Field	Description
Channel Name	The name of the channel as you would like it to appear on the channel guide that appears on your video displays. A maximum of 12 characters are supported.
Description	Description of what is playing on the channel (optional). This shows up on the TV only.
Multicast Address	The multicast IP address of this channel designated at the Cisco Vision headend.
Port	The multicast port used to communicate with this channel as designated at the Cisco Vision headend.
Channel Number	The number you want to assign to this channel. This channel number will appear in the channel guides on the TVs and IP Phones.
Source ID	Placeholder for future program guide integration. Not required.
Allow Ad Wrapping	Ad wrapping refers to displaying this channel in an L-wrapper or similar screen template where advertisements play alongside the video stream.
Favorite	Specify “yes” if you want the channel to be listed as a favorite in the channel guide controlled by a 3 rd party touch panel.
Favorite Order	Enter a number (between 1 and 10) indicating the ordinal placement of this channel in the listing,

4. When you have filled in all the required fields, click Save. As soon as you save this channel, it will appear in the Master Channel List.

Note: You must Save before you add or modify another channel. As soon as you move from one channel to another without doing a save, all of your input is lost.

5. Repeat steps 3 and 4 to add all the channels you want to display in Cisco Vision.

Using “Favorites” (Third-Party Touch Panels Only)

In addition to the channel lineup, a maximum of 10 channels can be identified as favorites, which appear on the initial video control page of the third-party touch panels.

For each channel that should be listed as a favorite:

- In the Favorite field, select Yes.
- In the Favorite Order field, enter a number (between 1 and 10) indicating the ordinal placement of this channel in the listing.

Work with the third-party device integrator to determine how the favorites list should be displayed on the third-party touch panels. All installations should move to access channels directly versus indirectly through the favorites mechanism.

Sorting the Master Channel List

Click the Master Channel List column headings (Name or #) to sort the channel names alphabetically in ascending or descending order or by channel number. You can also use the filter box to see only the subset of channels that have the characters you specify in the filter. The filter is not case sensitive. For example, if you type “e” in the filter box the following channels will appear: ESPN, ESPN2, Universal, HD Theater, HDNet, HDNet Movies, and E.

Creating and Assigning Channel Guides

Once you have added channels to the Master Channel List, you can create “per-area channel guides” to display a custom channel guide in different areas of the venue. For example, you can have a different set of channels available in each of the suites, concourses, clubs, the owners suite, back offices, locker rooms, concessions and ticket windows.

The per-area channel guides are a subset of the master channel list, meaning the channels numbers and descriptions are preserved. For example, a venue may have raw in-house channels that they want to make available only to the coaching staff and not to the general public. This is achieved by creating two channels guides: one private and one public. The private channel guide is assigned to groups/zones of DMPs that control the TVs in the coaches office and locker rooms. The public channel guide is flagged as the default channel guide and hence is automatically assigned to all other DMPs.

You can designate one channel guide as the default channel guide. Cisco Vision Director automatically assigns this channel guide to any DMP that is not associated with a luxury suite, bar, restaurant, or other area that supports local control, or any DMP that does not have a channel guide defined.

Note: If you make changes to a channel guide that is associated with an area serviced by a third-party touch panel, the third-party device must reload the latest channel guide information. Consult the third-party device integrator (AMX or Crestron) for reload options.

Creating a Channel Guide

Administrator / Content Manager

To create a channel guide:

1. Add channels to the Master Channel List. For more information, see [Table 13 on page 84](#).
2. Open the Control Panel and select Setup > Channels.
3. Click the Channel Guide tab (next to the Master Channel List tab).
4. Click the plus (+) above the Channel Guide and type a name and description for the new channel guide.
5. (Optional) Enable “Default Channel Guide for All Suites” to make this the default channel guide.

6. Click Save.

Assigning Channels to a Channel Guide

Administrator / Content Manager

To assign channels to a channel guide:

1. Create a channel guide. For more information, see [Creating a Channel Guide, page 85](#).
2. Open the Channel Guide tab and select the per area channel guide to which you want to assign channels.
3. Click Assign Channel. The Master Channel list displays.
4. Select the channels you want to add to the channel guide and click Add. The channels you add display in the Channel Guide window.

TIP: You can use the keyboard Shift-click and Ctrl-click functions to select multiple channels.

5. Click Save.

Assigning a Channel Guide to a Luxury Suite/Local Control Area

Administrator / Content Manager

This task should be done after the master channel list and per area channel guide has been created.

To assign a channel guide to a luxury suite:

1. On the Setup > Channels page, select the per-area channel guide.
2. Click Assign (under the “Used in Suites” list). The list of undefined luxury suites/local control areas displays.

Note: The term “Luxury Suite” is used to define not only Luxury Suites but also any local control area.

3. Select the luxury suites/local control area to which you want to assign the custom channel guide.

TIP: To select more than one suite/local control area, use the keyboard Shift-click and Ctrl-click keyboard functions.

4. Click Assign.

By default, when the channel guide is brought up on the IP Phone, it is also displayed on the selected TV(s). You can change this behavior by setting the “tvguide.autolaunch” parameter to 0 in the Cisco Vision Director Management Dashboard Registry. See [Controlling the Behavior of the Channel Guide, page 88](#).

Adding Icons to the IP Phone Channel Guide

You can associate channel icons that display in the IP Phone channel guide. Channel icons must be obtained locally (the venue must obtain permission from the network) and must be a 24 x 24 PNG file. The most common is a third-party channel icon file that is a 100 X 100 PNG. [Figure 33 on page 87](#) shows some examples.

Figure 33 IP Phone Icons

Uploading a Phone Channel Icon

You can upload and tag multiple icons for the same usage type at the same time.

To upload a phone channel icon:

1. Copy the icon graphic(s) to your local drive.
2. Select Setup > Channels.
3. On the Channels toolbar, click the Icon button. The icon list displays.
4. Click Upload Icon and browse to the png file you want to assign as a channel icon.
5. In the Import Content dialog box, enter the following information: Under “Keyword Tags to Apply” select where the channel icon will be used:
 - DMP (for TV banner)
 - Phone
 - 3rd Party Remote
6. Select an expiration setting.
7. Click Upload. The icon you uploaded will now appear in the icon list.

Assigning a Phone Channel Icon

Administrator / Content Manager

Once you have created a master channel list and uploaded phone channel icons, you can assign icons to the channels.

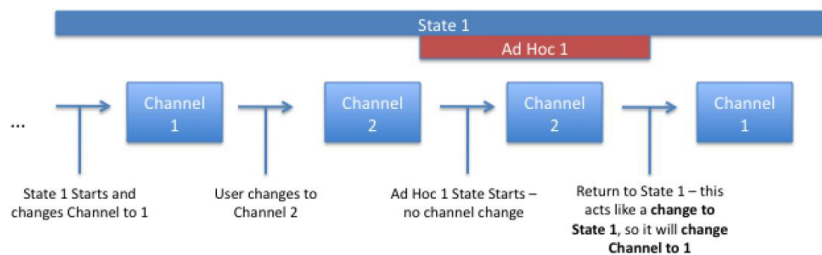
To assign a phone channel icon:

1. In the icon list, select the channel for which you want to assign an icon. The channel number displays in the Assigned Icons box.
2. Select the icon you want to assign to the channel.
3. Click Assign Icon.
4. Click Save. A message displays confirming the icon assignment was successful.

Channel Guide Behavior

- If a DMP is assigned to more than one Luxury Suite, it will use the Per-Area Channel Guide associated with the last Luxury Suite to which it was assigned. For example if a DMP is added to Suite 1 and then added to Suite 2, it will use the Channel Guide defined for Suite 2. For this reason, it is recommended that you do not assign a DMP to more than one Luxury Suite.
- If the user changes the channel via an IP phone, IR remote, or 3rd-Party remote, the channel chosen by the user will override the currently playing video playlist with the selected video.
- If the template is full screen video or 3-region video, the template will not change, but the video will change to the selected channel.
- If the template is full screen signage, the signage will be replaced with full screen video showing the selected channel.
- If the DMP is showing a playlist of video, the entire playlist will be replaced by the single video channel. For example, if the playlist contains three videos, all three videos will stop and be replaced by selected channel.
- When the state changes on a DMP that is associated with a local control area (luxury suite, bar, restaurant, etc.), the script contents will override the user's local control.

Therefore, if you expect a DMP to be locally controlled, any states in use during that period should not change the template or channel. This is particularly important when using ad hoc states with locally controlled DMPs. Cisco Vision Director will treat the return from an ad hoc as a state change, so if the base state has a channel setting, the channel on all locally controlled DMPs will return to the base channel when the ad hoc state ends.



Controlling the Behavior of the Channel Guide

The appearance and behavior of the channel guide are controlled by parameters in the Cisco Vision registry. These settings control whether:

- A preview window is displayed when a channel is selected.
- The channel guide is automatically displayed on the TV when it is selected on the phone.
- The phone UI continues to display the channel guide after a channel has been selected.

For individual luxury suites, you can override the setting that controls the automatic display of the channel guide on the TV through the Control Panel.

Configuring Channel Guide Settings in the Registry

Administrator

To configure channel guide settings in the registry:

1. From the Management Dashboard, go to:

2. Tools > Advanced > Registry. To be sure that you are displaying the current settings, click Load.

3. Scroll through the Registry Data list to the desired parameters.

Note: To change the phoneControl.stayOnChannelSelect parameter from its default (1), you must add the parameter using Add Row.

4. Click the Value field beside each parameter and enter the appropriate values.

5. Click Apply.

Defining a Delay Channel

Administrator / Content Manager

If you have assigned DMPs to a delay zone, then you can configure the channel you want to display on the TVs controlled by the DMPs in the delay zone during the delay event state.

If no channel is configured, the DMPs will display the default channel during the delay event state.

To define a delay channel:

1. Open the event script.
2. Click the green plus sign (+) above the Ad Hoc states panel.
3. Enable the Manual transition button (the default setting).
4. In the Ad Hoc State box, click Edit.
5. Select the delay group from the tree list.
6. Select the Set FULLSCREEN action source and drag it to the Assigned Actions list.
7. Click Region 1.
8. Select the channel you want to play during a delay from the Playlist Sources channels list.
9. Drag the channel to the Assigned Playlists.
10. Click **Apply**.
11. Click **Save**.

Defining a Non-Event Channel

Administrator / Content Manager

If you have assigned DMPs to non-event zone, you can configure the channel you want the TVs to play when no event script is running in that non-event zone.

If no channel is configured, the DMPs will display the default channel during the non-event state.

To define a non-event channel:

1. Open the event script.
2. Click the green plus sign (+) above the Ad Hoc states panel.
3. Enable the Manual transition button (the default setting).
4. In the Ad Hoc State box, click Edit.

5. Select your non-event group from the tree list.
6. Select the Set FULLSCREEN action source and drag it to the Assigned Actions list.
7. Click Region 1.
8. Select the channel you want to play when no event script is running from the Playlist Sources channels list.
9. Drag the channel to the Assigned Playlists.
10. Click **Apply**.
11. Click **Save**.

Setup: Channel Source Types

A new channel source type called **External URL** that allows you to specify an HTTP, HTTPS, or HTTP Live Streaming (HLS) source as a channel, including HTML page sources.

HLS sources are hardware-accelerated on the DMP. The content is specified as an External URL source type in the Channels setup. The system recognizes the content as an HLS source based on the Allowed HLS file formats designated in the Management Dashboard. The default extensions allowed are **m3u** and **m3u8**. See [Media File Types \(New\)](#), page 36 of the [Release Notes for Cisco Vision Dynamic Signage Director Release 6.0](#), page 1.

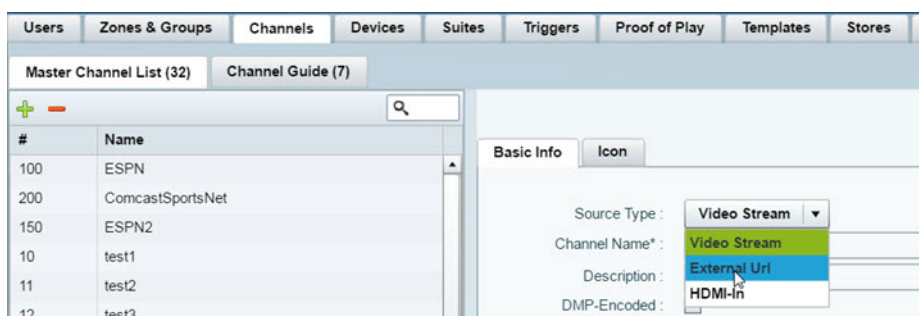
Note: This feature does not replace the existing HTML pass-through feature (**New External Content** button) from the Control Panel Content screen. HTML pass-through is recommended for content that might be considered for more temporary use in the system.

The Source Type field is available with Video Stream, External URL, and HDMI-In options ([Figure 34 on page 90](#)).

To choose a source type:

1. Go to **Control Panel > Setup > Channel**.
2. Click the **Basic Info** tab.
3. At **Source Type** pull-down, select **External URL** to choose an external url for your channel. The dialog box appears ([Figure 35 on page 91](#)).

Figure 34 Channel Source Types in Release 6.0



Use an external URL as a channel when you do not need synchronization of content, but you would like to be able to tune to that content from a script, User Control API, IP phone, or IR remote. External URL channels also can be streamed to a DMP-encoded multicast channel but do not support audio when streamed in that form.

Figure 35 External URL Channel Configuration

The items with an asterisk (*) are required.

How to Configure HDMI-In Video Sources on the SV-4K

This section includes the following topics:

- [Guidelines for Using HDMI-In on the SV-4K, page 91](#)
- [Prerequisites for Using HDMI-In on the SV-4K, page 91](#)
- [Restrictions for Using HDMI-In on the SV-4K, page 92](#)
- [Configuring HDMI-In as a Video Source in a Region on the SV-4K Media Player, page 92](#)
- [Configuring a DMP-Encoded Multicast Channel on the SV-4K in Cisco Vision Director, page 96](#)

Guidelines for Using HDMI-In on the SV-4K

When using HDMI-In on the SV-4K, consider the following guidelines:

- If using video with 4K resolution, be sure to observe the guidelines for 4K content in the [Cisco Vision Content Creation Design and Specification Guide](#) and use cables that are HDMI version 1.4 compliant.
- You can use different forms of local control only when using HDMI-In encoding to stream video as a multicast channel. Otherwise, you need to use scripts to start/stop streaming.
- If you want to maintain privacy of channels, create a DMP-encoded channel per suite with a unique multicast address (from 239.193.20.0/24 range), and create a separate channel guide per suite.
- For example, if you have 10 suites—create 10 separate DMP-encoded channels with unique multicast addresses, create 10 different channel guides for each DMP-encoded channel, and assign each suite to a different channel guide.

Prerequisites for Using HDMI-In on the SV-4K

Before you use HDMI-In on the SV-4K, be sure that the following conditions are met:

Restrictions for Using HDMI-In on the SV-4K

- You have purchased a separate encoder software license. For more information, see the [Release Notes for Cisco Vision Director](#).
- Test the devices that you plan to connect to the SV-4K HDMI-In port to stream content for HDCP support.
- Most Mac OS and Windows laptops should work for HDMI-In video encoding for non-copy-protected content. It is up to the device manufacturer and OS whether or not this is supported.
- When using HDMI-In encoded video channels, be sure that you have configured the allowable multicast range 239.193.20.0/24 for this feature in the Connected Stadium network.

Restrictions for Using HDMI-In on the SV-4K

Before you use HDMI-In on the SV-4K, consider the following restrictions:

IMPORTANT: The HDMI-In port on the SV-4K media player can only be supported either as a source to video region or source to encoder as a channel, but not both. Therefore, you cannot have a script in a state which tunes to the HDMI-In as video source in a region, and then transition to the next state where you are streaming video from HDMI-In.

- Videos with 4K resolution are not supported for HDMI-In streaming.
- When using HDMI-In encoding to stream video content as a multicast channel:
 - The streaming state is synchronized only when streaming is started by script, IP phone, IR remote, or User Control API—not when started from the Management Dashboard.

This means that if you start streaming from the Management Dashboard, then the IR remote menu might not properly show which channel is streaming or not streaming.
 - The SV-4K playing HDMI-In encoded video stops streaming if the DMP is rebooted, even though the script is running. Start Streaming is a direct command, which is sent when the svd server changes state (like RS232 commands or tv on /off type commands). It is only executed when the state is changed, so it is not re-executed on reboot.

Configuring HDMI-In as a Video Source in a Region on the SV-4K Media Player

Administrator / Content Manager

To configure HDMI-In as a video source in a region:

1. From the Cisco Vision Director **Main Menu**, go to: **Event Management > Control Panel > Schedule** ([Figure 36 on page 93](#)).

Figure 36 Control Panel Schedule Screen Workflow

The screenshot displays the 'Control Panel Schedule Screen Workflow' interface. At the top, there are input fields for 'Name' (HDMI-In Test 1), 'Description', and 'Color'. There are also checkboxes for 'Legacy Video Wall Sync Mode' and 'Don't Enforce Asset Rules', both of which are checked. 'Edit' and 'Close' buttons are located in the top right corner.

The interface is divided into two main sections:

- Sequential States:** A table with columns 'Name', 'Transition', and 'Duration(s)'. It lists three states: 'Blank' (Manual transition), 'FS Multicast' (Manual transition), and 'HDMI-In' (Manual transition). The 'HDMI-In' row is highlighted in green.
- State Details:** A table with columns 'Name', 'Actions', and 'Content'. It shows the details for the 'HDMI-In' state, which is highlighted in green. The 'Actions' column contains the text 'No actions configured'.

2. Create a new script by typing a name (Figure 37 on page 94).
3. Add the state named HDMIIn_State.
4. Select the group/zone where the event script runs to assign actions and content to the HDMIIN_State (Figure 38 on page 94).

Figure 37 New State Name

Add new sequential state or copy from existing sequential states

New State Copy State

Name: HDMIIn_State

Description: New_state

Transition: Manual Timer

Add all zones to this state

Add Cancel

Figure 38 Script State

Edit Actions for HdmITestZone

Assigned Actions

Full Screen Video configuration

Available Channels

Region Configurations

Region	Name	Playlist
1	Video	Local HDMI-In

Available Actions

Full Screen Video or Mixed (1920x1080)

Full Screen Dual Video

Full Screen NonVideo (1920x1080)

Full Screen Video or Mixed (1920x1080)

batwas_template

Full Screen Video with Graphic Overlay

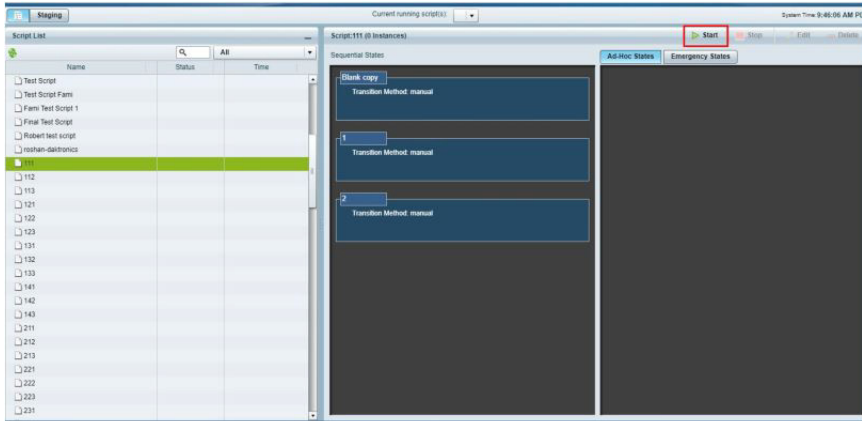
OK Cancel

5. Select a video/mixed media template.
6. Click **Channels**.
7. Drag Local HDMI-In to a template region.
8. Click **OK** to save the script.

Verifying the Script Plays Local HDMI-In Content

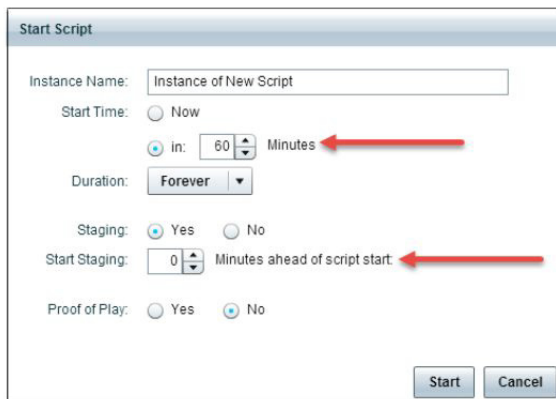
To verify (Figure 39 on page 95) that the script plays the local HDMI-In content:

Figure 39 Script Verification



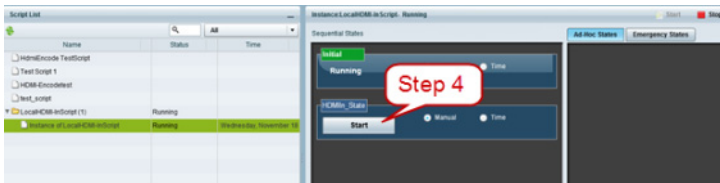
1. From the Cisco Vision Director Main Menu, go to **Event Management > Control Panel > Control**.
2. Select the Local HDMI-In script that you created. The Start Script dialog box appears (Figure 40 on page 95).

Figure 40 Start Script Dialog Box



3. Add in all the parameters.
4. Click **Start**.

Figure 41 HDMIIN_State Verification



5. Start the HDMIIn_State. Verify that the TV display for the target DMP is playing the expected HDMI-In content.

Configuring a DMP-Encoded Multicast Channel on the SV-4K in Cisco Vision Director

Administrator / Content Manager

To configure a DMP-encoded multicast channel on the SV-4K:

1. From the Cisco Vision Director **Main Menu, Event Management > Control Panel > Setup > Channel**.
2. Select or create a channel guide where you want to include the DMP-encoded channel.

TIP: If you want to maintain privacy of channels, create a DMP-encoded channel per suite with a unique multicast address (from 239.193.20.0/24 range) and create a separate channel guide per suite.

3. From the Basic Info tab, configure the options shown in [Figure 41 on page 95](#) and described in [Table 14 on page 97](#).

Figure 42 DMP-Encoded Multicast Channel Example

The screenshot shows the configuration page for a channel named "TestHDMI2". The "Basic Info" tab is selected. The configuration fields are as follows:

Channel Name*	TestHDMI2
Description	
DMP-Encoded	<input checked="" type="checkbox"/>
Maximum Bit Rate	40000 Kbps
Video Mode	1080p60
TTL	10
Display Encode Bitrate	20000 Kbps
Protocol	udp
Multicast Address*	239.193.20.100
Port*	4000
Channel Number*	888
Long Name	
Short Name	
Source ID	
Favorite	<input checked="" type="radio"/> Yes <input type="radio"/> No

Table 14 DMP-Encoded Multicast Channel Options

Option	Description
Channel Name	Simple name for the channel that will appear in local control devices.
DMP-Encoded	(Required) Select this checkbox to configure an encoded multicast channel on the SV-4K.
Maximum Bit Rate	Two times the encode bit rate.
Video Mode	Resolution that matches the configuration of the content and TV display.
TTL	Time-to-Live for the multicast packet.
Display Encode Bitrate	Value between 2000 to 25000 Kbps.
Protocol	UDP
Multicast Address	(Required) Multicast address from range 239.193.20.0/24 according to your Connected Stadium network configuration.
Port	(Required) Multicast port.
Channel Number	Number that appears in local control.

4. Click **Save**.

Starting and Stopping HDMI-In Streaming on the SV-4K Media Player

Table 15 on page 97 summarizes the methods of starting and stopping streaming for HDMI-In video sources on the SV-4K.

Table 15 Methods for Starting and Stopping HDMI-In Streaming by Type of HDMI-In Content Source

Method	HDMI-In as Video Source	DMP-Encoded Multicast Channel
IP Phone	No	Yes
IR Remote	No	Yes
Management Dashboard	No	Yes
Script	Yes	Yes
User Control API	No	Yes

Note: When the Management Dashboard is used to start/stop streaming for a DMP-encoded multicast channel, the channel parameters are configured directly in the Management Dashboard.

Starting and Stopping Streaming by IP Phone

A luxury suite user can use a configured IP phone to select HDMI-In Broadcast on the selected DMP-encoded player. The user can select the configured DMP encoded channels or Off to start streaming or stop streaming respectively.

For more information, see the phone guide **Using a Cisco Unified IP Phone with Cisco Vision: HDMI-In Broadcast**.

Starting and Stopping Streaming by IR Remote

A luxury suite user can use an IR Remote to broadcast HDMI-In contents. On selection of the HDMI-In Broadcast menu, the list of DMP-encoded channels for streaming are listed for selection and 'Off' to stop streaming.

Starting and Stopping Streaming by Script Action

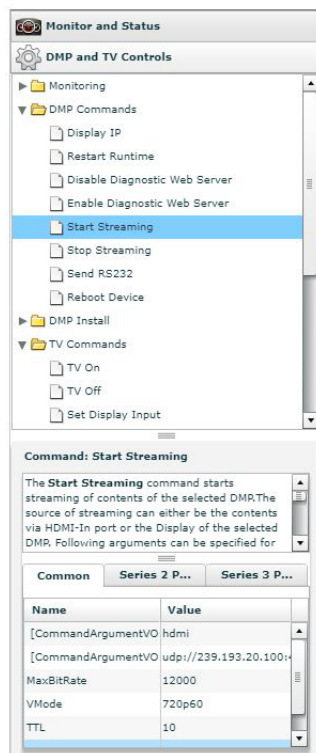
Two new actions of Start and Stop streaming can be defined as actions within a script. When the script starts running according to the defined state either start streaming or stop streaming action will be executed.

Starting and Stopping Streaming by Management Dashboard Command

Administrator

To start and stop streaming in the Management Dashboard:

Figure 43 Start/Stop Streaming Commands in Management Dashboard



1. From the **Management Dashboard**, go to **DMP and TV Controls > DMP Commands > Start Streaming**.
2. Configure the DMP-encoded channel options in the SV-DMP Parameters.
3. Select the SV-4K device where you want to start HDMI-In streaming.
4. Click the **Play** button to execute the command.

5. From the Management Dashboard Console, verify that the Start Streaming command is successful.

HDMI-In Streaming Versus Display Streaming

For HDMI-In streaming, what streams from the DMP is the audio/video from the HDMI-In port source ONLY (Figure 44 on page 100).

For Display Streaming, entire video composition (without audio) will be streamed from the DMP - i.e., an encoded rendition of what you see on the TV connected to the DMPs HDMI-out.

Display streaming can be used even when your video source is not HDMI-In, or in cases where you want to encode/stream not just HDMI-In but also other elements on the screen, or maybe an HTML5 page (you don't need a video source in display streaming) Display streaming parameters are set in channels where the DMP is the encoder (DMP encoded channels).

HDMI-In Streaming

Local HDMI-In (HDMI-In Pass-Through Supported by SV-4K and CV-UHD Players)

Script Configuration

1. Assign for DMP .94 pre-defined Channel 0 "Channel HDMI-In" to action **Full Screen Mixed Video**.

When script runs, all input from HDMI-In will be streamed out to the Display via HDMI-OUT (Figure 45 on page 100).

Restrictions for Using HDMI-In on the SV-4K

Figure 44 HDMI Streaming



Figure 45 Full Screen Video Streaming

The screenshot shows the configuration interface for a channel named 'Channel HDMI-In (HDMI-IN Pass Through)'. The interface includes several panels:

- Sequential States:** A table with columns for Name, Transition, and Duration(s). It lists states like 'Blank', 'TV On', 'HDMI-IN - 94', and 'TV Off'.
- State Details:** A table showing state details for 'Z_SV-4K', 'SV-4k-93', and 'SV-4k-94'.
- Edit Actions for SV-4k-94:** A central panel with sub-sections:
 - Assigned Actions:** Lists 'Full Screen Video or Mixed (1920x1080)'.
 - Full Screen Video configuration:** Shows 'Region: video' and 'Channel HDMI-In'.
 - Region Configurations:** A table with columns for Region, Name, and Playlist. It shows a configuration for Region 1, Name 'video', and Playlist 'Channel HDMI-In'.
 - Available Channels:** A list of channels including 'Channel - No Change', 'Channel DMP Encoded HDMI-IN CH1', 'Channel HDMI-In' (highlighted), 'Channel HDMI-IN-2', 'Channel in-house-1', 'Channel tagboard 1', and 'Channel URL cisco.com'.
- Available Actions:** A list of actions including 'Closed Caption Off'.

DMP HDMI-In Streaming

Script configuration

1. Create DMP-encoded CH1 configuration (Figure 46 on page 101).

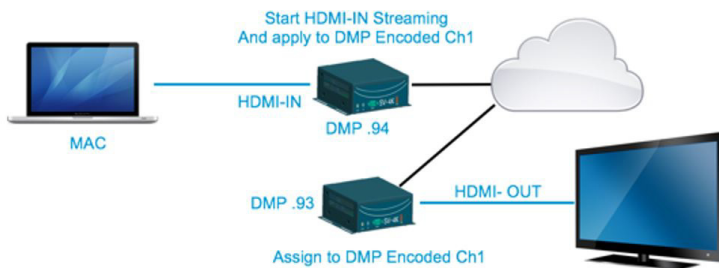
Figure 46 Create DMP-Encoded Channel 1

2. Attach video source to HDMI-IN.
3. For DMP .94 (Figure 47 on page 101): Script action Start HDMI-In Streaming and assign it to DMP encoded channel 1.
4. For DMP .93: Tune in on DMP Encoded channel 1 (Figure 48 on page 101).

Figure 47 Start HDMI-In Streaming to DMP-Encoded Channel 1

Sequential States			State Details		
Name	Transition	Duration(s)	Name	Actions	Content
Blank copy	Timer	45	▼ Z_SV-4K	No actions configured	
TV On copy	Manual	-	□ SV-4k-93	Full Screen Video or Mixed (1920x1080)	1-Channel DMP Encoded HDMI-IN CH1
Start HDMI-IN Streaming copy	Manual	-	□ SV-4k-94	Start HDMI-In Streaming	
Stop HDMI-IN Streaming copy	Manual	-			
TV Off copy	Timer	30			

Figure 48 DMP-Encoded Channel 1



5. On DMP .94: stop display streaming (Figure 49 on page 102).

Figure 49 Stop HDMI-In Streaming

Sequential States			State Details	
Name	Transition	Duration(s)	Name	Actions
Blank copy	Timer	45	Z_SV-4K	No actions configured
TV On copy	Manual	-	SV-4k-93	Action inherited
Start HDMI-IN Streaming copy	Manual	-	SV-4k-94	Stop HDMI-In Streaming
Stop HDMI-IN Streaming copy	Manual	-		
TV Off copy	Timer	30		

HDMI-In Streaming with External URL Source or Playlist

When you want to use the DMP HDMI-IN encoder to broadcast an External URL Script or a Playlist, there is an additional head-end DMP required (DMP .95).

Script Configuration

1. Create separate script and run Ex. Mixed playlist on DMP .95.
2. Connect the HDMI-OUT to the HDMI-IN of DMP .94 (Figure 50 on page 102).

Figure 50 Start HDMI-In Streaming and Assign to DMP-Encoded Channel

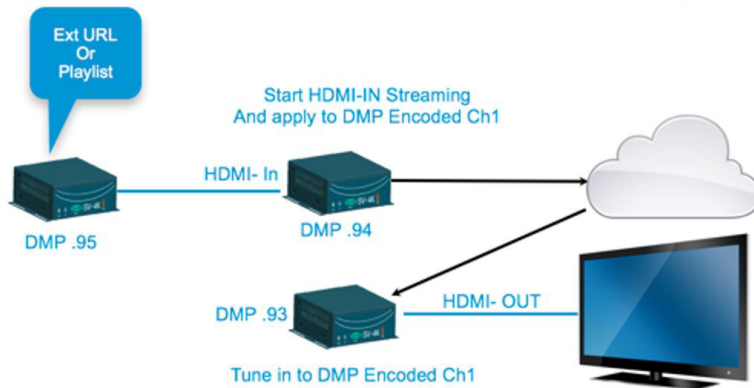
The screenshot shows the configuration for state SV-4k-94. The 'Assigned Actions' panel is open, showing 'Start HDMI-In Streaming' assigned to 'DMP Encoded HDMI-IN CH1'. The 'Available Actions' panel is also visible, showing a search bar and a list of actions.

3. In DMP .94 Start HDMI-Streaming and assign to DMP encoded Channel.
4. DMP .93: Select DMP Encoded channel 1.
5. On DMP .94, stop display streaming (Figure 51 on page 102).

Figure 51 Stop HDMI-In Streaming on DMP 94

Sequential States			State Details	
Name	Transition	Duration(s)	Name	Actions
Blank	Timer	45	Z_SV-4K	No actions configured
TV On	Manual	-	SV-4k-93	Action inherited
Start HDMI-In Streaming	Manual	-	SV-4k-94	Stop HDMI-In Streaming
Stop HDMI-In Streaming	Manual	-		
TV Off	Timer	30		

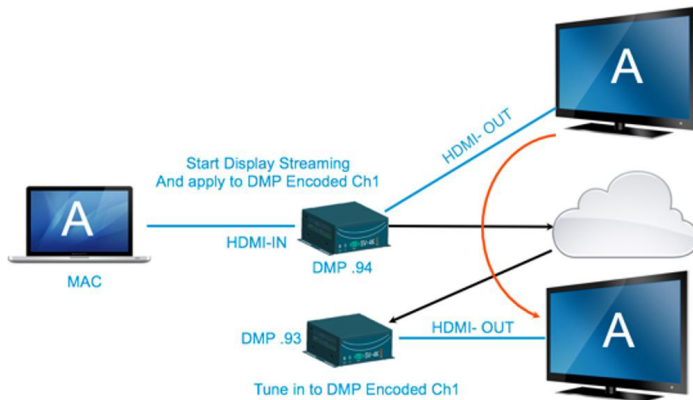
Restrictions for Using HDMI-In on the SV-4K



Display Streaming

Display Streaming with Video Source Input on DMP HDMI-In

In this scenario, everything entering the HDMI-IN is displayed on the TV connected to the encoder DMP (DMP .94) and will be streamed out on DMP channel Encoded Ch1.



Script Configuration

1. In DMP .94, start display streaming (Figure 52 on page 104) and assign to DMP encoded Channel 1 (Figure 53 on page 104).

Restrictions for Using HDMI-In on the SV-4K

Figure 52 Start Display Streaming on DMP .94

Name	Transition	Duration(s)
Blank copy	Timer	45
TV On copy	Manual	-
Start Display Streaming copy	Manual	-
Stop Display Streaming copy	Manual	-
TV Off copy	Timer	30

Name	Actions	Content
Z_SV-4K	No actions configured	
SV-4k-93	Full Screen Video or Mixed (1920x1080)	1-Channel DMP Encoded HDMI-IN CH1
SV-4k-94	Start Display Streaming	

Figure 53 Select Streaming Channel

- For DMP .93, tune to DMP-encoded Channel 1 (Figure 54 on page 104).

Figure 54 Start Display Streaming on DMP .93

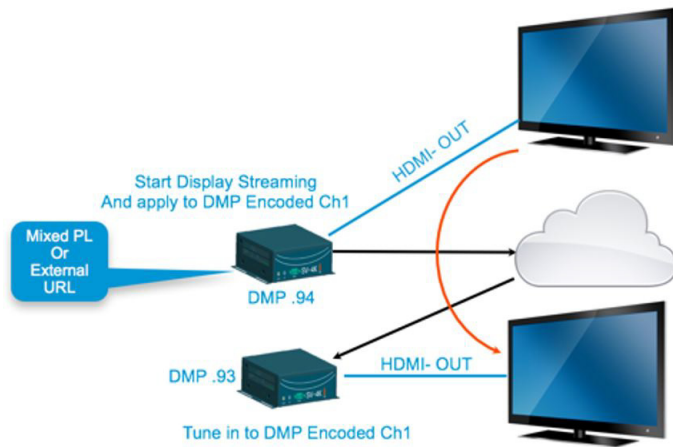
Name	Transition	Duration(s)
Blank copy	Timer	45
TV On copy	Manual	-
Start Display Streaming copy	Manual	-
Stop Display Streaming copy	Manual	-
TV Off copy	Timer	30

Name	Actions	Content
Z_SV-4K	No actions configured	
SV-4k-93	Full Screen Video or Mixed (1920x1080)	1-Channel DMP Encoded HDMI-IN CH1
SV-4k-94	Start Display Streaming	

Display Streaming with External URL or Mixed Media Playlist

In this scenario, no HDMI-IN of the DMP is used. A script in DMP 94 is setup and started. Once the script runs, “Start Display Streaming” will attach it to the DMP-encoded channel, functioning as a multicast channel.

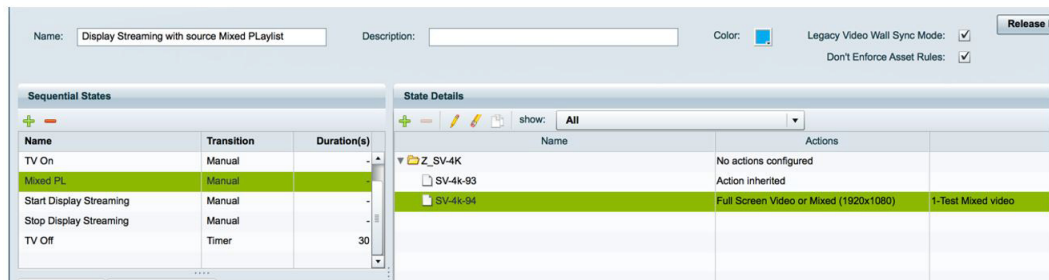
Restrictions for Using HDMI-In on the SV-4K



Script Configuration

1. Set up script.
2. Choose event state “Mixed PL.”
3. Assign “Full Screen Video or Mixed (1920X1080)” to DMP .94 (Figure 55 on page 105).

Figure 55 Assign DMP .94



4. For DMP .94, Start Display Streaming (Figure 56 on page 106) and assign it to DMP-encoded Channel 1 (Figure 57 on page 106).

Figure 56 Start Display Streaming on DMP .94

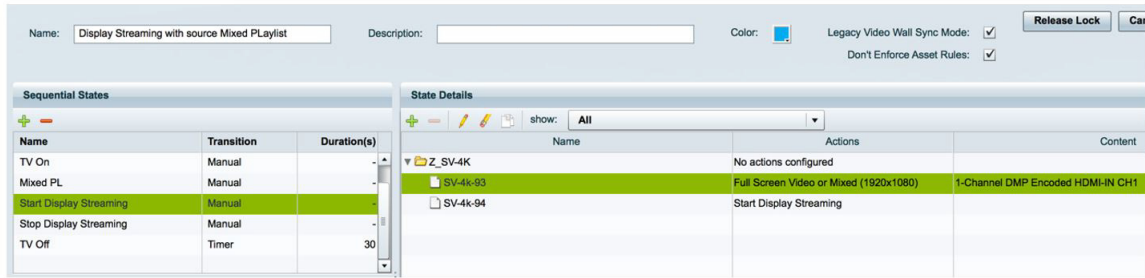
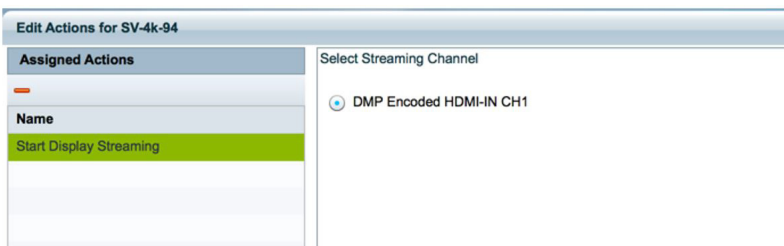
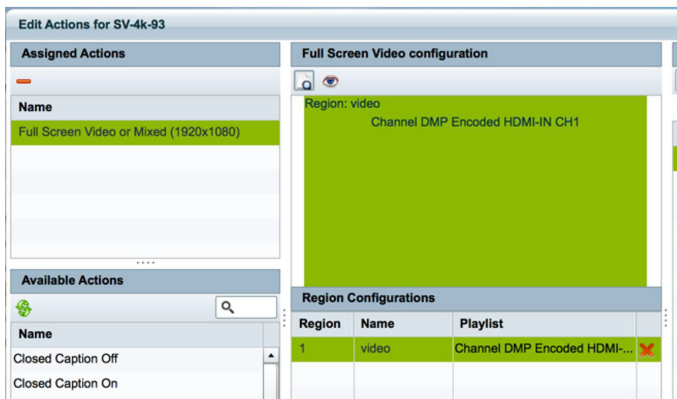


Figure 57 Select Streaming Channel



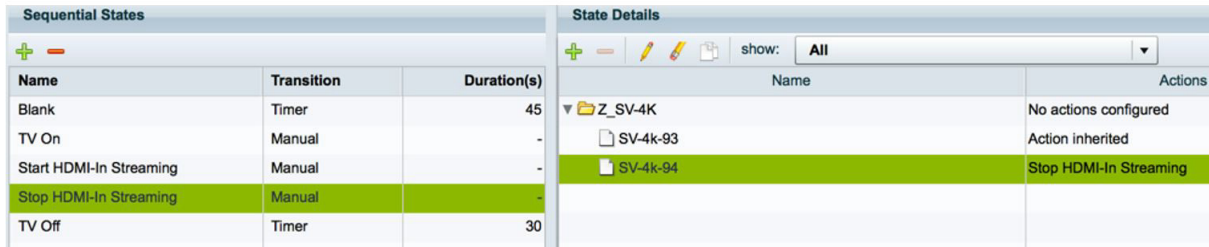
On DMP .93, choose the DMP-encoded channel 1 (Figure 58 on page 106).

Figure 58 Assign DMP .93 to Channel DMP Encoded HDMI-In Channel 1



On DMP .94, Stop HDMI-In Streaming (Figure 59 on page 106).

Figure 59 Stop HDMI-In Streaming on DMP .94



How to Manage Content

This section includes the following topics:

- [Information About the Content Screen, page 107](#)
- [Creating and Assigning Content Tags, page 111](#)
- [Removing a Tag From Content, page 112](#)
- [Getting Content Into Cisco Vision Director, page 113](#)

Information About the Content Screen

The Control Panel Content screen allows you to both manage content as well as create and modify playlists.

Use the Content screen to do the following tasks:

- Import static graphics or local video content.
- Add an HTML pass-through URL.
- Manage content:
 - Sort the content by name, type, URL, size, or expiration date.
 - Search for content.
 - Tag content.
 - Delete content.
- Create and manage playlists.

Content Screen Views

The Content screen has three views:

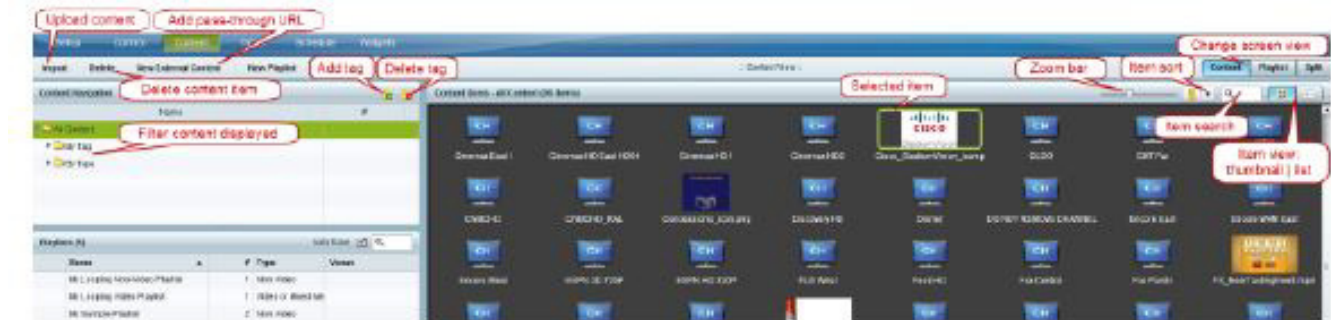
- [Content View, page 107](#) (default)
- [Playlist View, page 108](#)
- [Split View, page 109](#) (content and playlist panels displayed)

The menu bar is organized based on the selected view.

Content View

[Figure 60 on page 108](#) identifies the content-related layout and task options available from the Content view.

Several areas of the Content view also appear in the other screen views.

Figure 60 Content View Navigation

Content Items Panel

Content items can be displayed as thumbnails or as a file list with details.

By default, the Content Items panel shows thumbnails of the following items stored in the Content Management System (CMS) library:

- Dynamic Menu Board (DMB) gadgets
- Images (static graphics)
- Pass-through URLs
- Videos
- Widgets

Items Not Displayed in Content Items Panel

Certain content types and applications in Cisco Vision Director are not directly visible from the main Content screen in the Control Panel, including the following:

- Data integration sources (RSS feeds, generic data sources, other).
- Dynamic Menu Board (DMB) default images and themes.
- Content albums (images or videos).
- Uploaded fonts.

Playlist View

[Figure 61 on page 109](#) identifies the playlist-related layout and task options available from the Content view.

Several areas of the Playlist view also appear in the other screen views.

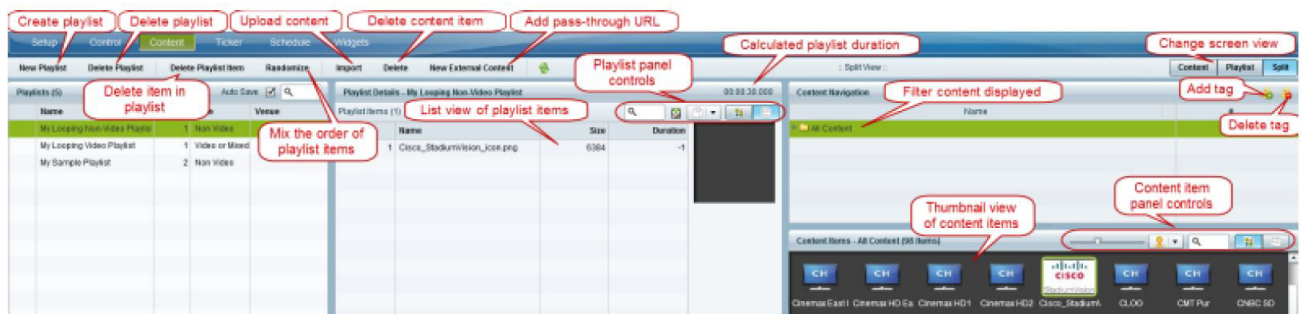
Figure 61 Playlist View Navigation



Split View

Figure 62 on page 109 identifies the layout and task options for the combined views for content and playlists on the same screen.

Figure 62 Split View Navigation



Content Search Methods

You can use the Control Panel Content screen to find your content items or playlists in multiple ways:

- Search for content items assigned with a particular tag name by selecting the tag in the Content Navigation panel.
- Search for content items by name or file type using the Search box on the Content Items panel.

TIP: You can enter the first few letters of the content file name, or enter a file type such as ".jpg" in the search box.

- In the Content Items panel, sort the content by name, type, or size to locate content.
- Search for playlists using the Search box on the Playlist panel, and by typing in the first few letters of the playlist name.

Content File Information

You can use the Control Panel Content screen to get file information about your uploaded content in either thumbnail or list view.

How to Manage Content

Thumbnail View File Information

From thumbnail view, you can select a content item and click the arrow in the lower right corner and select **Get Info** (Figure 63 on page 110).

Figure 63 Get Info for Content Item in Thumbnail View

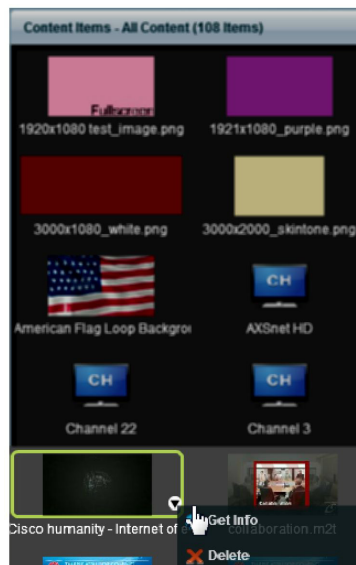


Figure 64 on page 110 shows an example of the file information that is displayed for the selected video file in the Content Details window.

Figure 64 Content Details Window for Video Content



List View File Information

Figure 65 on page 111 shows an example of the file information available in list view for the same selected content item shown in Figure 63 on page 110 thumbnail view.

Figure 65 File Information in List View



Name	Ty	W	H	Durati	Size
(A) [Super HD] MAD MAX F	Vi	0	0	146	152.01MB
(A) [Ultra HD 4K] STAR WAI	Vi	0	0	90	77.95MB
(A) [ULTRA HD] Sony 4k De	Vi	0	0	191	7.67MB
(A) [ULTRA HD] TRANSFOI	Vi	0	0	153	271.94MB
(A) Batman v Superman D	Vi	0	0	135	354.21MB
(A) GoPro Hero 4 DJI Phant	Vi	0	0	125	266.68MB
(NA) [Super HD] MAD MAX	Vi	0	0	146	158.73MB
(NA) [Ultra HD 4K] STAR W	Vi	0	0	90	79.32MB
(NA) [ULTRA HD] TRANSFC	Vi	0	0	153	283.79MB
(NA) Batman v Superman	Vi	0	0	135	358.71MB
(NA) GoPro Hero 4 DJI Pha	Vi	0	0	125	278.21MB
1 - 1 - 1. Course outline and	9c	54		896	17.08MB
4K Footage SpaceX Launc	Vi	0	0	126	167.52MB
4K_FS_ATT_112414_v2.mp	Vi	15	10	15	18.80MB

Guidelines for Content Tags

Consider the following guidelines to create content tags:

- Proof of Play processing requires the following naming convention:
- <tag name> **_PoP**
 - where <tag name> is the name for your proof of play label, and the “_PoP” suffix is required to designate the label for proof of play processing.
- The following characters are not supported in tag names: / ? < > \ : * | "
- Content in multiple playlists can use the same tag. The number of playlists that have content assigned to a tag displays under the # column in the Content Navigation window next to the tag name.

Creating and Assigning Content Tags

Administrator / Content Manager

TIP: Consider assigning zone and group names as tags for the content files used in those areas. This allows you to type in a single search word or phrase and find all the content for a given zone or group, such as “Luxury Suite Delta” or “Concourse A.” You can also use tags that correspond to the type of content in the playlist, such as “menu.”

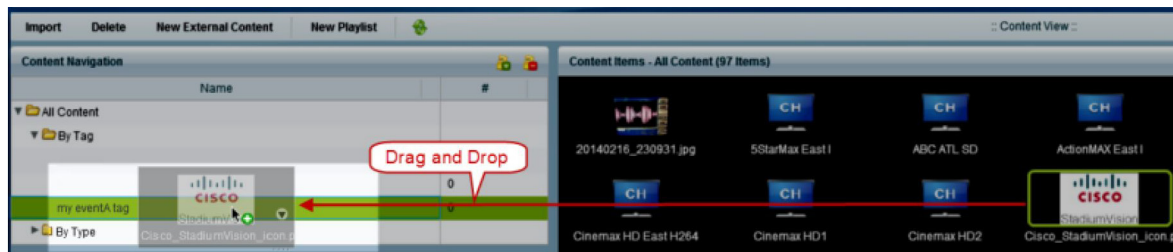
To create and assign content tags:

1. Go to Control Panel > Content.
2. In the Content Navigation panel, click the "Add new tag" icon.
3. In the name box, type a new name for the tag.

IMPORTANT: The following characters are not supported in tag names: / ? < > \ : * | ".

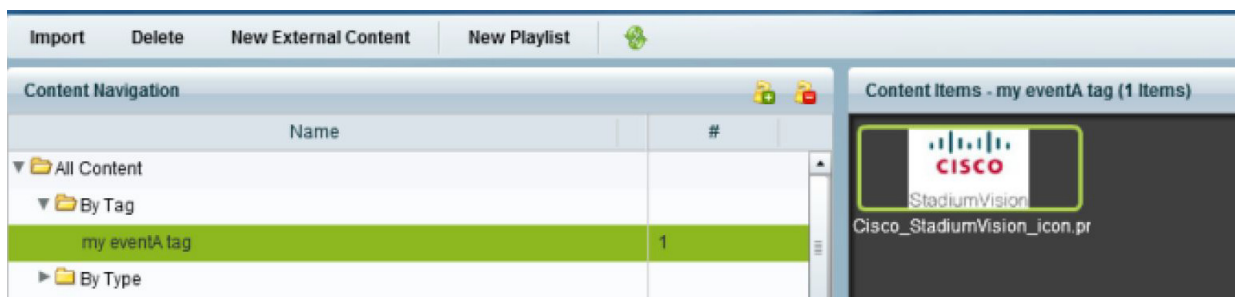
Be sure to include the required “_PoP” suffix in your tag name for proof of play records. For more information about Proof of Play, see the [Cisco Vision Director Proof of Play](#).

4. To assign a tag to content, drag and drop content items from the content library to the tag name in the Content Navigation panel ([Figure 66 on page 112](#)).

Figure 66 Assigning a Content Tag

TIP: Content can also be assigned to tags when you first upload the content to the library.

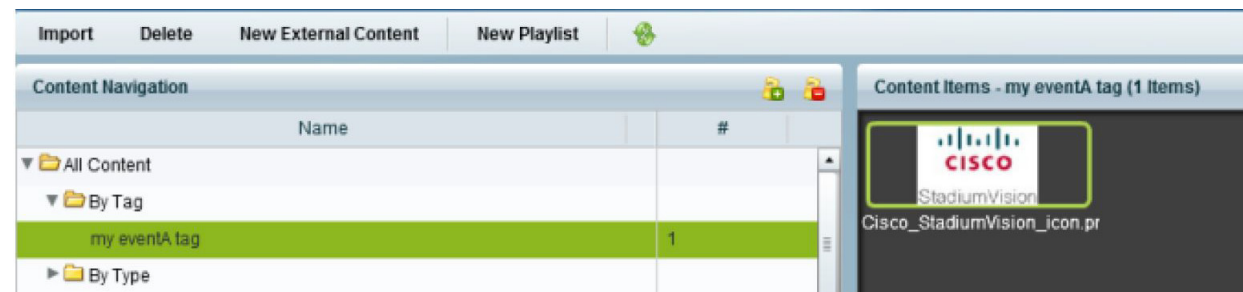
5. To verify that the content has been assigned to the tag, click the tag name. The content assigned to the selected tag will display in the Content Items area (Figure 67 on page 112).

Figure 67 Viewing Tagged Content

Removing a Tag From Content

Administrator / Content Manager

When you remove a tag from content, the content will no longer be associated with that tag but the content itself remains in the content library. Figure 68 on page 112 summarizes the steps to remove a tag from selected content.

Figure 68 Workflow Summary to Remove a Tag From Content

To remove a tag from content:

1. In the Content Navigation panel, select the tag name. The content items for that tag display in the Content Items panel.
2. Click on the content item from which you want to remove the tag.

TIP: Use the keyboard Shift-Click function to select and untag multiple content items assigned to a tag.

3. Click "Remove selected tag from content" icon with the red "x".
There is no confirmation prompt. The tag is immediately removed from the content.

Getting Content Into Cisco Vision Director

Cisco Vision Director supports a wide variety of content types and methods for ingesting content.

There are limitations and specifications for the content size and formats supported by Cisco Vision. These vary depending upon a number of factors including the TV display resolution, the media player used in the venue, the screen template region layout, and the TV proximity to the fans.

Before you deploy content to Cisco Vision Director, be sure that you refer to the [Cisco StadiumVision Content Creation Design and Specification Guide](#) to be sure the content is in the correct format, is the appropriate size, and has the correct dimensions for where it will be displayed. If the content is not the correct size for the region into which it will be placed, the image will either be cropped or there will be blank space in the region.

[Table 16 on page 113](#) summarizes the different content types supported by Cisco Vision Director, the methods of how you ingest the content, and references to topics in this document and other external guides where you can find the details about how to work with that content type.

Table 16 Content Ingestion Methods by Type of Content

Type of Content	Method	For more information see:
Channel Guide	Control Panel > Setup > Channels	Configuring the Default Video Channel, page 81
Content Feeds (Atom, RSS)	Control Panel > Setup > Data Integration	Cisco Vision Director External Content Integration Guide
Database (MySQL or SQLServer)	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director External Content Integration Guide
FTP Data	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director External Content Integration Guide
HTML Pass-Through	Control Panel > Content > New External Content	Adding a URL for HTML Pass-Through Content, page 114
HTTP/HTTPS Data	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director Data Integration Guide
JSON Data	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director Data Integration Guide
Menu Boards Using DMB	Main Menu > DMB Application	Cisco Vision Director Dynamic Menu Board and Store Configuration Guide
Menu Boards Using POS Data Sources	Control Panel > Setup > Data Integration	Cisco Vision Director Data Integration Guide
NFL Data	Control Panel > Setup > Data Integration	Cisco Vision Director Data Integration Guide

Type of Content	Method	For more information see:
Scoreboard Controllers	Control Panel > Setup > Data Integration	Cisco Vision Director Data Integration Guide
Static Graphics (Content screen)	Control Panel > Content > Import	Importing Local Video and Images to the Content Library, page 114
Static Graphics (Direct upload to non-video playlist)	Control Panel > Content > Playlist view	Adding Static Graphics to a Non-Video Playlist by Direct Upload, page 126
TCP Data	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director Data Integration Guide
UDP Data	Control Panel > Setup > Data Integration > Generic Data Source	Cisco Vision Director Data Integration Guide
Video (Headend)		Cisco StadiumVision Video Headend Design and Implementation Guide (Available to qualified Cisco Vision partners.)
Video (Local)	Control Panel > Content > Import	Importing Local Video and Images to the Content Library, page 114

Importing Local Video and Images to the Content Library

Administrator / Content Manager

To import local video and images from the Content screen:

1. Go to **Control Panel > Content**.
2. Click **Import**.

TIP: Use the keyboard Shift-Click function to select and untag multiple content items assigned to a tag.

3. Browse to the file that you want to upload.

TIP: Use the drop-down box by the File name to filter your selection by file type, including .zip files.

4. Click **Open**.
5. From the Import Content dialog box, do the following:
 - a. (Optional) Add or delete available tags.
 - b. (Optional) Select available tags to be assigned to the content that you are uploading.
 - c. Click **Upload**.

Adding a URL for HTML Pass-Through Content

Administrator / Content Manager

For HTML content guidelines, see the [Cisco Vision Content Planning and Specification Guide](#).

To add a URL for HTML pass-through content:

1. Go to **Event Management > Control Panel > Content**.

2. Click **New External Content**.
3. Type the name and URL for your content.
4. Click **Save**.

Staging Content to the Media Player

Once you have content uploaded to Cisco Vision Director, it must be pushed to the media player before it can be run by a script. This process of pushing content to the media player is called **content staging**.

Content staging needs to be done when:

- (SV-4K and DMP-2K only) New custom fonts or language packs have been installed in the Software Manager.
- There have been changes to any content imported to the content library (CMS). This includes local video and graphics files.

Note: Changes to widgets or data integration sources do not require content staging.

There are two ways that you can stage content from the Control screen in the Control Panel:

- Staging content manually

Manual content staging is performed outside the actual running of the script using the Staging button on the Control screen. With this method, you can stage content per script for all media players, or by selected media players.

Note: Only Administrator and Event Operator roles can stage content manually. Venue operator roles cannot stage content this way.

- Scheduling content staging

With this method, you can schedule content staging to occur at a specified number of minutes ahead of script start, or just before a script starts.

Staging Content Manually

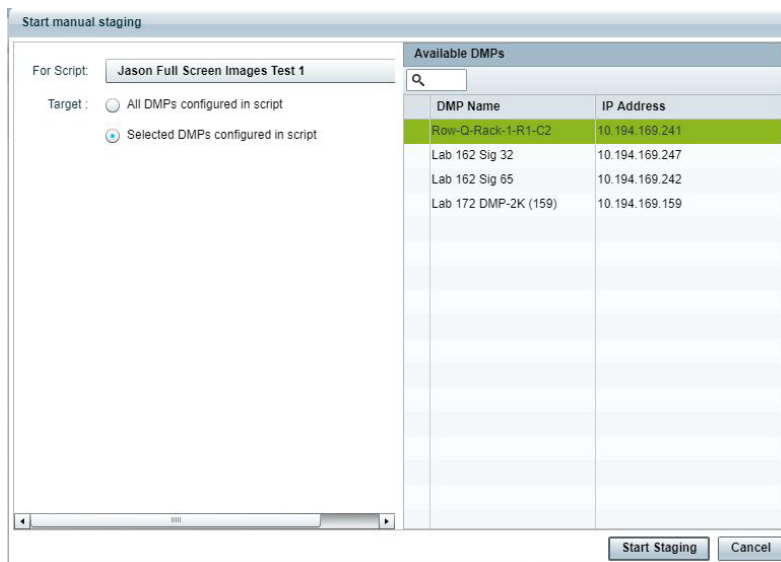
Administrator / Event Operator

To stage content manually:

1. Go to **Event Management > Control Panel > Control**.
2. Select the script whose content you need to update on the media players.
3. Click **Staging**.
4. In the Staging screen, click the green arrow to start manual staging. The Start Manual Staging dialog box appears (Figure 69 on page 116).

Figure 69 Start Manual Staging Dialog Box

5. Select the target media players to receive the content updates. If you click " Selected DMPs configured in script," a list of available media players appears ([Figure 70 on page 116](#)).

Figure 70 Selected DMPs Configured in Script

6. Select the available media players to receive the content updates.
7. Click **Start Staging**.

Scheduling Content Staging with Script Start

Administrator / Event Operator / Venue Operator

It is up to the user to determine how long before the script start to schedule staging. However, the script will not start until staging is complete, even if 0 minutes ahead of script start is configured.

For more information about running event scripts, see also the [Running an Event Script from the Control Panel, page 160](#).

To schedule content staging with script start:

1. Go to **Event Management > Control Panel > Control**.
2. Select and start the script. The Start Script dialog box appears ([Figure 71 on page 117](#)).

Figure 71 Start Script Dialog Box

The screenshot shows the 'Start Script' dialog box with the following configuration:

- Instance Name: Instance of New Script
- Start Time: Now, in: 60 Minutes (indicated by a red arrow)
- Duration: Forever
- Staging: Yes, No
- Start Staging: 0 Minutes ahead of script start: (indicated by a red arrow)
- Proof of Play: Yes, No

Buttons: Start, Cancel

3. To delay the start of a script, specify the Start Time in: option.
4. To configure the staging options, do the following:
 - a. Set Staging to Yes.
 - b. In the Start Staging spinner box, specify the number of minutes ahead of the scheduled script start time to stage content to the media players.

To run staging immediately before running the script, specify a value of 0. The script will not start until staging is complete.
5. Click **Start**.



Working with Playlists in Cisco Vision Director

First Published: 2017-11-21

User Role: Administrator / Content Manager

This module provides information about how to create and modify groups of content items for sequential display using playlists in Cisco Vision Director.

Information About Playlists

A **playlist** is a series of content items (static images, video, widgets) that are grouped together to display in sequential order (one after the other) for a set duration and repeat. The playlist appears in a given area of the screen called a **region**.

Each playlist runs independently of other playlists, and multiple playlists can be run in any given event script in separate regions.

Playlists are defined by the type of content that they contain—either static graphics only (Non Video), or video/ other content types (Video or Mixed Media). A playlist set up as "Video or Mixed Media" can contain both video and static graphics, as well as other content types.

One of the most common uses of a playlist is in a screen template region where a series of advertisements cycle based upon a preset rotation. Playlists also can include tickers and full screen messages, among a number of other types of content.

[Figure 1 on page 119](#) shows an example of a playlist that contains five static images that will each display for a set duration in Region 2 of the screen template.

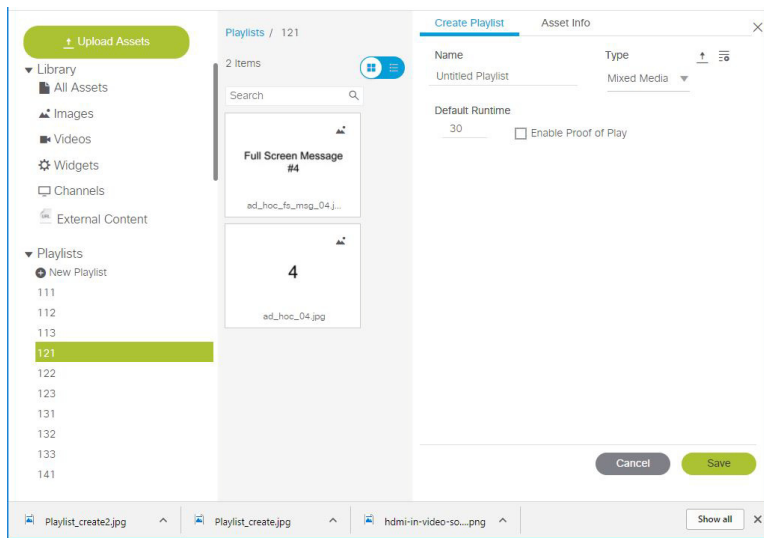
Figure 1 Playlist Example of Static Images



The playlists to be run as part of an event script must be staged, or pre-loaded, to the Cisco DMPs or SV-4Ks prior to the event from the **Event Management > Control Panel > Control** screen.

Content Screen Playlist View

[Figure 2 on page 120](#) shows the Content screen playlist view and the options available there.

Figure 2 Playlist View Navigation

How to Set Up Playlists

This section includes the following topics:

- [Guidelines for Creating Playlists, page 120](#)
- [Prerequisites for Playlist Creation, page 122](#)
- [Creating a Playlist, page 122](#)
- [Adding Content Items to a Playlist, page 124](#)
- [Changing the Order of Content Items in a Playlist, page 127](#)
- [Replacing Content in a Playlist During an Event, page 128](#)
- [Creating a Playlist with Looping Content, page 129](#)
- [Setting the Item Duration in a Playlist, page 130](#)
- [Copying Content From One Playlist to Another, page 131](#)
- [Deleting Content Items From a Playlist, page 132](#)
- [Deleting a Playlist, page 132](#)

Guidelines for Creating Playlists

When creating playlists, consider the following guidelines:

- You cannot have playlists with the same name.
- Each region can have at most one playlist.
- For Proof of Play, you can have more than one region with an ad playlist.

How to Set Up Playlists

- In all releases of Cisco StadiumVision Director, graphic playlists can only play static graphics and certain .swf files*. Prior to Release 3.1, only video content could be in a video playlist. In Release 3.1 and higher, Cisco StadiumVision Director can support static graphics, and video in mixed media playlists.

IMPORTANT: The SV-4K and DMP-2K media player do not support Flash content. For additional information, refer to allowable [Static Graphic Formats](#).

- Once a playlist displays the last content item in the list, it will loop back to the beginning of the playlist.
- The recommended ad rotation time is 30 seconds. 15 seconds is the minimum supported time for all content. As a best practice, we recommend that you never use less than 15 seconds per playlist content items.

Note: All playlists from all zones/groups for a given event must be loaded on every media player prior to the event.

Each playlist can have its own ad rotation time independent of other playlists.

Content in the playlist is displayed in the order in which it is added unless you re-order your content.

Note: As a series of content items transition in a playlist (such as advertisements in Region 2 of a standard 3-region L-wrap template), there will be some variance in the appearance of each content item as the media player displays where that content is presented. Each content item will generally appear on all corresponding media player displays within about one second of each playlist item transition. However, the amount of time that it takes for all displays in your venue to show the same content item within a playlist might exceed a one-second duration based on the following venue conditions: Network infrastructure, number of regions on the display, number of content items in the playlist, and the playlist duration.

[Table 1 on page 121](#) provides some guidelines for general playlist support in Cisco Vision Director.

Note: While these limits have been tested with basic Cisco Vision Director operation, the combination of maximum values and complexity of your system and content can potentially impact the actual limit. Therefore, be sure to test your playlist content for expected behavior before using in production.

Table 1 Playlist Guidelines and Limitations

Playlist Guideline	Limit
Number of playlists (any type) in the Cisco Vision Director content database.	1,000
Number of playlists per group.	100
Number of items per playlist.	1,200
Number of items of content (any type) used in entire SVD event. ¹	1,200
Number of characters in a playlist name (including spaces).	22

1. The number of content items that can be replaced in a playlist depends on the total number of content items, playlists, and the composition of the playlists in Cisco Vision Director. Typically a playlist containing 243-273 content items can be saved. Saving playlists larger than that will fail and content replacement will not work.

Consider the following restrictions and expected behavior when configuring playlists:

- Single video loop—You can configure a playlist to loop continuously when you have a playlist with a single video content item set for a duration of zero, with the playlist duration also set to zero.
- Single non-video loop—You can configure a playlist to loop continuously when you have a playlist with a **single** non-video content item by setting the item duration to -1, and setting the playlist duration to a number greater than or equal to zero.

How to Set Up Playlists

- All playlists will loop their content (for example, once the last item plays, the playlist restarts with the first item) **unless** a duration of zero is configured on the first playlist item.
- To run a playlist one time, you can specify a duration of zero for the last item in the playlist. There is different behavior if the last item is a non-video item versus a video. If the last item has zero duration, and once the rest of the playlist items run, then if the last item is a non-video item, it continuously plays for the duration of the state. If the last item is a video, the video plays one time followed by a black screen for the duration of the state.
- If a change is made to a playlist and the playlist is currently being displayed, it is possible that items in the playlist that are past an item in the playlist with a duration of zero, could get displayed and the playlist continues until the item with zero duration is reached again.

Prerequisites for Playlist Creation

Before you create playlists, be sure that the following conditions are met:

- You are familiar with the playlist content types to specify the appropriate playlist types (Non Video, Video or Mixed Media).
- The content for the playlist is in the Content library.
- You have determined a naming convention to ease identification and management of your playlists.

Creating a Playlist

User Role: Administrator / Content Manager

IMPORTANT: For video walls, the playlist must have the same number of items, and the same duration for each content item. Each list item must be of the same type. For more information, see [Prerequisites for Video Walls, page 142](#).

To create a playlist:

1. From the **Main Menu (Asset Library)** click **Playlist > New Playlist**. The Create Playlist box appears on the right [Figure 3 on page 123](#).
2. Specify the Playlist options, see [on page 124](#).
 - a. Type a **Name** for your playlist.
 - b. Use the pull-down arrow for **Type** of media. Best to choose **Mixed Media**.

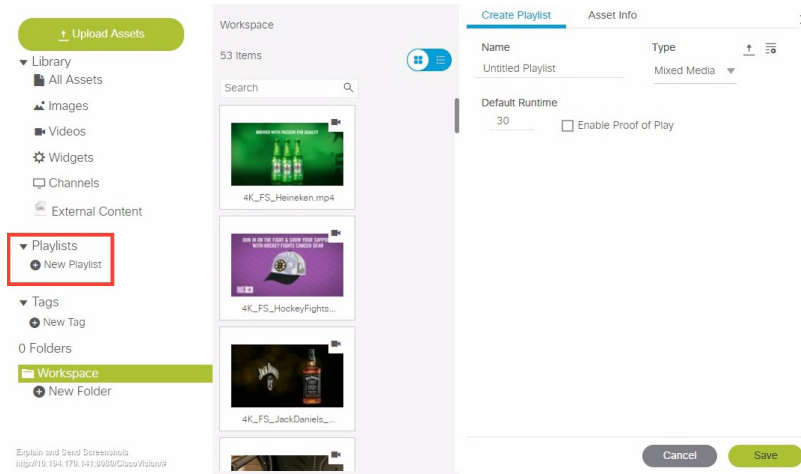
Table 2 Playlist Options

Option	Description
Playlist Name	(Required) Alphanumeric name for the playlist. Default is "New Playlist."
Type	Type of content to be used in the playlist: Non Video —(Default) Static graphics (images) only. Video or Mixed Media —Video content or combination of video and images.
Enable Proof of Play	Captures a log of items played for advertisement reporting. The default is Yes.

How to Set Up Playlists

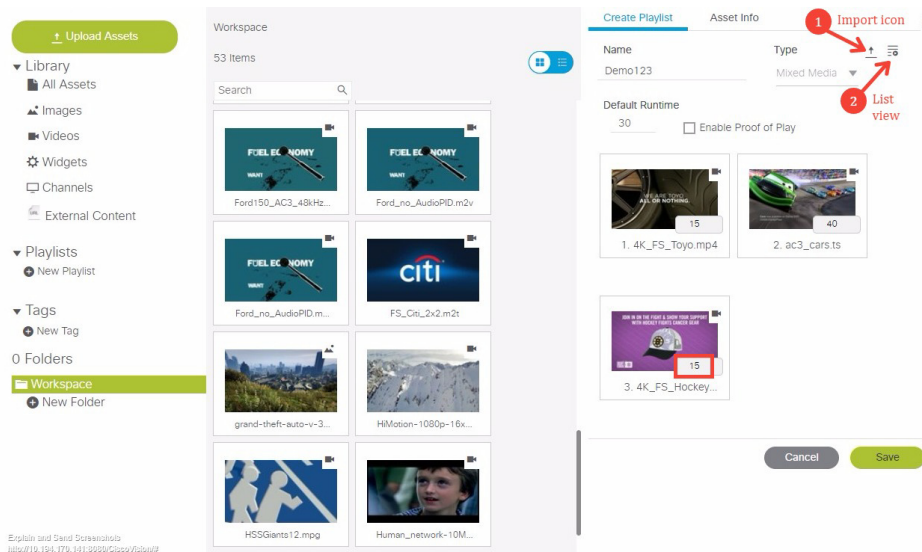
Option	Description
Default Item Duration	Length of time (in seconds) for the content item to play. The default is 30 seconds. Value must be an integer—fractions of seconds are not supported. Note: See the Guidelines for Creating Playlists, page 120 topic for information about how to properly use an item duration of 0 to loop content.
Playlist Total Duration	(Display field only) Estimates the length of time for all content items to play.

Figure 3 Create New Playlist Box



- c. Define Default Runtime (if necessary). Cisco default runtime is 30 seconds.
- d. Drag and drop content from the Asset Library ([Figure 4 on page 124](#)) or use the Import icon.
- e. Enable Proof of Play (check the box) to record the entire event script at your venue.

How to Set Up Playlists

Figure 4 Importing Content to a Playlist

3. Click **Save**. The name of the new playlist will display in the text below the Playlist Items dialog box.

Adding Content Items to a Playlist

User Role: Administrator / Content Manager

IMPORTANT: For video walls, the playlist must have the same number of items, and the same duration for each content item. Each list item must be of the same type. For more information, see [Prerequisites for Video Walls, page 142](#).

Adding Content Items from the Asset Library (Main Menu) to a Playlist

To add content items to a playlist:

1. From the **Main Menu**, click **Playlist > New Playlist**. The Create Playlist box appears on the right ([Figure 3 on page 123](#)).
2. In the Playlists pane, select the Name of the playlist where you want to add content items.
3. In the Asset Items list, select the content item(s) that you want to add to the playlist.

TIP: You can select multiple files using the standard multi-select keyboard strokes. Use the search or sort functions to find the content you want to add to the playlist.

IMPORTANT: Be sure to select content that is formatted for the proper TV display resolution where you will be running the playlist, and that it matches the region size where it will be displayed. For example, if the TV supports 1920x1080 resolution, the content you add to the playlist must be in 1920x1080 format to display properly on the TV screen.

4. Drag and drop files onto the Playlist Items area.

Content is displayed in the order in which it was added. A thumbnail of each piece of content is shown in the Playlist Items box. The header above the playlist box will indicate the number of items in the playlist.

5. (Optional) To duplicate an item in the playlist, select a content item in the Playlist Items panel, and do one of the following:
 - a. To duplicate an item once—Click the Item duplicate icon.

How to Set Up Playlists

- b. To duplicate an item multiple times—Click the drop-down arrow and select the "Duplicate multiple times" option.

In the Duplicate Contents dialog, specify the number of times that you want to duplicate the item and click Duplicate.

Metadata-Validity and Playability

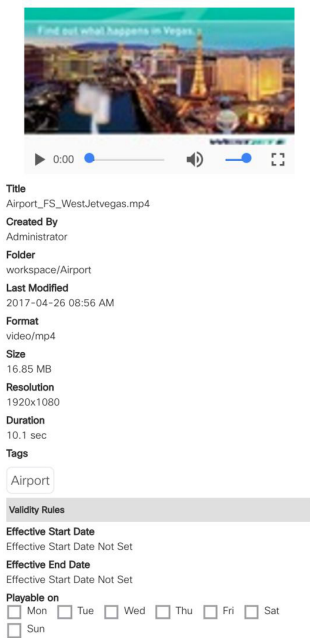
Tag an asset with metadata comprised of validity and playability information. Add granularity to your asset by configuring exactly when it is effective (validity) and exactly when it can be shown (playability). These values are typically provided by a sponsor or asset provider. But previously, an asset was unrestricted. Now assets are scalable.

To set validity and playability data:

1. Go to: **Library > Workspace > Click as Asset**. The Metadata window appears.
2. Set values (see [Figure 5 on page 125](#)). Click the **Edit** icon (pen) at top of panel.
 - a. For validity, set the **Effective Start Date** and **Effective End Date**.

Note: If you do not set this metadata, the default for all content is *forever*.

Figure 5 Setting Metadata Values



- b. If you do not set the end date, it will default to forever.
- c. If you do not pick a time, it will default to midnight (12:00 am).
- d. Slide **Restrict Playback** button to enable greater flexibility. The Playable options appear.

Figure 6 Restricting Playback of Content

- e. Choose days of the week you want the content to validly play. Previously, the default for content was everyday (always valid); now it's scalable. Uncheck days you do not want the content to play.
- f. Choose Start and End times.
- g. Click the **Save** icon at the top of the panel.

IMPORTANT: No matter where the physical location of the DMP is, once you set the start/stop data, the time you choose is “local” to that DMP, meaning content will play on that DMP at exactly the time you set, even if you are located out of the same time zone from that DMP.

Note: When your content become valid in the script, that content is not *instantly* valid. Meaning the next time the playlist loops back, the content becomes available (valid and playable).

IMPORTANT: Cisco Vision Director does **NOT** support a playlist with NO valid content. A playlist has to have at least ONE piece of content that is valid. Therefore the default for all content, unless you set it's metadata, is **always valid**.

Adding Static Graphics to a Non-Video Playlist by Direct Upload

You can drag and drop images from the Asset Library to a playlist, or, if you have not already uploaded the content to Cisco Vision Director, you can upload images directly to the playlist.

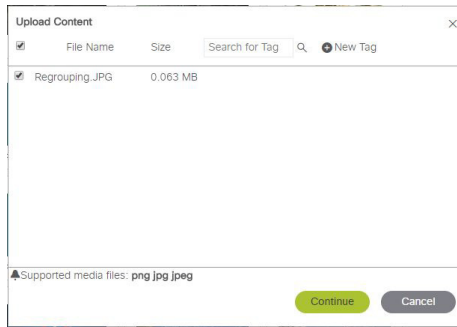
To directly upload static graphics to a non-video playlist:

1. Go to **Main Menu**, click **Playlist > New Playlist**.
2. In the Playlists listing, select the name of the playlist where you want to add images.

TIP: Once you select images to upload, you can change the target playlist name or even create a new playlist for the selected content in the Upload dialog box. You can also create and apply tags to the content.

3. At the top of the Playlist Items pane, click the import icon (Figure 7 on page 127).

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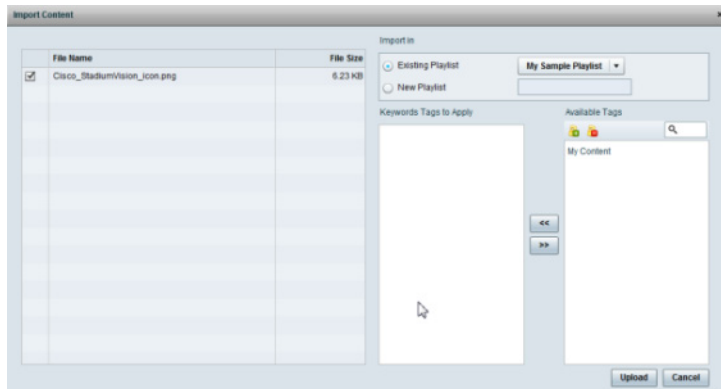
Figure 7 Import Images Directly to Non-Video Playlist

4. In the Open dialog box, select the images that you want to upload.

TIP: You can also select a compressed .zip file to upload multiple images.

5. Click **Open**.

6. In the Import Content dialog box (Figure 8 on page 127), do the following:

Figure 8 Import Content Dialog Box

- a. (Optional) Change the target playlist to another existing playlist, or type the name of a new playlist to be created.
- b. (Optional) Apply an existing tag, or create a new tag name to apply to the content.
- c. Click **Upload**.

Changing the Order of Content Items in a Playlist

User Role: Administrator / Content Manager

Content is displayed in the order in which it is added.

TIP: If you do not want a specific order of items, you can click **Randomize** to put the content items into an arbitrary order.

To change the order of content items in a playlist:

1. Go to **Main Menu**, click **Playlist**.
2. Go to List view.
3. In the Playlist Items list, select the content item that you want to move and drag and drop it into the desired position in the list. If you place the thumbnail of the content on top of another thumbnail, they swap positions.

Replacing Content in a Playlist During an Event

User Role: Administrator / Content Manager

You can perform content updates in a playlist during content presentation as long as you follow important guidelines.

Restrictions for Event-Time Content Replacement

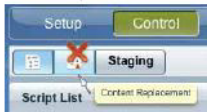
CAUTION: Event-Time Content Replacement should be used with care if you are using Proof of Play due to impact of Proof of Play reporting if changes are made while a script is running. The cost-benefit of replacing content versus PoP impact should be weighed. Once an updated event script has stopped running, the PoP will operate normally upon re-running of the script.

Before replacing content in a playlist during an event, consider the following restrictions:

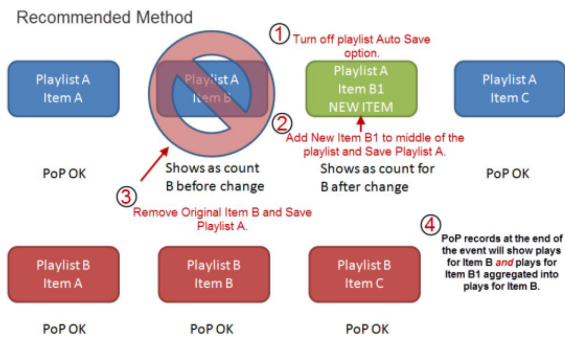
- Avoid making the following types of playlist updates when using replacing content that is using Proof of Play:
 - Adding items to the end of a playlist—The new item will show up in the PoP raw data, but not the detailed report.
 - Removing an item from a playlist—Synchronization of the PoP reporting will be mismatched.
- The replacement content file name must be unique. Do not re-import content using the same file name as any existing playlist content item.

The best practice is to Import the content item with a new file name and add it to the playlist before removing the content item to be replaced. See [Figure 9 on page 129](#) for an illustration of the recommended workflow to preserve PoP reporting.

- Widgets are not supported for event-time content replacement.
- Content replacement can negatively impact video content synchronization and is not recommended. If you must consider this, plan to have non-video content available as the replacement.
- Content replacement for the SV-4K is only supported through an update of the playlist. Performing content replacement from the Control screen using the content replacement icon is not supported on the SV-4K.



How to Set Up Playlists

Figure 9 Replacement of Existing Content Item

Creating a Playlist with Looping Content

User Role: Administrator / Content Manager

Once a playlist displays the last content item in its list, it will automatically loop, or replay content from the beginning of the playlist, as long as an item duration of 0 is **not** specified for the first content item.

For playlists with only a single video or non-video item, you need to be sure that the item duration and playlist duration to specific values to achieve a continuous replay (loop) of the playlist.

To create a playlist with looping content:

1. Go to **Main Menu**, click **Playlist**.
2. Click **Split**.
3. Select an existing playlist or create a new one.
4. Add content items to the playlist. For more information, see [Adding Content Items to a Playlist, page 124](#).
5. In the Playlist Items panel, select the list icon so that you can see the content items detail, including the item Duration.
6. Select the playlist that you want to modify and do the following:
 - a. To loop a playlist with multiple content items—Automatic. Be sure that the item duration for the first content item in the playlist is not 0.
 - b. To loop a playlist with a single, non-video item—Set the Default Item Duration for the playlist to a value greater than or equal to 0 and set the item duration to -1. See [Figure 10 on page 129](#).

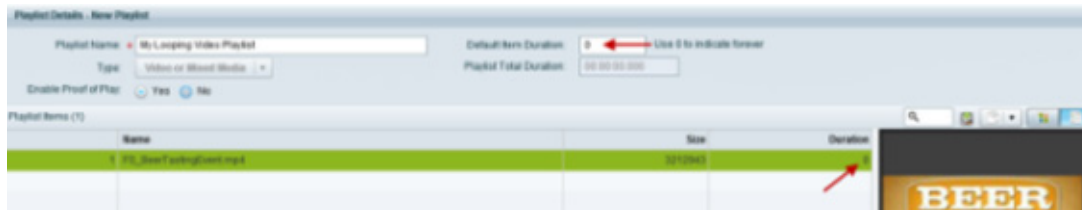
Figure 10 Duration Values to Loop Single-Item Non-Video Playlist

- c. To loop a playlist with a single, video item—Set both the Default Item Duration and item Duration to a value of 0 ([Figure 11 on page 130](#)).

How to Set Up Playlists

IMPORTANT: When looping a single video item of 0 duration, be aware that content synchronization is lost on the SV-4K media player.

Figure 11 Duration Values to Loop Single-Item Video Playlist



7. Click **Update** for an existing playlist, or Save for a new one.

Setting the Item Duration in a Playlist

User Role: Administrator / Content Manager

IMPORTANT: For video walls, the playlist must have the same number of items and the same duration for each content item.

The Default Item Duration is set in the Playlist Details panel. The default value is 30 seconds.

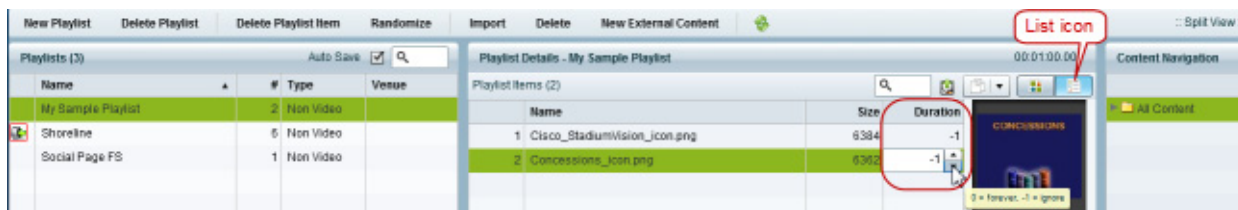
When you add non-video content items to the playlist, the value set in the Default Item Duration is used by default. In list view, you will see an item duration value of -1 (ignore) for the content item, which means that the default item duration set for the playlist is used.

Video content items use the length of the video as their default duration when added to a playlist.

To set the item duration in a playlist:

1. Go to **Event Management > Control Panel > Content**.
2. Go to Playlist or Split view.
3. Select the existing playlist or create a new one.
4. Add content items to the playlist. For more information, see [Adding Content Items to a Playlist, page 124](#).
5. In the Playlist Items panel, select the list icon so that you can see the content items detail, including the item Duration ([Figure 12 on page 130](#)).

Figure 12 Playlist Item Duration



6. Click the item Duration cell for the content item that you want to modify.
7. Type a value or use the spinner controls to set the item duration (in seconds), using the following guidelines:
 - a. **For advertisements**—Set a value of 15 (recommended).
 - b. **To use the Default Item Duration set in the playlist properties**—Use a value of -1 (This is the default).

- c. **To run a playlist one time (where last content-item is non-video)**—Set a value of 0 for the last non-video content item.

The content will play one time, and the last non-video item will run until the end of the Event state.

IMPORTANT: If the last content item is a video, then the video will play one time and a black screen is displayed for the remainder of the Event state.

- d. **To loop a playlist with multiple content items**—Automatic. Be sure that the item duration for the first content item in the playlist is not 0.
 - e. **To loop a playlist with a single, non-video item**—Set the Default Item Duration for the playlist to a value greater than or equal to 0 and set the item duration to -1.
 - f. **To loop a playlist with a single, video item**—Set both the Default Item Duration and item Duration to a value of 0.
8. Click **Update** for an existing playlist, or **Save** for a new one. For more information about creating playlists with looping content, see [Creating a Playlist with Looping Content, page 129](#).

Copying Content From One Playlist to Another

User Role: Administrator / Content Manager

You can easily copy content from one playlist to another. This task is useful for video walls or other groups of TV displays where you want to show identical content.

To copy content from one playlist to another:

1. Go to **Event Management > Control Panel > Content**.
2. Click **Playlist**.
3. Create the new playlist if it does not already exist.
4. Select the name of the playlist that you want to copy content items from.

TIP: Use the Search box to find a playlist.

5. In the Playlist Items panel, select all of the items.
6. Drag and drop the content items to the target playlist in the Playlists panel where you want to copy the content.
7. Specify the Playlist options (see [Table 3 on page 132](#)).

Table 3 Specify Playlist Options

Option	Description
Playlist Name	(Required) Alphanumeric name for the playlist. Default is "New Playlist."
Type	Type of content to be used in the playlist: Non Video —(Default) Static graphics (images) only. Video or Mixed Media —Video content or combination of video and images.
Enable Proof of Play	Captures a log of items played for advertisement reporting. The default is Yes.
Default Item Duration	Length of time (in seconds) for the content item to play. The default is 30 seconds. Note: See the Guidelines for Creating Playlists, page 120 topic for information about how to properly use an item duration of 0 to loop content.
Playlist Total Duration	(Display field only) Estimates the length of time for all content items to play.

8. Click **Save**. The name of the new playlist will display in the text below the Playlist Items dialog box. Since you have not yet added items to the playlist, (0 Items) are indicated.

Deleting Content Items From a Playlist

User Role: Administrator / Content Manager

When you delete an item from a playlist, the item remains in the content library and is only removed from the playlist.

To delete an item from a playlist:

1. Go to **Control Panel > Content**.
2. In the Playlist listing, select the playlist where you want to delete a content item.
3. In the Playlist Items panel, select the content item that you want to delete.
4. Click **Delete Playlist Item**.

IMPORTANT: There are two delete buttons that pertain to playlists—one to delete the actual playlist itself (**Delete Playlist**) and one to delete items in a playlist (**Delete Playlist Item**). Be sure to choose the correct button.

5. In the confirmation dialog box, click **Delete** to remove the item.

Deleting a Playlist

User Role: Administrator / Content Manager

When you delete a playlist, the playlist is permanently removed from the content library. However, the content items in the playlist are still available to you in the content library.

To delete a playlist:

1. Go to **Event Management > Control Panel > Content**.
2. In the Playlist listing, select the playlist that you want to delete.
3. In the Playlist Items panel, select the content item that you want to delete.
4. Click **Delete Playlist**.
5. In the confirmation dialog box, click **Yes** to remove the playlist.



Working with Video Walls

First Published: 2017-11-15

User Role: User Role: Administrator / Content Manager

This module provides information about how to design and deploy video walls.

Information About Video Walls

A **video wall** is a group of displays that show synchronized content and convey a single, much larger screen. Cisco Vision supports different video wall design methods depending on the type of media player controlling the video wall.

A common use for video walls is to vary the video wall layout and content over the course of an event.

Content Scaling

Scaling refers to support of two things:

- Stretching of the content.
- Showing only a portion of the content per display in a multi-screen video wall.

Multicast Video Scaling

- Supported in Release 5.0 and later releases.
- Intended for use in video walls.
- Allows scaling of a multicast video region across a video wall display for both portrait and landscape orientation.

Video Wall Design Methods

Cisco Vision Director supports the following different video wall design methods, depending on your media player model:

- TV-based tile matrix
- DMP-to-DMP content synchronization (SV-4K and DMP-2K only)
- Zone-based video wall synchronization (SV-4K and DMP-2K only)

Note: While TV-based tile matrix video walls can be used for the SV-4K, the best practice for full HD resolution is to use either DMP-to-DMP content synchronization or zone-based video wall synchronization methods.

TV-Based Tile Matrix

All media players support TV-based tile matrix video walls.

A TV-based tile matrix video wall requires the use of TVs that have built-in tile matrix capabilities, where video input from one player is stretched across all displays. Due to this stretching, the resolution is proportionately reduced.

The tile matrix functionality is configured using RS-232 commands that specify the overall "x" and "y" dimensions of the matrix, as well as each TV's position in the video wall.

DMP-to-DMP Content Synchronization (SV-4K and DMP-2K only)

The DMP-to-DMP Content Synchronization feature for the SV-4K and DMP-2K media player synchronizes content rendering of playlist items on the displays.

This synchronization includes transitioning from one item to the next (such as for still images), and more accurate playback and rendering of local video content. For local video, this serves as the foundation for implementing video ribbon boards and video walls. This requires cabling of a single media player per display.

Note: Widgets, external URLs, and multicast video tuning synchronization are outside the scope of this feature.

Cisco Vision Director Release 4.0 and later supports enhanced content synchronization methods for the SV-4K and DMP-2K only, with close synchronization of playlist item transition using the Precision Time Protocol (PTP).

Zone-Based Video Wall Synchronization (SV-4K and DMP-2K only)

Zone-based video wall synchronization is an alternative form of synchronization available for SV-4K and DMP-2K devices participating in a video wall.

The primary benefit of this form of synchronization is that if any SV-4K and DMP-2K device that is not the leader in the video wall reboots, it will "catch up" to play whatever content item that the rest of the video wall is currently playing. This form of synchronization is recommended for dedicated video walls that are running video content longer than 15 minutes.

If an SV-4K and DMP-2K device reboots in a video wall that is **not** using zone-based video wall synchronization (using normal DMP-to-DMP synchronization), the tradeoff is that the rebooting device synchronizes with the rest of the video wall at the next content item in the playlist, or at replay of a single-item playlist.

Summary of Video Wall Synchronization Methods for the SV-4K and DMP-2K

[Table 1 on page 137](#) provides a comparison of the configuration guidelines and behavior for device reboot in an SV-4K and DMP-2K video wall for the two content synchronization methods.

Note: Both content synchronization methods use single device cabling per TV display. See [Dynamic Video Wall Sizing, page 137](#).

Constant Bit Rate (CBR) is recommended for best performance.

Table 1 SV-4K and DMP-2K Video Wall Synchronization Summary¹⁰

Synchronization Method	Network Time Source	Multicast Config Required	Video Duration	Bit Rate	Video Wall Reboot Behavior
DMP-to-DMP	PTP	No	< 5 minutes	CBR	Sync at next content item in the playlist.
Zone-Based	PTP	Yes	>15 minutes	CBR	<p>Video content syncs with current item being played by the device leader.</p> <p>Still images sync at next content item in the playlist.</p> <p>Note: If the leader reboots, all SV-4K and DMP-2Ks will display black and resync when the leader has completed its reboot.</p>

Dynamic Video Wall Sizing

New in this release is Sync Manager which synchronizes local videos across multiple DMPS. This is not for multicast streaming. To set this feature, you'll need to set the **Use as Video Wall** to "true." See [Figure 1 on page 138](#). This tells the system to treat the DMPS in a zone or group to be part of a video wall or not. This means now you *can* change a video wall size from one state to another.

Two good reasons to use Sync Manager:

1. When Sync Manager is "ON," the system enables a "leader" DMP which maintains very tight synchronization between all the DMPS in the video wall. The leader DMP controls precisely where all DMPS play content, regardless of failure.
2. If one of the DMPS has to reboot or gets restarted, without Sync Manager enabled, that DMP would restart the video file and start replaying the content from the beginning, not being able to jump to the exact location of the other DMPS, which would throw-off the continuity of the video wall.

Figure 1 Enable Dynamic Video Wall Sizing

Zone Name	Description	Use as Video Wall	#Groups	Venue
Concessions		false	4	
Concourse		false	2	
CRT3		true	1	
CRT3-4		false	1	
CRT3-R2-C3		false	1	
P 2x2		true	2	
Pankaj zone T3 R...		false	1	
Portrait HDMI-In Z...		false	2	
portrait_mode		false	2	
Ramona Cube		false	2	
RibbonWall		false	5	
Suite		false	2	
Timing Test		false	2	
Vertical Zone		false	2	
wall 2x2		false	4	

Group Name	#Zones	Venue
CRT3	2	

Video Wall Cabling

A video wall can be connected in the following ways:

- [Daisy-Chained TV Displays for TV-Based Tile Matrix Video Walls, page 138](#)
- [DMP Connection Per TV Display in a Video Wall, page 139](#)

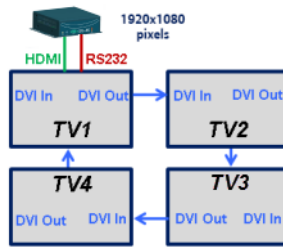
Daisy-Chained TV Displays for TV-Based Tile Matrix Video Walls

This cabling method is supported by all media players and uses the native tile matrix capabilities of the TV displays in the video wall.

In this cabling method, the TV displays in the video wall group are connected together using the DVI In/Out ports. One media player is connected to a single TV in the group using HDMI and RS-232 connections.

[Figure 2 on page 139](#) shows an example of a 2x2 tile matrix configuration with 4 displays daisy-chained in a group with control of the group by a single SV-4K media player. In this example, notice that all displays are using 1920x1080 format.

IMPORTANT: For the 2x1 portion of the video wall, the DMP crops a 1920x1080 canvas to the 960x1080 signal resolution rather than shrinks it. Therefore, you must specify the correct template to match your signal resolution and your content must match the template. For more information, see [Understanding Content and TV Resolution, page 57](#).

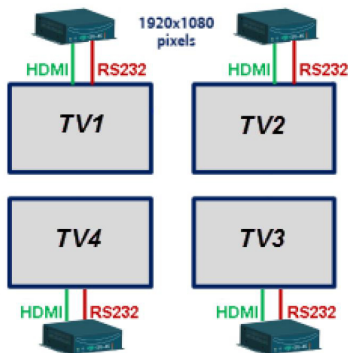
Figure 2 Daisy-Chained 2x2 Tile Matrix Example with the SV-4K

DMP Connection Per TV Display in a Video Wall

For display of synchronized local content (video or images) in your video wall, this method is only supported by the SV-4K and DMP-2K media player.

In this cabling method for local video synchronization, a single media player is connected to each TV display in the video wall using the HDMI Out and RS-232 connections (Figure 3 on page 139). It can be used for video walls playing local video that do not rely on the tile matrix capabilities of the TV.

With this architecture, you can develop content at 3840x2160 resolution. Then, divide your video into four 1920x1080 pieces for synchronized playback. This method will use the maximum resolution for each display giving you the highest possible quality for your presentation.

Figure 3 Video Wall with Single SV-4K Per TV Display

This cabling method also is required for zone-based synchronization using the SV-4K and DMP-2K, which is recommended to achieve enhanced functionality for dedicated video walls running videos with a duration greater than 15 minutes.

Video Wall Design Examples

This section provides examples of some of the more common and currently deployed video wall designs in Cisco Vision venues.

TIP: Be sure to consult with the video wall experts from the Cisco Creative Services team for any of your video wall ideas, including non-standard configurations. This team can help you with ideas, best practices, and wiring diagrams to ensure a successful deployment.

2x3 TV-Based Tile Matrix Video Wall Example

Figure 4 on page 140 shows a video wall commonly used in a concourse area, with a larger game feed for groups of patrons to watch, along with rotating sponsor content displayed beside the game.

Figure 4 2x3 Video Wall Content Example

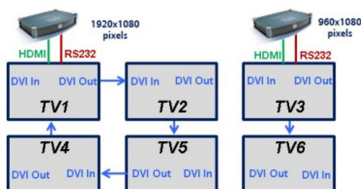
A 2x3 video wall is the most common video wall that Cisco recommends because in the left 2x2 group of displays, the game feed maintains the proper 16:9 aspect ratio of the HD game feed.

The right 2x1 group of displays can work independently from the game feed and show sponsor, social, or other content throughout the game. The user also can change the type of content that plays during the game. For example, during half-time or period break, when there is no game feed, the user can switch the 2x2 to play full screen sponsor content, while changing the 2x1 to show upcoming events or team branded content so that there are not any sponsor conflicts.

[Figure 5 on page 140](#) shows the cabling for the 2x3 video wall example, where two Cisco DMPs are used to break the wall into different display areas.

The first DMP provides the 2x2 game feed and the second DMP provides the 2x1 sponsor ads.

Note: This cabling design is not the recommended design for the SV-4K and DMP-2K media player. Instead, a single player per display is preferred for video walls. For more information, see the [DMP Connection Per TV Display in a Video Wall, page 139](#). In addition, use of any resolution other than 1920x1080 is not technically supported on the SV-4K and DMP-2K (although it might work).

Figure 5 2x3 Video Wall Cabling Example Using TV Tile Matrix Functionality

These dedicated DMPs provide the video signal for the group of TVs that the DMP is connected to through the daisy-chain. Depending on the screen manufacturer, the RS-232 connections can also be daisy-chained if this feature is available.

When operating in tile matrix mode, the TVs are fed the same video signal. Based on the TV's tile matrix configuration, the TV knows to first scale input video to the size of the configured x,y dimensions, and then to display its "piece" of the overall display based on its configured position within the matrix.

Note: If you want to show multiple types of content, such as four different channels on each of the screens, connect a DMP behind each TV.

Other Video Wall Configurations

While the 2x3 video wall is the most commonly used video wall configuration, using the information and concepts for the [Figure 5 on page 140](#), you can create any number of different video wall configurations.

IMPORTANT: These video wall examples require a different number of DMPs and cabling than the 2x3 video wall.

Figure 6 4x4 Video Wall Example



Figure 7 3x5 Video Wall Example



Figure 8 2x7 Video Wall Example



Best Practices for Video Walls

When implementing video walls, consider the following best practices:

- Use the same media player model (such as all SV-4K, or all DMP-2K media players) throughout the video wall.
- Use the same TV model throughout the video wall with a uniform bezel size (ultra narrow bezel strongly recommended).

Note: TV screens with an ultra narrow bezel help ensure the best viewing experience without important text or data being cut off.

- While using multicast videos for both video regions is supported, it is recommended to use a combination of multicast and locally-stored videos for the video regions (or local video for both video regions).
- Create video to be the same size as the video region where it will be rendered. This avoids any unnecessary video scaling.

- Use consistent video aspect ratio, and design video regions so that they are consistent with the aspect ratio of video content.
- Use constant bit rate (CBR) for local video files for best performance in video walls.

Restrictions for Video Walls

Before you create video walls with the SV-4K and DMP-2K, consider the following restrictions:

- In Release 4.1 and earlier releases, multicast video is not supported for a multi-screen video wall. For example, the SV-4K and DMP-2K cannot stretch multicast content across four displays to convey a single image.

Note: Support for multicast video scaling in a video wall with the SV-4K and DMP-2K is introduced in Release 5.0.

- All screens in the video wall should use 1920x1080 format.
- Widgets, external URLs, and multicast video tuning synchronization are not supported by the DMP-to-DMP content synchronization feature for the SV-4K and DMP-2K media player.
- When using zone-based content synchronization for video walls, one device controls synchronization. If that device stops showing video, then all displays in the video wall stop showing content.

How to Configure Video Walls with the SV-4K and DMP-2K Media Player

This section includes the following topics:

- [Prerequisites for Video Walls, page 142](#)
- [Workflow Summary to Configure SV-4K and DMP-2K Video Walls, page 143](#)
- [Configuring Zone-Based Video Wall Synchronization for the SV-4K and DMP-2K, page 145](#)

Prerequisites for Video Walls

Before you deploy video walls and create the content for them, be sure that the following conditions are met:

- Beginning in Release 5.0, scaling of multicast video is supported for a video wall in both portrait and landscape orientation. See [Content Scaling, page 135](#).
- Generally speaking, stretching a piece of content across multiple screens is not supported.
 - Local video or image content to be played in an SV-4K or DMP-2K video wall first must be created in the overall format of the video wall to be supported, and then edited into separate 1920x1080 files that contain the segment of content to be shown on each display.
 - For example, in a 2x2 SV-4K video wall (4 screens), the original content should be in 3840x2160 format (that is, 2 times 1920x1080). Then, it should be broken into four individual files of 1920x1080 format to show the appropriate portion of the content for the 4-screen display.
- For SV-4K or DMP-2K content synchronization:
 - Each SV-4K or DMP-2K media player must be in its own group.
 - For each region, the playlists must have the same number of items, type of item, and duration of each item, or have no playlist at all in the region (empty).
[Table 2 on page 143](#) shows an example of playlist content for a 2x2 SV-4K video wall with a mix of local video

and image content. Notice that all first items in each of the four playlists are of the same type (PNGs), with the same duration, but the content itself is not the same. Likewise, the second item in each playlist is video content with the same duration, but different files.

Table 2 2x2 Video Wall Playlist Example for the SV-4K

	Playlist 1	Playlist 2	Playlist 3	Playlist 4
1	30s: PNG 1-1	30s: PNG 1-2	30s: PNG 1-3	30s: PNG 1-4
2	34s: MP4 2-1	34s: MP4 2-2	34s: MP4 2-3	34s: MP4 2-4
3	21s: MP4 3-1	21s: MP4 3-2	21s: MP4 3-3	21s: MP4 3-4

- Trim local video item duration to boundaries in seconds and not fractions of seconds.

IMPORTANT: If your imported video content duration is in fractions of seconds, then the Content screen shows the actual item duration for the video. However, the system actually rounds that content duration for the playlist to even time boundaries (in seconds). Also, if you manually change the item duration within the Cisco Vision Director UI, the content playback will be truncated.

- For SV-4K or DMP-2K zone-based video wall synchronization:
 - Each media player must be in its own group.
 - Collectively, the groups that are part of the video wall are placed in a zone.
 - The "Use as Video Wall" checkbox is selected when you create the zone for the SV-4K or DMP-2K groups.

Workflow Summary to Configure SV-4K and DMP-2K Video Walls

[Table 3 on page 144](#) provides a summary of the tasks and guidelines for you to complete when configuring a video wall using SV-4K or DMP-2K media players.

Table 3 SV-4K and DMP-2K Video Wall Task Workflow

Step	Task	Guidelines
1	Determine the type of content that you want to display on the video wall.	<p>Restrictions for Video Walls, page 142.</p> <p>Most video walls can reliably use standard DMP-to-DMP synchronization.</p> <p>Video content of longer duration (15 minutes or longer), will benefit most from zone-based synchronization.</p>
2	Determine your video wall configuration.	<p>Video Wall Design Methods, page 135.</p> <p>Best Practices for Video Walls, page 141.</p> <p>Dynamic Video Wall Sizing, page 137.</p> <p>Be sure that the layout is designed to accommodate 1920x1080 screen formats. See Understanding Content and TV Resolution, page 57.</p>
3	Configure groups/zones.	Configuring Zone-Based Video Wall Synchronization for the SV-4K and DMP-2K, page 145
4	Create (or verify) templates.	All content (and for all TVs in a video wall zone) must be deployed using the same template, with the same number of regions and playlists.
5	Create content.	<p>Consider the content changes for different times over the course of the event.</p> <p>Prerequisites for Video Walls, page 142.</p> <p>Restrictions for Video Walls, page 142.</p> <p>Cisco Vision Content Creation Design and Specification Guide.</p>
6	Create playlists.	<p>Create one playlist for each DMP/display in the video wall.</p> <p>For every region, the playlists must have the same number of items, type of item, and duration of each item, or have no playlist at all the region (empty).</p>
7	Stage content.	–
8	Create event scripts.	Determine the states that you need to vary the video wall layout and content over the course of an event.
9	Test the video wall.	–
10	Schedule the event.	Working with Event Scripts, page 147.

Configuring Zone-Based Video Wall Synchronization for the SV-4K and DMP-2K

Zone-based video wall synchronization provides enhanced recovery for video walls if an SV-4K or DMP-2K reboots during the running of a playlist. It is intended for dedicated video walls running video content of longer duration (> 15 minutes).

Enabling System Support for Zone-Based Video Wall Synchronization for the SV-4K and DMP-2K

User Role: Administrator

To enable system support for zone-based video wall synchronization:

1. Change the setting for zone-based video wall synchronization to true:
 - a. From the **Management Dashboard**, go to SV Director Configuration > System Configuration > Global DMP Settings > SV-DMP Common Settings.
 - b. In the Configuration Property box, locate the Zone Based Video Wall Synchronization property.
 - c. In the value box, type true.
 - d. Click **Apply**.
2. To verify the multicast configuration for zone-based video wall synchronization:
 - a. From the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Networking**.
 - b. Verify that the default values for the following properties are compatible with your network, and change as required:

Content sync multicast address–239.193.0.253

Content sync multicast port–50001

Configuring Groups and Zones for Zone-Based Video Wall Synchronization for the SV-4K and DMP-2K

User Role: Administrator / Content Manager

To configure zone-based video wall synchronization for the SV-4K and DMP-2K:

1. Go to **Event Management > Control Panel > Setup > Zones & Groups > Groups**.
2. Create a new group for each media player that is part of the video wall.
3. Add only one SV-4K or DMP-2K location per group.
4. Create a new zone and select the Use as Video Wall checkbox.
5. Add all SV-4K or DMP-2K groups in the video wall to the zone.

Note: Synchronization applies only to video and still images. Synchronization cannot be guaranteed for other content such as tickers, external URLs, or widgets.



Working with Event Scripts

First Published: 2017-11-21

User Role: Administrator / Content Manager

This module describes how to create and schedule event scripts in Cisco Vision Director.

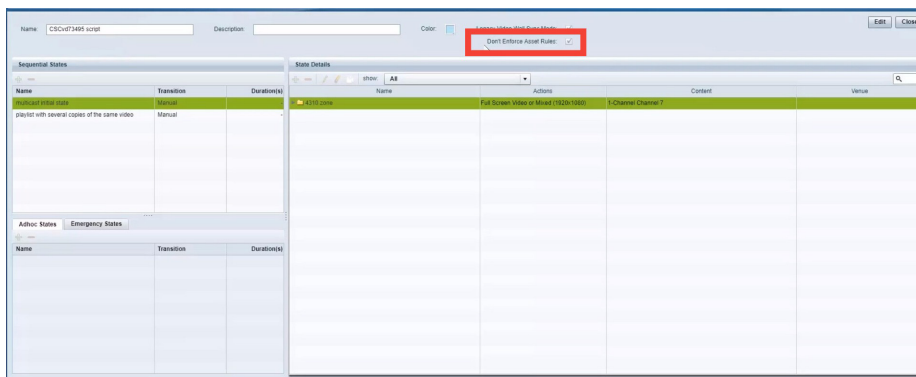
Upgrading Scripts from 5.0 Release to 6.0 Release

It is important to note that by default, all legacy scripts are flagged with **Don't Enforce Asset Rules** when you upgrade from StadiumVision Director 5.n to Cisco Vision Director, 6.0 (see [Figure 1 on page 147](#)). That means that the content run times do not care about content validity and playability metadata (see [Metadata-Validity and Playability, page 125](#)). So, in effect, this is a validity **override** to **always valid**. This is convenient if you have scripts that play and run to your satisfaction and you do not want to set new metadata.

To change the Don't Enforce Asset Rules flag:

1. Go to **Event Management > Control Panel > Schedule**.
2. Choose a script from the Sequential States list on the left panel.
3. **Uncheck** that script from the legacy rules of **always valid**. Now you can change the metadata for that piece of content.

Figure 1 Don't Enforce Asset Rules Flag



Information About Event Scripts

Event scripts and event states control what, when, and where content displays on the TV screens in a venue over the course of an event.

Event Script

You create event scripts and event states ahead of an event, allowing you to predetermine what will display at a given time and location on each screen in the venue as shown in [Figure 2 on page 148](#). Prior to the event, you can stage and validate the script and make any necessary adjustments to be sure everything displays correctly.

Then, you run the script at the scheduled event time. The script can be initiated manually or automatically. Once the script is running, you can use the many features of Cisco Vision Director to further manage the ads, content, graphics, and video displayed throughout the course of the event.

[Figure 2 on page 148](#) illustrates an example of the progression through an event script. At each change in the event state (Pre-Game, In-Game, Post-Game) the screen template and content applied to the TV displays changes within the group and/or zone.

Figure 2 Progression of an Event Script



Event Script

An **event script** sets where and at which time the ads, video, and graphics will be displayed in the stadium and on the screen. The event script is typically tied to a timeline of moments in the game such as pre-game, game, and post-game. If the event is a concert, the event script could be tied to pre-concert, concert, and post-concert. Each of these event segments are called event states in Cisco Vision. You can pre-script what is displayed on each screen during each event state.

Event scripts allow you to display content based upon time as well as physical location, allowing ad sponsors to target different advertising for different demographics and locations in the stadium.

Event State

An **event state** is a point in the script where content changes. Event states are assigned to event scripts and specify actions that a group and zone will display or perform in sequence during the event. You can create event states that specify when, where, and how long to display a screen template, when to turn TVs on and off, and so on. You can define a duration and time transition to play a particular event state or you can invoke the event state manually.

There are three types of event states:

- Sequential
- Ad hoc
- Emergency

Sequential Event States

Sequential events states are scheduled states that are part of the event script and tied to a period of time in the event such as pre-game, game, and post-game.

- Sequential event states can be controlled by a timeline (Manual or Time-based) where time-based event states can be overridden by manual control.
- Actions assigned to sequential event states control functions, such as changing screen templates and playlists within a screen template, changing the channel, and turning the TV On/Off.

Ad Hoc Event States

Ad hoc event states are event states used for a temporary change, such as an unforeseen event delay or to indicate a goal or moment of exclusivity. You can assign graphics to control what you want displayed during an ad hoc state. You can also customize which channel you want your DMPs videos to display during the temporary change.

Ad hoc event states are usually timed states that have a specific duration assigned and are meant for a temporary change. Once the ad hoc state ends, the event script continues to play.

Emergency Event States

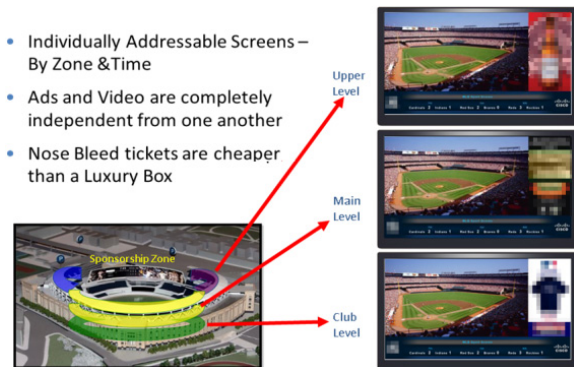
Emergency event states are fixed event states used to signal a change in all zones in the emergency zone to a full screen graphic or the content specified in an emergency playlist. When an emergency state is started, all local TV controls are locked so the emergency message cannot be removed. Emergency states can also be tied to venue alarm systems or automated activation.

Non Event State

Cisco Vision uses the non-event state to put all non-event displays in full screen mode with a default channel (the channel customized for the venue) at a specified time of day.

Targeted Advertising

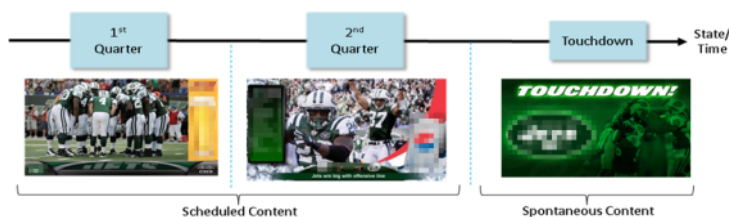
Because each TV screen/DMP in Cisco Vision is individually addressable, sponsors can target advertising to a particular location in the venue to increase sales. This “exclusive” advertising is implemented with event scripts that play unique content in a sponsored area such as a club, luxury suite, or concourse level. As shown in [Figure 3 on page 150](#), you might have a script that plays ads for cheap beer near the cheap seats and plays ads for expensive beer near the expensive seats. All this adds up to a better fan experience while providing more revenue opportunities for sponsors and the stadium.

Figure 3 Using Targeted Event Scripts

Dynamic Content Management

In addition to providing the ability to segment content by location, Cisco Vision also provides the ability to segment content by third-party.

For example, during a touchdown or goal, you can manually play an ad-hoc event script that contains unique sponsored content such as a Touchdown splash screen as shown in [Figure 4 on page 150](#).

Figure 4 Using an Event Script for Spontaneous Content

Best Practices for Event Scripts

When working with event scripts, consider the following best practices:

- Be sure to regularly manage your script list by removing any test scripts and other outdated scripts from the system. Keep the overall script count to as limited a number as possible and as needed for your venue.
- Finalize script changes before an event.
- Avoid starting scripts during an event, and when possible complete the start of all scripts before the event begins.
- Avoid starting a group of scripts at one time. Scripts start sequentially, and an attempt to start multiple scripts at once can lead to delays in state changes.
- When using the Scheduler to control the start/stop of event scripts, be very careful of editing a scheduled script that requires you to manually stop it. The risk is that if you then manually restart that script, the Scheduler will not stop a manually-started script.

Remember to manually stop that script at the appropriate time, or the script is blocked at the next regularly scheduled start time. If this happens, either remove the blocked script or stop the manually-started script.

- Avoid using both triggers and the Scheduler to start an event script which can lead to blocked scripts.

How to Set Up Event Scripts

- Consider developing a content matrix that lists all of the zones / groups throughout the venue and all of the states needed for an event. You can use a spreadsheet to help keep track of the content and playlists needed for each state.
- For additional information on event content preparation and planning, refer to the [Cisco Vision Director Operations Playbook](#) (or the guide that corresponds to your release on [Cisco.com](#)).
- When working in an environment that has mixed DMP types, carefully consider the device differences and design and plan event scripts accordingly.

Note: The best practice is to create groups of media players of the same model type, and to create zones of like-model groups. For more information, see the [Best Practices for Zones and Groups, page 44](#).

- If using RS-232 for TV control, send the TV On/Off commands a couple of times to allow for some TVs that might not respond the first time.
- Use an ad-hoc state to display a moment of exclusivity such as a touchdown, goal, stoppage in play or a sponsor venue domination.
- If you want to display different content using the same template in different zones / groups, you can save time by copying assigned actions from one zone / group to another. You can then select different content to display in the template in the copied zone / group.
- It is important that you allow media players to load the runtime and get into a ready state to receive and process new script actions. Therefore, be sure to define an empty script state (without any actions or commands) as the first state in all event scripts, and configure it to run for a duration of at least two minutes (120 seconds) before changing to a different state.

TIP: The actual duration for the empty state depends on the number of media players in the system and the amount of time it takes to stage any content. Manually staging content before you run a script can help reduce this time.

- Do not change an event state more frequently than the following:
 - SV-4K and DMP-2K media players: 15 seconds minimum
- If you are supporting an environment with mixed DMPs that use the same script, it is important to allow for 60 seconds for an event state change.
- Play the event scripts to visually verify each state and ad hoc states within a venue.

How to Set Up Event Scripts

This section includes the following topics:

- [Guidelines for Event States and Event Scripts, page 152](#)
- [Prerequisites for Event Script Creation, page 152](#)
- [Creating a New Event Script, page 153](#)
- [Creating Event States, page 154](#)
- [Adding an Event State to a Zone / Group, page 155](#)
- [Assigning Actions and Content to an Event State, page 156](#)
- [Editing an Event Script, page 158](#)
- [Deleting an Event Script, page 158](#)

- [Copying Event State Actions, page 159](#)
- [Changing an Event Script Color, page 160](#)

Guidelines for Event States and Event Scripts

Consider the following guidelines when creating event states and event scripts:

- Cisco Vision Director displays the default video channel / non-event state on the media players when an event script is not running on it.
- When you use Proof of Play content in your playlist, and especially when your PoP content is included near or up to the end of the playlist, you should define a final script state (without any PoP content) that runs for at least 60 seconds so that all PoP data has time to be captured by Cisco Vision Director. This last event state is commonly set up to turn off the displays in the venue.
- When you configure a script action for a zone, then by default all groups within that zone inherit the defined action. You can override this inheritance by configuring a script action for a particular group within that zone.
- When a zone contains multiple groups, and if you configure script actions for a particular group, those actions will apply only to that group.
- Cisco Vision Director supports only one RS-232 command per event state.

[Table 1 on page 152](#) describes some guidelines for general script support in Cisco Vision Director.

Note: While these limits have been tested with basic Cisco Vision Director operation, the combination of maximum values and complexity of your system and content can potentially impact the actual limit. Therefore, be sure to test your script content for expected behavior before using in production.

Table 1 Script Guidelines and Limitations

Script Guideline	Limit
Maximum number of simultaneous scripts (when per-script multicast is in use)	20
Maximum number of event states per script	50
Maximum number of items per event script	2,200

Prerequisites for Event Script Creation

Before you create event scripts, be sure that the following conditions are met:

- DMPs have been successfully added to the SV Director database and are in 'production' state.
 - DMPs and IP phones are defined and added for Local Control Areas.
 - If used, third party touch panels are defined and associated for local TV control.
- DMPs are linked to locations.
- Zones and groups have been created.
- Content has been added and playlists created.
- Channels have been assigned.

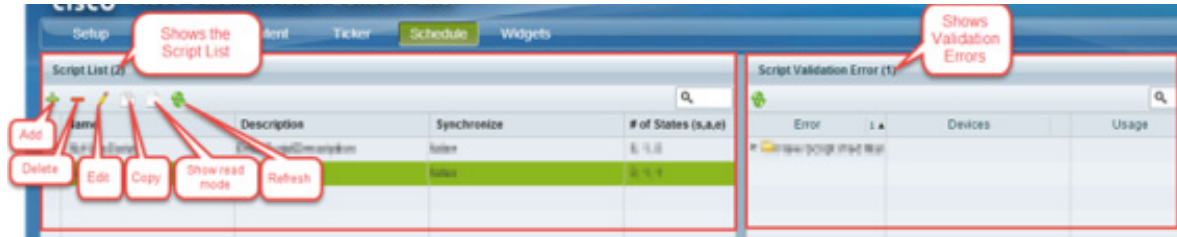
Creating a New Event Script

User Role: Administrator / Content Manager

To create a new event script:

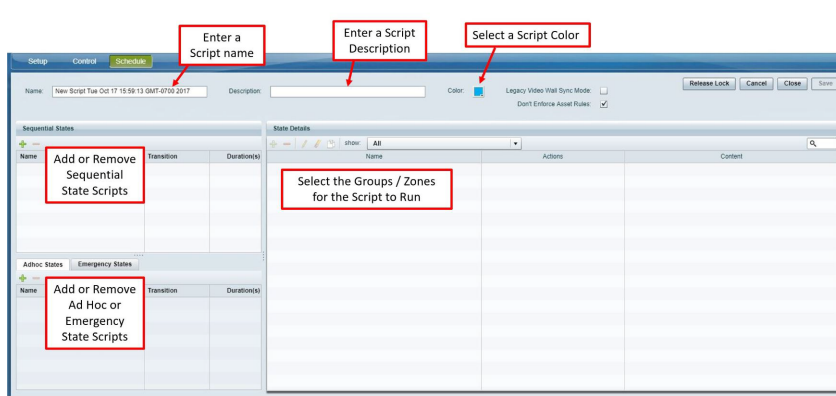
1. Go to Control Panel > Schedule. [Figure 5 on page 153](#) shows the Schedule screen script view and the options available there.

Figure 5 Schedule Script View Navigation

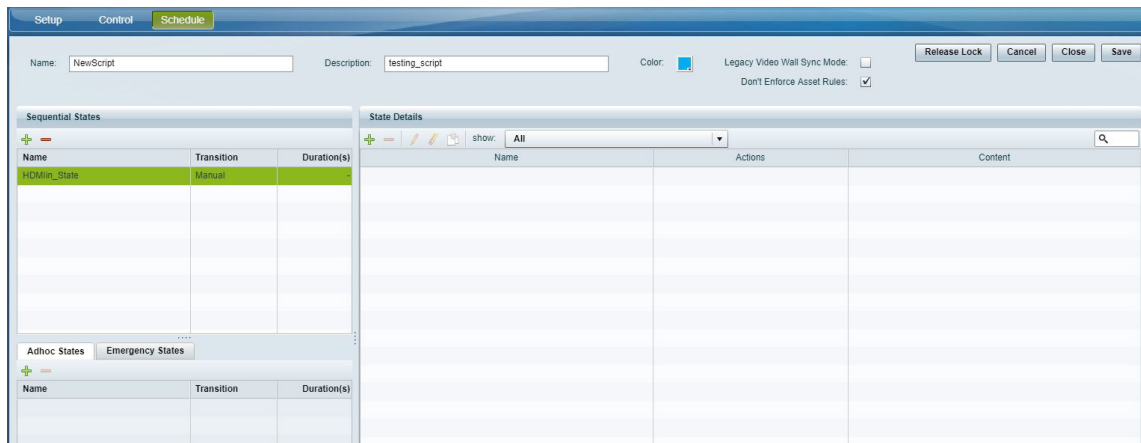


2. Click the '+' icon located under Script List. A new script window appears with an automatically generated default script name based on date information.

Figure 6 Create New Script



3. (Required) As shown in [Figure 7 on page 154](#), enter a new name (or keep the default script name).

Figure 7 New Script Dialogue Box

4. (Optional) Enter a script description.

Note: If you choose to save the event script and add state details at a later time, you must place your cursor in the name or description field and enter a space in order for the Save button to become active.

5. (Optional) Click the Color box to assign a color to the script. If you do not select a color, the default color will be selected.

Script colors are only used for organization and do not affect any colors displayed on screens by the script. Refer to the [Best Practices for the Scheduler Application, page 164](#) for additional information.

6. Click **Save.**

7. Click **Close to return to the Schedule window to create event states and assign zones / groups at a later time or continue to [Creating Event States, page 154](#).**

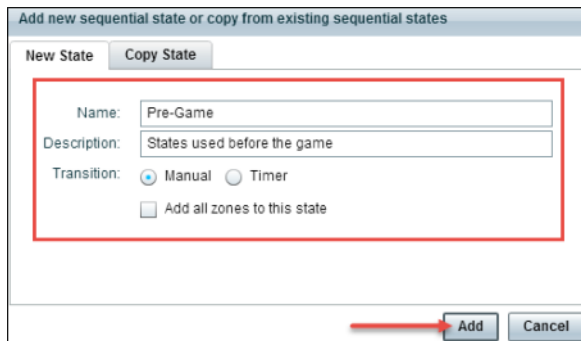
Creating Event States

User Role: Administrator / Content Manager

After creating an event script, add states to the script to define when, where, and the content to display.

To add states to an event script:

1. With an event script open, click the '+' icon under Sequential, Ad-hoc, or Emergency to create a new state. A new state dialog box appears. [Figure 8 on page 155](#) shows a new sequential state.

Figure 8 Sequential State Dialog Box

2. (Required) Enter a state name.
3. (Optional) Enter a state description.
4. Select the transition type:
 - Manual: Requires to manually initiate the next event state. Manual states are most useful when the duration is uncertain. Therefore, it is recommended that you use manual states during the game.
 - Timer: Automatically initiated to run for a specific length of time (in seconds) without manual interaction. It is recommended that you use time-based event states at the start and end of a game.

Note: An event operator can change the event state transition from time-based to manual at any time while the event script is running from the **Control Panel > Control** window.

5. (Optional) Add all zones to this state: When selecting this, the zones will automatically appear under State Details.
6. Click Add. Repeat the steps above to add additional states.

Note: Drag and drop the event states to change the order in which they display.

7. Click Save.
8. Click Close to return to the Schedule window to add zones / groups at a later time or continue to [Assigning Actions and Content to an Event State, page 156](#).

Adding an Event State to a Zone / Group

User Role: Administrator / Content Manager

Once you have created event states, the next step is to add a zone / group.

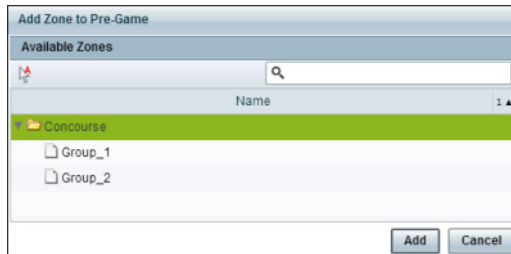
To add a zone / group to an event state:

1. With an event script open, select the state that you want to add zones / groups to.

Note: When opening a saved event script, be sure to click **Edit** in order to make changes to it. If another user has a script open that you want to make changes to, you might have to click **Release Lock** in order to proceed.

2. Click the '+' icon under State Details.

[Figure 9 on page 156](#) is an example of available zones / groups to choose from that can be added to the Pre-Game state. Your list will vary depending on your venue set up. The folders represent zones and groups are shown as page icons when you expand or open the folder.

Figure 9 Adding Zone to Event State Dialog Box

3. Select the specific zone / group that you want to add to the state, click Add. In this example, the Zone (Concourse) and the Groups (Group_1 and Group_2) will be added to the Pre-Game state. The State Details screen displays.

Note: The zones will automatically appear if you selected the check box to "Add all zones to this state" when you originally created the state.

4. Click **Save**.
5. Click **Close** to return to the Schedule window. To assign actions and content to event states, continue to [Assigning Actions and Content to an Event State, page 156](#).

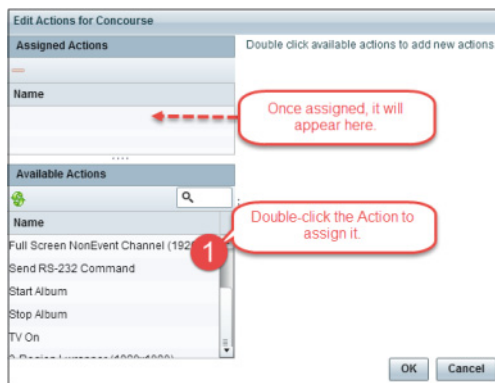
Assigning Actions and Content to an Event State

User Role: Administrator / Content Manager

Once you have added the event state to a zone / group, the next step is to assign actions and content.

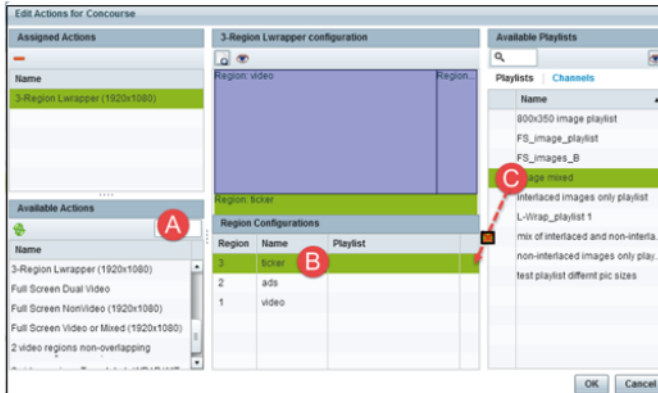
To assign an action to a state:

1. With an event script open, select the state and state details (zone / group) that you want to assign an action to. You can assign an action at the zone level or the group level. Groups can also inherit the actions of the zone.
2. Double-click the zone / group or click the edit pencil icon. [Figure 10 on page 156](#) displays the dialog box that appears where you can assign a template by selecting from the list of available actions.

Figure 10 Edit Actions Dialog Box

3. Double-click the Action you want to assign. Once selected, it appears under Assigned Actions. [Figure 11 on page 157](#) is an example of an assigned 3-Region Lwrapper (1920x1080) template.

Note: Be sure to double-click on the action to assign it. If the action does not appear in the Assigned Actions list, click the green refresh icon located below the Available Actions heading.

Figure 11 3-Region Lwrapper (1920x1080) Example

4. Configure the assigned actions and content for the state:

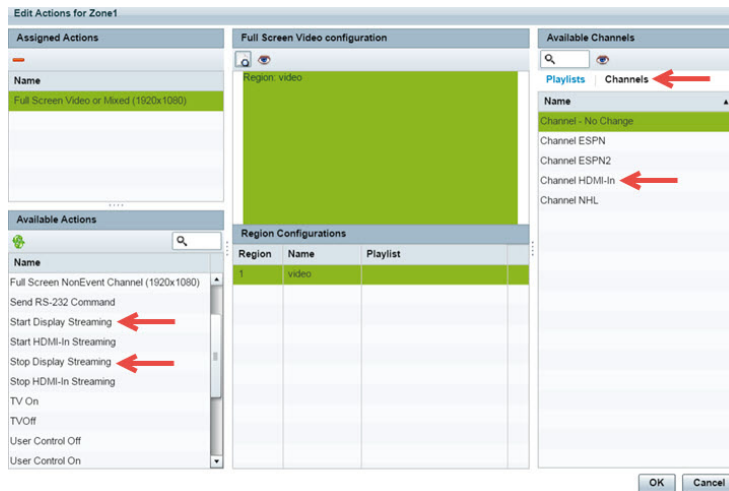
- a. As shown in [Figure 11 on page 157](#), the 3-Region Lwrapper (1920x1080) action has been assigned and appears on the left under Assigned Actions.
- b. The middle column shows which regions are available to assign content. In this example, you can assign content to 3 regions (ticker, ads, and video). To assign content you can select from a visual perspective or from a list at the right which shows the available playlists and channels. Select the region (when selected, it appears highlighted) that you'd like to assign content to.

Note: When you click on the template region in the middle, only the same content type that matches the region will appear on the right. For example, only video or mixed media content will appear in the list when assigning content to the video region in the template.

- c. To assign content from a visual perspective, click on a playlist then click the eye icon to see a thumbnail of the content displayed in the playlist preview panel on the right. You can also use the search function if you have hundreds of playlists. With the region selected, drag and drop or double-click on a playlist or channel to assign it to the selected region. Once assigned, the name of the playlist or channel will display in the Region Configurations pane and red "x" will appear in the region row. Clicking the red "x" will remove the playlist or channel assigned.
5. Once content has been assigned to each region of the template, click **OK**.
6. Click **Save** in the Script window. Repeat the steps above to assign an action to each zone / group or you can proceed to [How to Run and Schedule Event Scripts and Series, page 160](#).

The following are changes to the Edit Actions dialog box ([Figure 12 on page 158](#)):

- Two new script state actions are added under Available Actions: **Start Display Streaming** and **Stop Display Streaming**.
- Available **Channels/Video Sources** changed to **Channels**.
- **Local HDMI-In** source changed to **Channel HDMI-In**. This reflects the name of the new default local HDMI-In channel 0.

Figure 12 Edit Actions Dialog Box

Using External Triggers to Control Script Actions

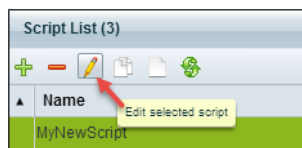
Beginning in Cisco StadiumVision Director Release 3.1, output triggers also can be configured by the administrator to send a Hypertext Transfer Protocol (HTTP) request to notify external systems of a script event and trigger an action externally. This functionality can be used with the Cisco StadiumVision Mobile Streamer to trigger actions on mobile devices, such as for ad insertion. Additional information is available at: [Configuring Cisco Vision Director for External Triggers](#).

Editing an Event Script

User Role: Administrator / Content Manager

To edit an event script:

1. Go to **Event Management > Control Panel > Schedule**.
2. Select the script you want to change, then click the edit (pencil) icon as shown in [Figure 13 on page 158](#).

Figure 13 Edit Script

You can also double-click the selected script to open it; however, you must click Edit to make changes.

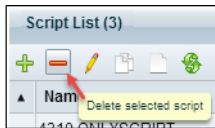
3. Make the changes and click **Save**.

Deleting an Event Script

User Role: Administrator / Content Manager

To delete an event script:

1. Go to Control Panel > Schedule.
2. Select the script you want to remove, then click the "-" icon as shown in [Figure 14 on page 159](#).

Figure 14 Delete Script

A Confirm Script Delete dialog box appears.

3. Click **Save**.

Copying Event State Actions

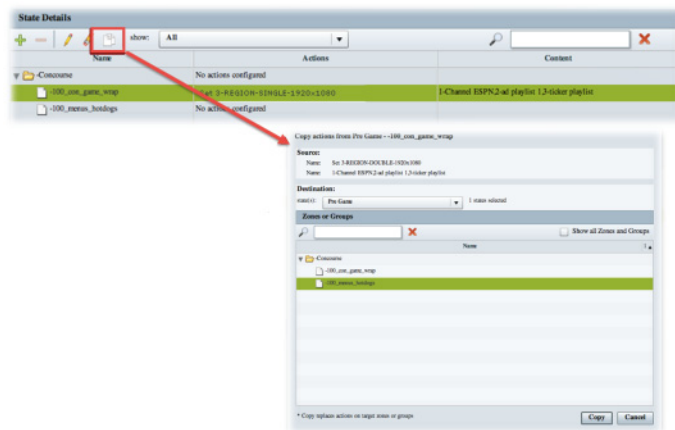
User Role: Administrator / Content Manager

In the case where you have actions assigned to a zone / group and the content you want displayed in another zone / group is similar, you can copy the actions.

For example, if you are using a 3-Region template and want to reuse it with the same ticker, the same video, but a different ad region copying the template saves time.

To copy actions from one zone / group to another:

1. Go to **Event Management > Control Panel > Schedule**.
2. Open the script, select the state, state details, and the zone / group that you want to copy.
3. Click the copy (pages) icon as shown in [Figure 15 on page 159](#).

Figure 15 Copying Event Actions

The Copy dialog box appears.

4. From the Destination State drop-down list, select the states that you want to assign the same actions (template) to.
5. Click **Copy**.
6. Select the event state that you copied to (it now appears with the updated state details), open the state details, and make applicable changes.
7. Click **OK**.
8. Click **Save** to save the script.

9. Click **Close** to return to the Schedule window.

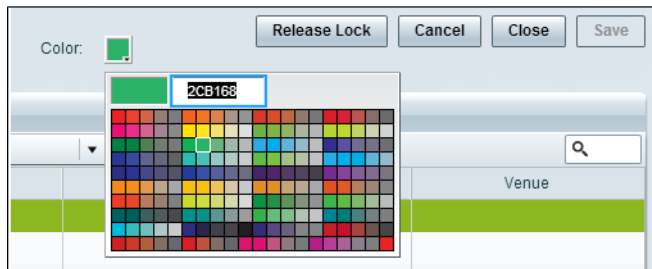
Changing an Event Script Color

Administrator / Content Manager

To change the color of an event script:

1. Go to **Event Management > Control Panel > Schedule**.
2. Open the event script by double-clicking it or by clicking the edit pencil icon. If you open the script by double-clicking, click **Edit**.
3. Click the color square and choose the new color from the color picker as shown in [Figure 16 on page 160](#).

Figure 16 Selecting a New Script Color



4. Once you have selected a new color, the Save box becomes active. Click **Save**.

The event script appears highlighted with the new color.

Note: If color changes do not appear in the Scheduler application, reload or refresh the web browser.

How to Run and Schedule Event Scripts and Series

- There are two ways to run and schedule event scripts:
- From Cisco Vision Director **Main Menu > Event Management > Control Panel > Control** to run single event scripts and to set single event scripts to run in advance. If you run an event script using this method, the scheduled event script will not appear in the Scheduler application.
- From Cisco Vision Director **Main Menu > Event Management > Scheduler** application to schedule single events and recurring event script series in the future. If you schedule an event script using this method, it will appear as scheduled in **Control Panel > Control**. You can also cancel the scheduled event script from **Control Panel > Control** or from the Scheduler application.

Running an Event Script from the Control Panel

User Role: Administrator / Event Operator / Venue Administrator / Venue Operator

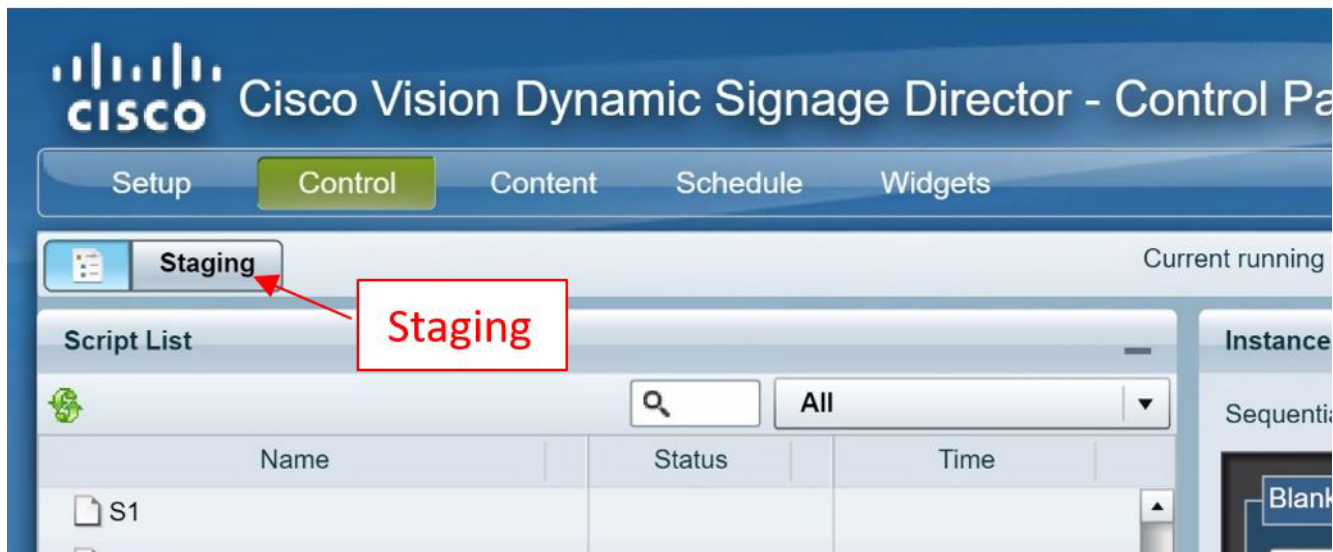
Note: When running an event script or setting the run time in advance from the Control Panel, it will not appear in the Scheduler application. An event script has to be scheduled using the Scheduler application in order for it to appear there.

To run an event script:

1. Go to **Event Management > Control Panel > Control**. Check to see if any running scripts should be stopped.

Figure 17 on page 161 shows the Control script list view and the options available there. As shown below, there is one script currently running. Notice the middle column displays the event states and transition method previously created.

Figure 17 Event Script Overview

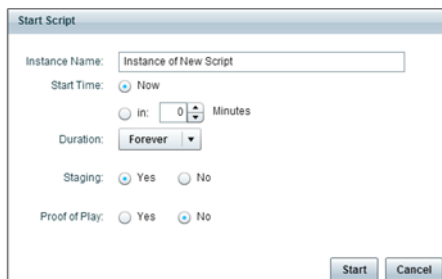


2. From the Script List (left), select the script that you want to run, then click the green Start arrow.

Note: In the Script List, you'll notice that event scripts have either a page or folder icon. The folder icon indicates that the script has been run at least once. Every time you run a script, a new instance (text log) will be created. If you want to run the script again be sure to click on the folder and not the instance.

The start script dialog box appears as shown in Figure 18 on page 161.

Figure 18 Start Script Dialog Box



3. (Required) Name the script instance. A name will appear automatically based on the script name.
4. (Required) Select Start Time or when you'd like the script to run. **Keep in mind that if you select Now, the Start Time includes time to stage the script.**

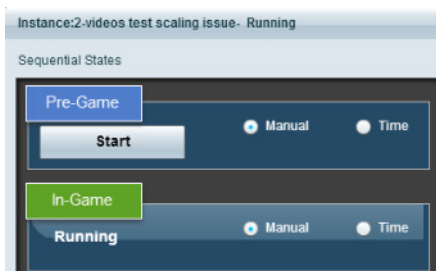
You also have the ability to run the script in the future by entering how many minutes in advance you want the script to run as shown in Figure 19 on page 162. You can also specify the start staging time in advance of the script start.

Figure 19 Starting an Event Script in Advance

5. (Required) Select the Duration of the script or how long you want the script to run. Typically this is set to forever as you don't know exactly how long the event will take. This also provides the ability to manually end the script when the event is over.
6. (Required) Select whether to stage by selecting **Yes** or **No**.

For more information about staging content, see the [Staging Content to the Media Player, page 115](#).
7. (Required) Turn Proof of Play On (yes) or Off (no).
8. Click **Start**. As the script starts, the images in the playlist will be staged to the DMPs associated with the zones / groups. When the script is fully staged, the first state will change color to green.

Script states will advance automatically if set, or the event operator can manually advance them as shown in [Figure 20 on page 162](#).

Figure 20 Example of a Running Script

In this example, the In-Game state is running and will continue to run until the next event state is started manually. If you had an ad-hoc or emergency state to run, you would do so by clicking Start in the event state box.

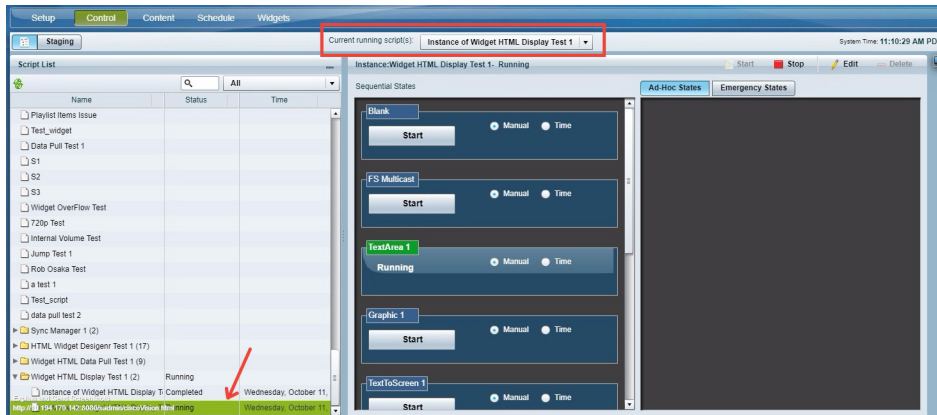
Note: When advancing from state to state, it is important that you allow media players to load the runtime and get into a ready state to receive and process new script actions. It's recommended that you define an empty script state (without any actions or commands) as the first state in all event scripts, and configure it to run for a duration of at least two minutes (120 seconds) before changing to a different state.

Stopping an Event Script

User Role: Administrator / Event Operator / Venue Administrator / Venue Operator

To stop an event script:

1. Go to **Event Management > Control Panel > Control**.
2. Locate the running script from the Script List using by searching or by using one of the drop-down menus ([Figure 21 on page 163](#)).

Figure 21 Locating a Running Event Script

3. Click **Stop**.

Information About the Scheduler Application

This module describes the Scheduler application that is available from the Cisco Vision Director Main Menu. The Scheduler application is introduced in Release 4.0 to provide a calendar-based script scheduling function. It provides the following capabilities:

- Schedule a single occurrence or recurring event series in advance.
- Create an event script as you normally would (Control Panel> Schedule) and use the Scheduler application to insert the script into the Control Panel. The Scheduler application uses these already created event scripts to schedule single events or event series. These events or events series created by the Scheduler application will be listed in the Control Panel (Control Panel > Control) under each script folder.
- Modify and/or cancel a single occurrence, recurring event series, or an occurrence within a recurring event series.
- Automate the start and stop of an event script.
- Define event script parameters when scheduling an event script.
- View scheduled event scripts by day, week, and month.

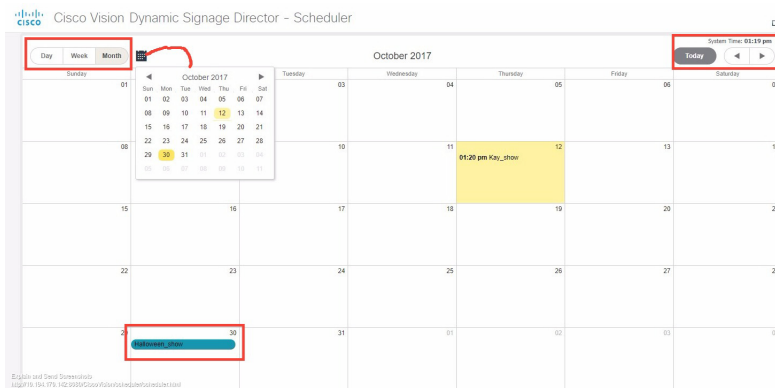
Navigating the Scheduler Application User Interface

The Scheduler application appears as a calendar (Figure 22 on page 164) that allows you to navigate the user interface by:

- Day, week, or month.
- Calendar icon to select a specific time frame.

Note: Days that have a scheduled event script and the current day appear highlighted.

- Left and right arrows to view previous and future time frames.
- To schedule a new event script, double-click on the day that you want the event script to run.
- To modify a scheduled event script, double-click on the scheduled event.

Figure 22 Scheduler Application Interface

How to Schedule Event Scripts Using the Scheduler Application

This section includes the following tasks:

- [Prerequisites for Using the Scheduler Application, page 165](#)
- [Accessing the Scheduler Application, page 166](#)
- [Creating a New Event, page 166](#)
- [Creating a New Event Series, page 167](#)
- [Confirming an Event Script is Scheduled, page 169](#)
- [Modifying a Scheduled Event, page 168](#)
- [Canceling a Single Event, page 169](#)
- [Canceling an Event Script Series or Single Occurrence in a Series, page 169](#)

Best Practices for the Scheduler Application

When using the Scheduler application, consider the following best practices:

- For event scripts that need to run fairly soon or on the same day, initiate starting the script using **Event Management > Control Panel > Control > Start Script** interface.
- It is recommended to manually stage scripts for optimal operation. Manually staging scripts ensures the staging process is kept to a minimum. If you rely on automated staging, failures are not easily detected unless you view the staging job status.
- The Scheduler application is best used for unattended event script starts and ends, such as for store opening and closing.
- You can drag and drop a scheduled event script to take place at the same time on a different day.
- Select a color for the event script at the time of creation. Script colors are only used for organization and do not affect any colors displayed on screens by the script. After the event script is created, you can edit the color by editing the script. The color selected for the script will also be displayed in the Scheduler application. If the script color is changed from the Control Panel, the new script color will be reflected in the Scheduler application. If a specific color is not selected, a default (blue) color will be assigned.

Guidelines for the Scheduler Application

- If after scheduling an event script or series it doesn't appear in the Scheduler application calendar view, reload or refresh the web browser.
- If you scheduled events using the Scheduler application, you can change the event name or cancel the event from the Control Panel. Modifications made to events that are scheduled using the Scheduler application are reflected in Control Panel.
- Do not change settings for an event that is in the past. Be careful when editing an event series that has events that have already completed.

IMPORTANT: While it is possible to cancel a single occurrence that is part of a series, it is not recommended. For example, if you cancel a single occurrence that is part of a series, then edit and save the series, the changes made to the single occurrence will be lost.

Guidelines for the Scheduler Application

When using the Scheduler application, consider the following guidelines:

- Event scripts must be created (Control Panel > Schedule) in advance of using the Scheduler application.
- While you can schedule different event scripts to run on the same day and at the same time, only one event script can stage at a time. In practice, the event scripts will not start simultaneously as staging for one script will block the other scripts from staging until they have a chance to stage.

CAUTION: Do not delete a played scheduled event script or series before generating a proof of play report. If a scheduled event script or series is deleted, all proof of play data will be lost. Prior to deleting an event script, it is highly recommended to generate a proof of play report.

Restrictions for the Scheduler Application

When using the Scheduler application, consider the following restrictions:

- You cannot schedule the same script to run during the same interval. If you try to do this, a warning will appear.
- Single scheduled event scripts must be edited individually. You cannot select and edit multiple scheduled single event scripts at one time. However, you can edit an entire series at one time by opening any instance from the series.
- When using the Scheduler to control the start/stop of event scripts, be very careful of editing a scheduled script that requires you to manually stop it. The risk is that if you then manually restart that script, the Scheduler will not stop a manually-started script.

You need to remember to manually stop that script at the appropriate time, or the script is blocked at the next regularly scheduled start time. If this happens, either remove the blocked script or stop the manually-started script.

- The Scheduler application will only display events that are created using the Scheduler.
- Events created from the Control Panel (**Control Panel > Control > Start Script**) will only be displayed in the Control Panel and will not appear in the Scheduler application.
- You cannot set the zone and group specifics through the Scheduler application.

Prerequisites for Using the Scheduler Application

Before you use the Scheduler application, be sure that the following requirements are met:

- You have an Administrator or Event Operator Role Based Access Control for Cisco Vision Director.

- You have created an event script through Control Panel > Schedule.

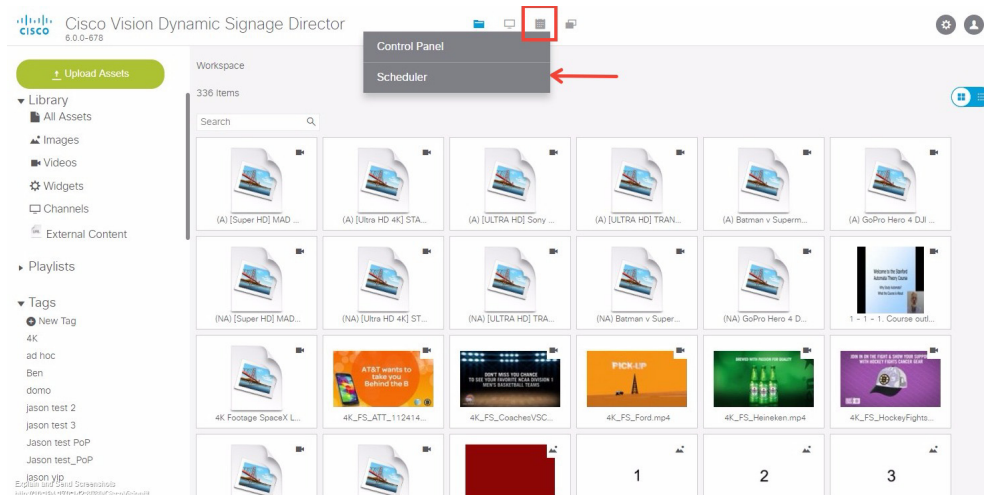
Accessing the Scheduler Application

User Role: Administrator / Event Operator

To access the Scheduler application:

1. Log into Cisco Vision Director as an Administrator or Event Operator.
2. From the Main Menu, click **Scheduler**.

Figure 23 Access the Scheduler Application



The Scheduler application opens in a new browser window with the current day highlighted as shown in [Figure 22 on page 164](#).

Creating a New Event

User Role: Administrator / Event Operator

The following steps summarize the overall workflow to schedule a single event script occurrence using the Scheduler application:

1. From Cisco Vision Director **Main Menu**, go to: **Event Management > Scheduler**.
2. Double-click on the day that you want the event script to run. The Create New Event dialog box appears.
3. Complete the Create New Event dialog box ([Figure 24 on page 167](#)).

Figure 24 Creating a New Event

- a. **Event Name:** Type in a name for the event in the Event Name field (required).
- b. **Select script:** Select the event script from the Select Script drop-down menu.
- c. **Repeat event:** Leave the check box as is (unchecked) for a single event.
- d. **Select options:** Click the check boxes to active or deactivate the following options: **Proof of Play**, **Staging** (enabled by default), **Force Stop**.
- e. Selecting Force Stop causes the script to end automatically at the scheduled end time. If Force Stop is not selected, the script will continue to run until a user manually stops the event script through the Control Panel or if a trigger is received that stops the script.
- f. **Time period:** Select the date and time for the event script to run ([Figure 25 on page 167](#)).

Figure 25 Set the Event Time Period

4. Save the scheduled event script. The Scheduler application appears with the scheduled event script highlighted in the color that was selected when the script was created.

Creating a New Event Series

User Role: Administrator / Event Operator

The following steps summarize the overall workflow to schedule an event script series using the Scheduler application:

1. From Cisco Vision Director **Main Menu**, go to: **Event Management > Scheduler**.
2. Double-click on the day that you want the event series to run. The Create New Event dialog box appears.
3. Complete the Create New Event dialog box as shown in [Figure 26 on page 168](#).

Figure 26 Creating a New Event Series

- a. **Event Name:** Type in a name for the event series in the Event Name field (required).
- b. **Select script:** Select the event script from the Select Script drop-down menu.
- c. **Repeat event:** To schedule an event series, check the check box. Once selected, the event series options appear. Set the series as applicable.

Daily: Select Daily to repeat an event for a specific number of days. As in the example above, enter the frequency (every other day) and the number of occurrences (1) or set an end date. In this example, the event would be scheduled 1 time on Monday, Wednesday, and Friday ONLY.

Weekly: Select Weekly to repeat an event script on a weekly basis.

Note: Be careful when entering a number of occurrences. In the example above if the number of occurrences was set to 1, the event would only be scheduled 1 time in several weeks >>> not good!

- d. **Select options:** Click the check boxes to activate or deactivate the following options: **Proof of Play**, **Staging** (enabled by default), **Force Stop**.

Selecting Force Stop causes the script to end automatically at the scheduled end time. If Force Stop is not selected, the script will continue to run until a user manually stops the event script through the Control Panel or if a trigger is received that stops the script.

- e. **Time period:** Select the date and time for the event script series to run.

4. Save the scheduled event script series. The Scheduler application appears with the scheduled event script series highlighted in the color that was selected when the script was created.

Modifying a Scheduled Event

User Role: Administrator / Event Operator

To modify a scheduled event script occurrence or series:

1. Locate the scheduled event script or series in the Scheduler application.
2. Double-click the scheduled event script to open it.
3. Select **Edit Series** or **Edit Occurrence**.
4. Change the applicable options and choose **Save**.

Confirming an Event Script is Scheduled

User Role: Administrator / Event Operator

To confirm an event script occurrence or series is scheduled, perform one of the following:

- Review the Scheduler application calendar view to verify the script appears.
- From Cisco Vision Director Main Menu > **Event Management** > **Scheduler**. If an event script is scheduled, a green check icon appears in the left column.
- From Cisco Vision Director Main Menu > **Event Management** > **Control Panel** > **Control**. If an event script is scheduled, the Status column indicates scheduled.

Canceling a Single Event

User Role: Administrator / Event Operator

To cancel a scheduled event script:

1. Locate the scheduled event script that you want to cancel from the Scheduler application or from **Control Panel** > **Control**.
2. If using the Scheduler application, **double-click** the event script to open it.
 - a. Click **Delete** in scheduler dialog box.
 - b. Click **OK** in the alert dialog box.
 - c. Navigate to the Scheduler application to view changes.

If changes or cancellations do not appear in the Scheduler application, reload or refresh the web browser.

3. If canceling the event script from **Control Panel** > **Control**, highlight the script instance and click **Stop**.

Canceling an Event Script Series or Single Occurrence in a Series

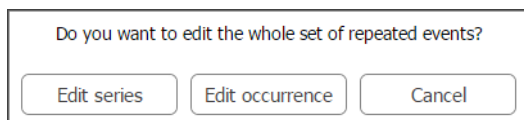
User Role: Administrator / Event Operator

To cancel a scheduled event script series or a single occurrence that is part of a series:

1. Locate the scheduled event script series or single occurrence in a series that you want to cancel in the Scheduler application.

TIP: To cancel a scheduled event series, you can select any instance from the series to cancel the entire series.

2. **Double-click** the event to open it.



Do you want to edit the whole set of repeated events?

Edit series Edit occurrence Cancel

- a. To cancel the entire event script series, click **Edit series**. In the scheduler dialog box that appears, click **Delete**. Next, click **OK** in the alert dialog box.
- b. To cancel a single occurrence that is part of a series, click **Edit occurrence**. In the scheduler dialog box that appears, click **Delete**. Next, click **OK** in the alert dialog box.

3. Navigate to the Scheduler application to view changes.
If changes or cancellations do not appear in the Scheduler application, reload or refresh the web browser.

Troubleshooting Event Scripts

Troubleshooting Blocked Scripts

Several conditions can cause a scheduled script to be blocked from running. No error messages occur during these conditions, and it requires manual discovery and correction.

In many cases, a scheduled script has problems because a separate method has been used to control the starting or stopping of that script in addition to the Scheduler application.

A script might become blocked under the following conditions:

- A running scheduled script was manually stopped and restarted.

The Scheduler application cannot stop a script that was manually started, even if the script had originally been scheduled. If the manually-started script instance is still running at the time of the next scheduled start, then the script is blocked.

Either remove the blocked script or manually stop the currently running script.
- Triggers were used to start a script that is also scheduled.

The Scheduler application cannot stop a script that was started through an external trigger. If the triggered script instance is still running at the time of the next scheduled script start, then the script is blocked.

Either remove the blocked script, or stop the currently running script manually or using an external trigger.
- When DMPs associated with a blocked script are referenced by another script, the additional script is also blocked.

Running Event Operations

Workflow Summary for Running an Event

[Table 2 on page 170](#) provides a summary of the tasks and related information to run an event in Cisco Vision Director.

Table 2 Running an Event Resources

Event Stages	For more information, see:
Plan the event and prepare content	Cisco Vision Director Operations Playbook Cisco Vision Content Content Planning and Specifications Guide
Create and schedule event scripts to run the event	How to Run and Schedule Event Scripts and Series, page 160
Capture event data by generating Proof of Play reports	Cisco Vision Director Proof of Play



Monitoring Media Player Operation During an Event Using Device Management

First Published: 2017-11-21

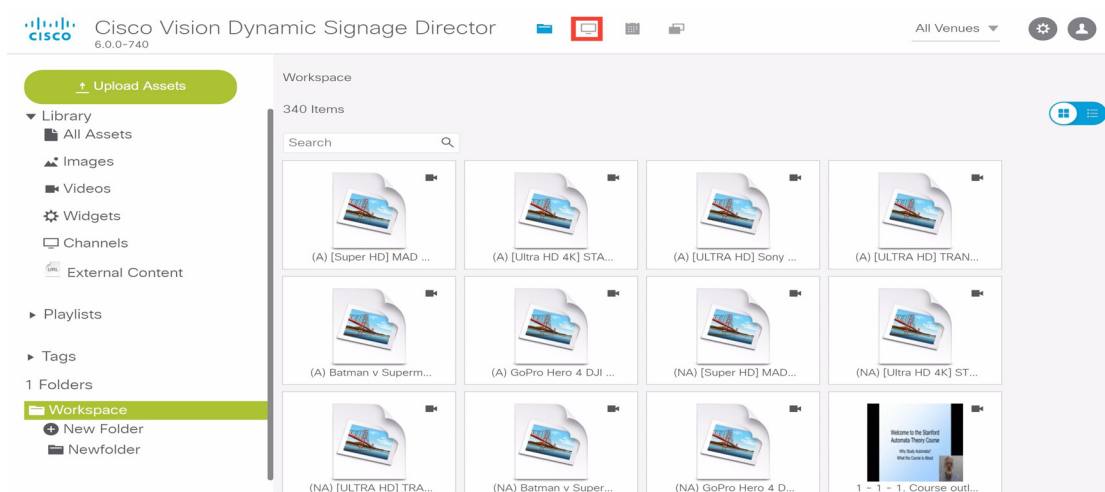
User Role: Administrator / Help Desk/ Support / Venue Operator / Venue Administrator

This module describes how to monitor operation of media players using Device Management in Cisco Vision Director.

Information About Device Management

The Device Management application shows at-a-glance device status information for media players and their attached TV displays during an event ([Figure 27 on page 171](#)).

Figure 27 Accessing the Device Management Application



Device Management Highlights

- Is accessible from the Cisco Vision Director **Main Menu**.
- Supports multi-venue site selection.
- Polls media players every 120 seconds (default) and auto-refreshes the monitoring display.
- Supports different ways to view device status.
- Allows you to select media players that you want to monitor by group/zone or search by Location Name, Description, IP or MAC address.

Device Management Views

- Allows you to filter the selected device list by several criteria, such as by DMP state or media player model, among others.
- Provides button for Administrator to restart a media player.

Device Management Roles

Note: The Administrator is the only role that can restart media players within the Device Management app, or change the polling interval in the Management Dashboard.

Device Management can be used by the following Cisco Vision Director user roles:

- Administrator
- Help Desk
- Support
- Venue Administrator
- Venue Operator

Device Management Views

Device Management supports two basic monitoring views of device status:

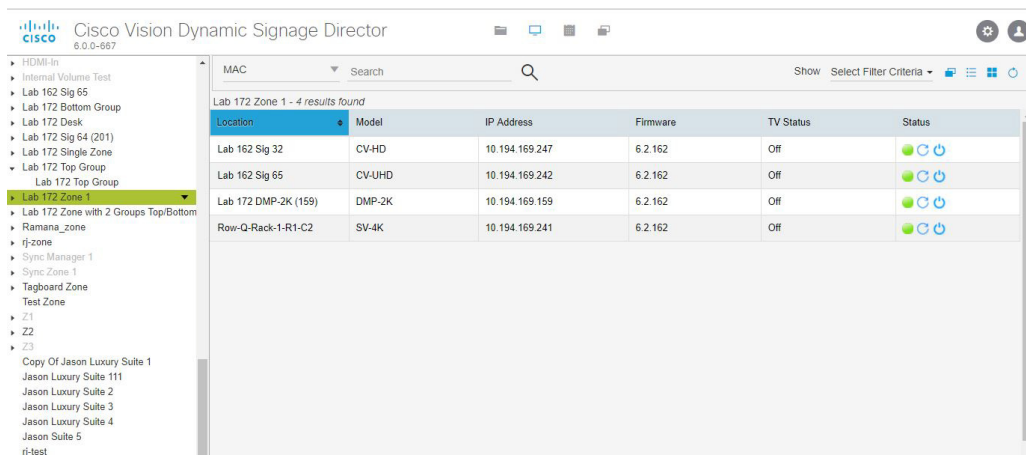
- Grid View—Provides detailed device status information in a tabular format.
- Thumbnail View—Provides device status as a thumbnail snapshot of content running on the TV along with a red or green icon showing the DMP state.

From either thumbnail or grid view, you can show or hide the device tree that appears on the left side of the screen.

Grid View

Figure 28 on page 172 shows an example of the device information that can be seen in grid view, in addition to the status icon and controls that are also available from thumbnail view.

Figure 28 Grid View Monitoring Example

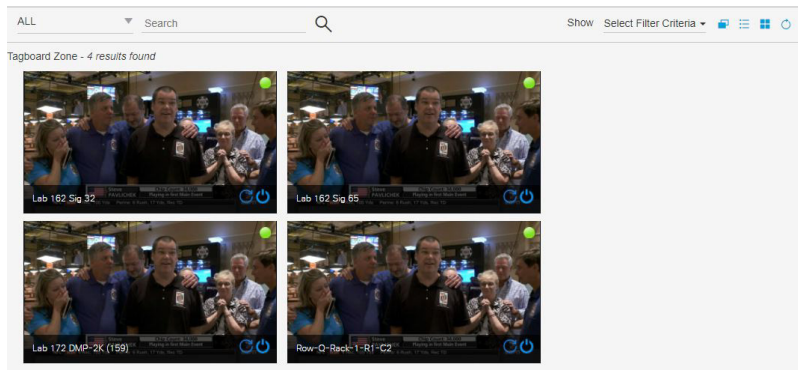


Location	Model	IP Address	Firmware	TV Status	Status
Lab 162 Sig 32	CV-UHD	10.194.169.247	6.2.162	Off	● ↺ ↻
Lab 162 Sig 65	CV-UHD	10.194.169.242	6.2.162	Off	● ↺ ↻
Lab 172 DMP-2K (159)	DMP-2K	10.194.169.159	6.2.162	Off	● ↺ ↻
Row-Q-Rack-1-R1-C2	SV-4K	10.194.169.241	6.2.162	Off	● ↺ ↻

Thumbnail View

Figure 29 on page 173 shows a view with snapshots of content playing on those devices.

Figure 29 Thumbnail View Monitoring Example



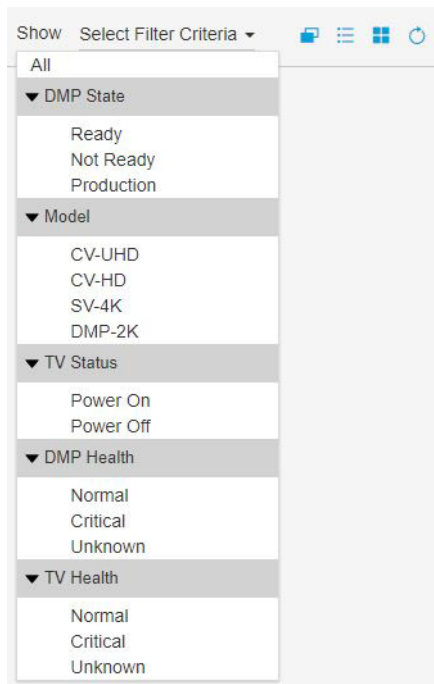
Device Management Filters

Device Management allows you to apply filter criteria to the devices selected for visual monitoring to see devices with specific characteristics or conditions:

- DMP State
- Model
- TV Status
- DMP Health
- TV Health

Note: The filters do not apply to all DMPs in the system. They only apply to the DMPs (groups/zones) that you have selected in the device tree list.

Figure 30 on page 174 shows the specific types of filter criteria available.

Figure 30 Device Management Display Filter Criteria

Best Practices for Device Management

When working with Device Management, consider the following best practices:

- Do not change the DMP polling interval to less than the 12000 ms (2 minutes) default.
- To reduce network traffic, only enable monitoring for the DMPs that you want to observe for the event.

How to Use Device Management

This section includes the following topics:

- [Prerequisites for Device Management, page 174](#)
- [Restrictions for Device Management, page 175](#)
- [Understanding the Device Management Screen, page 175](#)
- [Enabling Monitoring of Devices in Device Management, page 175](#)
- [Viewing DMP Details in Device Management, page 176](#)
- [Rebooting DMPs in Device Management, page 177](#)
- [Changing the Device Management Polling Period, page 178](#)

Prerequisites for Device Management

Before you configure Device Management, be sure that the following conditions are met:

- DMPs are created in Cisco Vision Director.

How to Use Device Management

- DMPs are assigned to zones, groups, and locations.

Restrictions for Device Management

Before you use Device Management, consider the following restrictions:

- Only users with role of Administrator can reboot DMPs from Device Management.

Understanding the Device Management Screen

Figure 31 on page 175 shows the default Device Management screen (thumbnail view with device list tree) and the options available there.

Figure 31 Device Management Screen Navigation



Enabling Monitoring of Devices in Device Management

User Role: Administrator / Help Desk / Support / Venue Operator / Venue Administrator

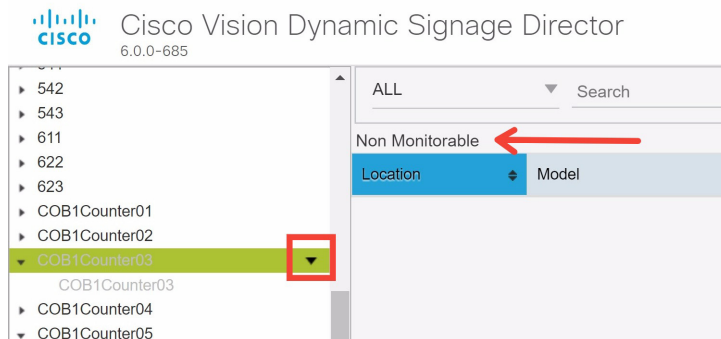
By default, monitoring of devices in Device Management is disabled.

To enable monitoring of devices in Device Management:

1. From the Device Management screen, show the device list tree.
2. In the Devices box, select the DMP group or zone that you want to enable.

TIP: Disabled DMPs display "Non Monitorable" on the screen when you select them (Figure 32 on page 176).

3. Click the drop-down arrow beside the DMP(s) that you want to enable for monitoring and select the Visual Monitoring checkbox (Figure 32 on page 176).

Figure 32 Visual Monitoring Checkbox

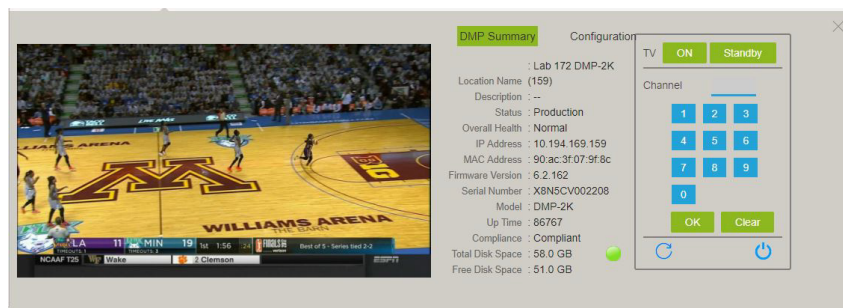
Viewing DMP Details in Device Management

User Role: Administrator / Help Desk Support / Venue Operator / Venue Administrator

You can view a lot of information about DMPs from Device Management including addressing information, firmware version, disk space and configuration.

To view DMP details in Device Management:

1. From Device Management, go to thumbnail view.
2. Search for or filter the current display to find the DMP that you want information about.
3. Click the thumbnail of the DMP. The DMP Summary page displays (Figure 33 on page 176).

Figure 33 DMP Summary Panel

From here, there are TV controls you can manage such as:

- Channel selection
- TV On
- TV Standby
- Refreshing the DMP device
- Rebooting the DMP device

4. To see configuration information such as switch and script information, click **Configuration**. The DMP Configuration page displays (Figure 34 on page 177).

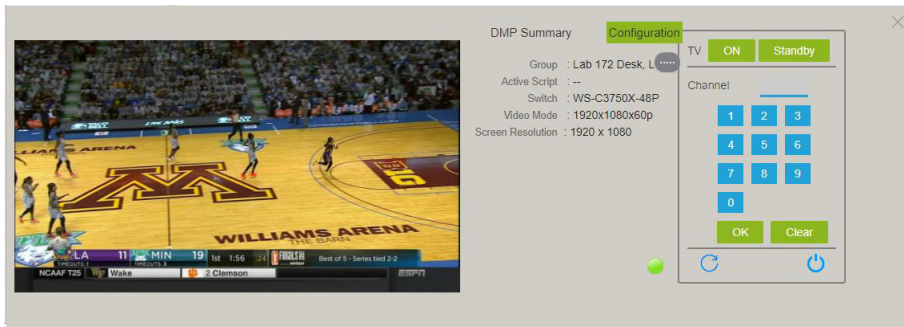
From here, there are TV controls you can manage such as:

- Group

How to Use Device Management

- Active Script
- Switch
- Video Mode
- Screen Resolution

Figure 34 DMP Configuration Panel



Rebooting DMPs in Device Management

User Role: Administrator / Venue Administrator

ONLY users with the Administrator role can reboot DMPs from within Device Management.

The reboot devices button can be used from either the grid view (Figure 35 on page 178) or thumbnail view (Figure 36 on page 178).

Figure 35 Reboot Device Button—Grid View

Location	Model	IP Address	Firmware	TV Status	Status
Lab 172 Group 1 (DMP-2K) - 1 result found	DMP-2K	10.194.169.159	6.2.162	Off	

Figure 36 Reboot Device Button—Thumbnail View

Changing the Device Management Polling Period

User Role: Administrator / Venue Administrator

By default, Device Management polls devices to update status every 120 seconds.

To change the Device Management polling period:

1. From the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Management Dashboard > DMP Health Poller**.
2. In the Configuration Property box, find the Normal Poll Interval in seconds.

Cisco Vision Dynamic Signage Director Management Dashboard

Dynamic Signage Director Configuration

Configuration Property	Value
DMP Health Poller Active	yes
Normal Poll Interval in seconds	300
Slow Poll Interval in seconds	600
Force Poll Interval in seconds	900

System

Timestamp	Messages	Count	Log Level
10/12/17 09:46:01	PBuilding Dashboard system cache start ...	12	Info
10/12/17 09:46:01	PBuilding Dashboard system cache and ...		
10/12/17 09:46:01	PRead Monitored Attributes, count = 45		
10/12/17 09:46:01	PRead Field Catalog, count = 62		
10/12/17 09:46:01	PRead Event Categories, count = 3		
10/12/17 09:46:01	PLoaded configurator: com.cisco.sv.hpm.config.registry.RegistryConfigurator		
10/12/17 09:46:01	PLoaded configurator: com.cisco.sv.hpm.config.local.LocalConfigurator		
10/12/17 09:46:01	PLoaded configurator: com.cisco.sv.hpm.config.local.LocalConfigurator		

3. In the value box, type the time period in ms.

4. Click the disk icon to save your changes.

TIP: You do not need to reset the SV-4K and DMP-2K to apply the new value. Whenever a script starts, the media player retrieves the global settings.



Troubleshooting Event Operations in Cisco Vision Director

First Published: 2017-11-21

Troubleshooting Event Operations

Table 1 on page 179 provides a summary of useful tasks when there is a problem while running an event in Cisco Vision Director.

Table 1 Troubleshooting Event Operations

Task	For more information see:
Replace a Failed DMP	Replacing a Failed Media Player While an Event Script is Running, page 218
Replace Content	Replacing Content in a Playlist During an Event, page 128
Stream video as multicast URL to a media player with content problem	Tuning Selected Media Players to a Multicast URL, page 82
Clear a blocked script	Troubleshooting Event Scripts, page 170

Troubleshooting Error Messages

Use the information in this section to troubleshoot error messages that occur when operating Cisco StadiumVision Director.

Action consistency problem between actionRegions and regionCount

Description There is an internal error in the database due to the Actions having a region Count > 0 but no information about the regions.

Workaround If a state is reported in the message, then you can recreate the affected state. Otherwise, recreate the script to remove the error condition. Ignoring this error can result in unpredictable script behavior.

Device(s) appear multiple times in zone/group mapping

Description The same device appears multiple times in the same state.

Workaround Either remove the devices in question from groups, remove groups from zones, or remove actions from zones and groups.

Device(s) have duplicate host(s)

Description Two different devices (or the same device) appear multiple times with the same IP address.

Workaround Either remove the device(s) in question from groups, remove groups from zones, remove actions from zones / groups, or change the IP addresses of the device(s).

Group for groupinstance is not set

Description The groupinstance object is missing a link to which group it refers to.

Workaround If a state is reported in the message, then you can recreate the affected state. Otherwise, recreate the script to remove the error condition. Ignoring this error can result in unpredictable script behavior.

Missing regionMap in an action that needs one

Description The regionMap is not set on an actioninstance but should be.

Workaround Add a region.

No action set for actioninstance

Description Actioninstance is not associated with an action, which is not a valid configuration. Actioninstances without actions can cause conflicts when Cisco StadiumVision Director is determining which digital media players have actions assigned to them.

Workaround Add an action to the zone or group.

No actioninstances for group

Description Actioninstance is not associated on the groupinstance.

Workaround Add an action to the groupinstance.

No actioninstances for zone

Description Actioninstances are not on the zone (there should be because not all sub-groups of this zone have actions on it).

Workaround Add an action to the zoneinstance.

No states in script

Description There are no states in this event script.

Workaround Add states to the event script.

Null state in script

Description There is a state entry which has a null pointer in it. This null state will be ignored, but represents a corrupted database.

Workaround Delete the entire script and recreate it.

Region id is null in ActionRegion–database corrupt

Description The ActionRegion is not linked to the region ID.

Workaround If a state is reported in the message, then you can recreate the affected state. Otherwise, recreate the script to remove the error condition. Ignoring this error can result in unpredictable script behavior.

Region " + i + " content has incompatible region type with the action .

Description The contentType of the playlists does not match the contentType of the template.

Workaround Put different playlists into the region, change the type of the region (from video to non-video or vice versa), or change the contentType of the playlists.

Region " + i + " does not have a contentType

Description Unable to compute the contentType for the region as there were no associated playlists or the playlists were missing a contentType.

Workaround Add a contentType to the playlist or add a playlist to the action.

Region lacks a playlist

Description A region should have a playlist associated with it, but it does not. As a result content will not be shown in that region.

Workaround Add a playlist to the appropriate action in the event script.

State has no zoneInstance(s)

Description A state exists but it doesn't have a zoneinstance (actions on zones).

Workaround Add actions to zones or groups.

Warning empty playlist in region

Description There is a playlist in the region, but it does not contain content.

Workaround Add content to the playlist.

Null Zone In zoneinstance

Description The event script has an action on a zoneinstance which is missing the Zone. This happens when the user deletes a Zone but does not delete the actions from that Zone or a group under that Zone before deleting the Zone. After deleting the Zone, the actions become irrelevant, but the script can still contain the action. The UI no longer shows the actions, so they can't be deleted.

Workaround If a state is reported in the message, then you can recreate the affected state. Otherwise, recreate the script to remove the error condition. Ignoring this error can result in unpredictable script behavior.

Content not ready for playlist

Description If the content is not ready for the playlist, this is set. Possible reasons include content not uploaded via Kore integration or the CMS is unreachable. For gadget type content, determine computeReadyForPlaylist based on the custom App **instance and check the** widget to see if it refers to invalid data sources.

Workaround User should fix reason for content to be invalid for playback.

Action removed from actioninstance

Description Error message occurs if an action is deleted from the database, possibly by a system upgrade.

Workaround User should remove those actioninstances from the script by deleting the state or all actions on a zone or group in the state.

Empty playlist(s) in region

Description There is no content in at least one playlist in this region, as a result the playlist is ignored.

Workaround Add content to the playlist or remove the playlist from the event script.

Device(s) have missing host(s)

Description The device has a missing or empty host (IP address).

Workaround Set the device(s) hosts to a valid IP address.

Device(s) have mismatched site

Description The script site / venue is not equal to the site / venue of the device.

Workaround Set the site of the script and or devices to match.

Video Region Count Exceeded

Description The number of video regions in the template exceed the number of valid video regions for the digital media player.

Workaround Change the template to reduce the number of video regions or assign these actions to different digital media players (by modifying zone/group structure or putting actions on different zone / group).

Warning Mixed DMP Type

Description Different types of digital media players are assigned to the same group or zone.

Workaround Change the script so that only one media player type is assigned to the same group or zone.

Synchronization Zone Group Conflict

Description A digital media player from a zone-based video wall has actions assigned from a different zone or group causing conflicts and disabling synchronization.

Workaround Change the script so that all actions are assigned to the digital media players from the video wall zone.

Synchronization Template Mismatch

Description Multiple groups within a synchronization-enabled zone have mismatched templates or playlists. Templates must be the same and each playlist must have the same number of items of the same type and the same duration. If not, synchronization will be disabled.

Workaround Change the state to enable all groups within the video wall zone to use the same template.

Multiple Templates Assigned

Description Multiple actions that assign a template have been assigned in the same state resulting in unpredictable behavior.

Workaround Remove all but one of the actions that assigns a template to the zone / group within that state.

Synchronization Multiple Templates Assigned

Description Multiple actions that assign a template have been assigned in the same state resulting in unpredictable behavior and disabling synchronization.

Workaround Remove all but one of the actions that assigns a template to the zone / group within that state.

Troubleshooting the Network Time Service

After a server power outage, sometimes the network time service does not recover.

A possible symptom of a network time service problem during an event is DMPs not changing state.

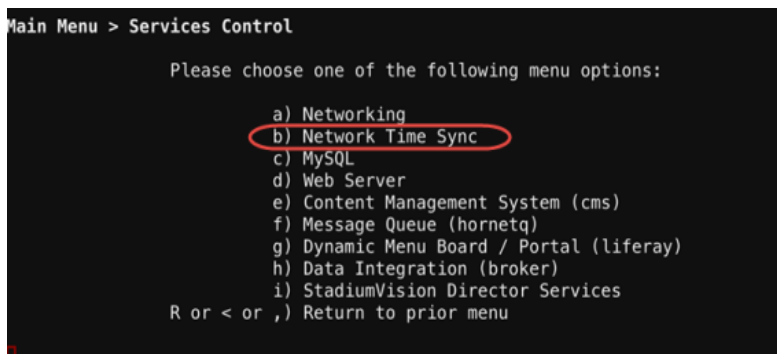
To troubleshoot the network time service:

1. If there was a power outage, restart the Cisco Vision Director server.
2. Look at the output from the console log to verify the system status.
3. Verify that the ntpd service is running.

TIP: A quick way to determine if there is a problem with the network time service is to verify the system time reported on the **Control Panel > Control** screen against the actual time.

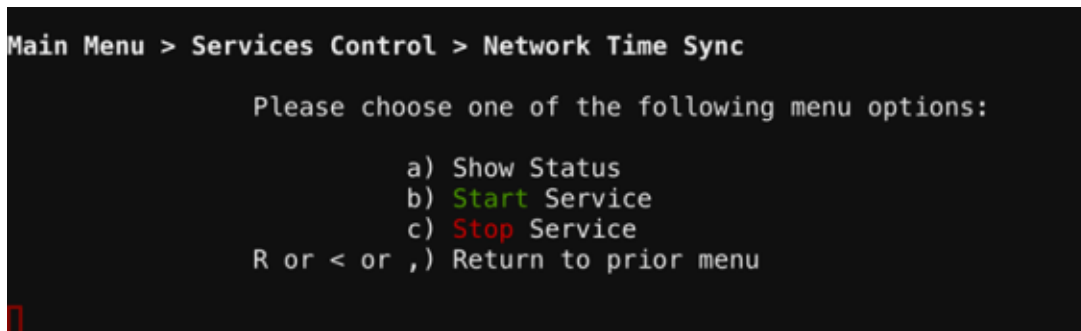
4. Log into the TUI.
5. From the Main Menu, go to **Services Control > Network Time Sync** (Figure 1 on page 183).

Figure 1 TUI Services Control Menu–Network Time Sync Option



6. (Optional) To verify the ntpd service, select Show Status (Figure 2 on page 183).

Figure 2 TUI Network Time Sync Menu



7. If the ntpd service is not running, click **Start Service**.



Managing Switch Data in Cisco Vision Director

First Published: 2017-11-21

This section includes the following topics:

- [Information About Importing Switch Data, page 185](#)
- [How to Import Switch Data to Cisco Vision Director, page 185](#)
- [Viewing Switch Details, page 190](#)

Information About Importing Switch Data

It is helpful to import switch data to Cisco Vision Director so that you can obtain certain switch-related information for your media player devices, and also run certain commands from the switch such as power resets of the media player using POE.

After you import switch data, information about the switch and its media player connections can be viewed in the following areas of the Management Dashboard:

- **Monitor and Status > All Devices > Settings**
- **Tools > Settings > Switch Management > View Switch Details**

How to Import Switch Data to Cisco Vision Director

This section includes the following topics:

- [Guidelines for Importing Switch Data, page 185](#)
- [Prerequisites for Importing Switch Data, page 186](#)
- [Configuring the Global Switch Device Default Settings, page 186](#)
- [Importing Switch Data, page 188](#)
- [Reimporting Switch Data, page 189](#)

Guidelines for Importing Switch Data

Before you import switch data to Cisco Vision Director, consider the following guidelines:

- Configure the Default Switch parameters area with the common credentials and connection type for all switches whose data you want to import to Cisco Vision Director. This will save you time when importing data from multiple switches.

How to Import Switch Data to Cisco Vision Director

- The following parameters can be configured as global defaults to connect to all Cisco Connected Stadium switches for data import:
 - Transport
 - User name
 - Password
 - Enable password
- You can override global defaults with a switch-specific transport protocol or user credentials at the time of switch import.

However, the switch-specific settings that you can specify on the Import Switch dialog box will only be used if you have changed the "Switch settings can override defaults?" option to yes in the global default settings.

- If you make any changes to your switch configuration, then you must re-import the switch data to reflect the latest port connections, or other updates.

Prerequisites for Importing Switch Data

Before you import switch data to Cisco Vision Director, be sure that the following conditions are met:

- You have installed and configured the Cisco Connected Stadium switch(es) for Cisco Vision Director.
- You have deployed the media players with connectivity to the switch.
- You have the following information for your switch connections:
 - Transport type (SSH is recommended)
 - User name
 - Password
 - Enable password
 - IP address of the switch

Configuring the Global Switch Device Default Settings

User Role: Administrator

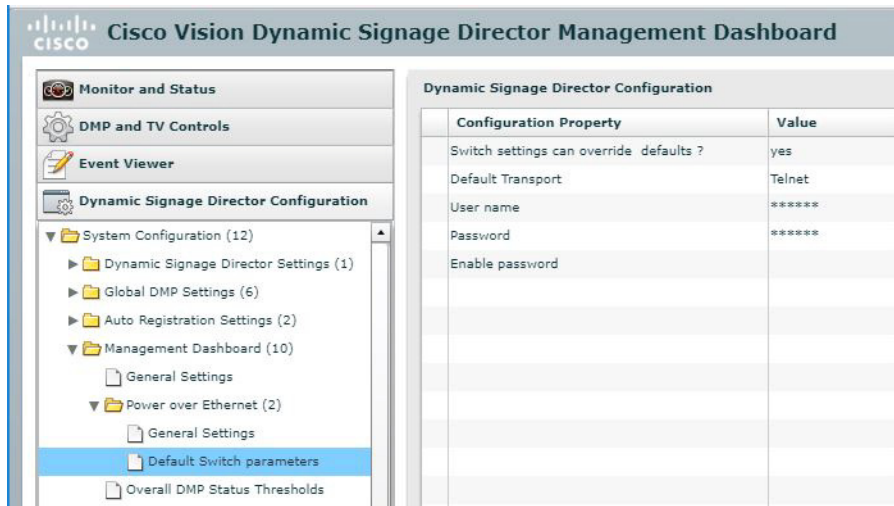
Use this task to set the common credentials and connection type for all switches whose data you want to import to Cisco Vision Director. This will save you time when importing data from multiple switches.

To configure global switch device default settings:

1. From the Management Dashboard, go to: **Dynamic Signage Director Configuration > System Configuration > Management Dashboard > Power over Ethernet > Default Switch parameters.**

[Figure 1 on page 187](#) shows the available configuration properties that can be specified as defaults for all imports of switch data to Cisco Vision Director.

Figure 1 Default Switch Parameters Properties



2. In the Default Switch configuration properties, type the default values that you want to set for all switch imports according to [Table 1 on page 188](#).

Table 1 Default Switch Configuration Property Descriptions

Property	Description
Switch settings can override defaults?	<p>no—Specifies that the values set in these default switch configuration properties cannot be overridden by transport, user name, or password values in the Import Switch settings area.</p> <p>yes—Specifies that these default settings for transport, user name and passwords can be overridden by values specified in the Import Switch settings at the time of import.</p>
Default Transport	<p>Default connecton type to the switch as Telnet or SSH. For best security, SSH should be used.</p> <p>This value can be overridden in the Import Switch settings when the override option is set to yes.</p>
User Name	<p>Default user name on the switch.</p> <p>This value can be overridden in the Import Switch settings when the override option is set to yes.</p>
Password	<p>Default password for the user name on the switch.</p> <p>This value can be overridden in the Import Switch settings when the override option is set to yes.</p>
Enable password	<p>Default enable password on the switch.</p> <p>This value can be overridden in the Import Switch settings when the override option is set to yes.</p>

Importing Switch Data

User Role: Administrator

This task describes how to import Cisco Connected Stadium switch data so that you can manage your media player devices in the Management Dashboard.

IMPORTANT: If you make any changes to your switch configuration, then you must re-import the switch data to reflect the latest port connections, or other updates.

To import switch data:

1. From the Management Dashboard, go to: **Tools > Settings tab> Switch Management > Import Switch**. [Figure 2 on page 189](#) shows the Import Switch options.

Figure 2 Import Switch

Import Switch

Device Summary

IP Address:

Description:

Connection Parameters

Transport:

Device Credentials

User name:

Password:

Enable password:

Used only when the "Switch settings can override defaults?" option is Yes in the Default Switch parameters settings.

2. Specify the IP address of the switch that you want to import.
3. (Optional) Type a description for the switch.
4. (Optional) If you have enabled override of the default switch settings, specify the switch-specific connection parameters.
5. Click the Import Switch icon.

Reimporting Switch Data

User Role: Administrator

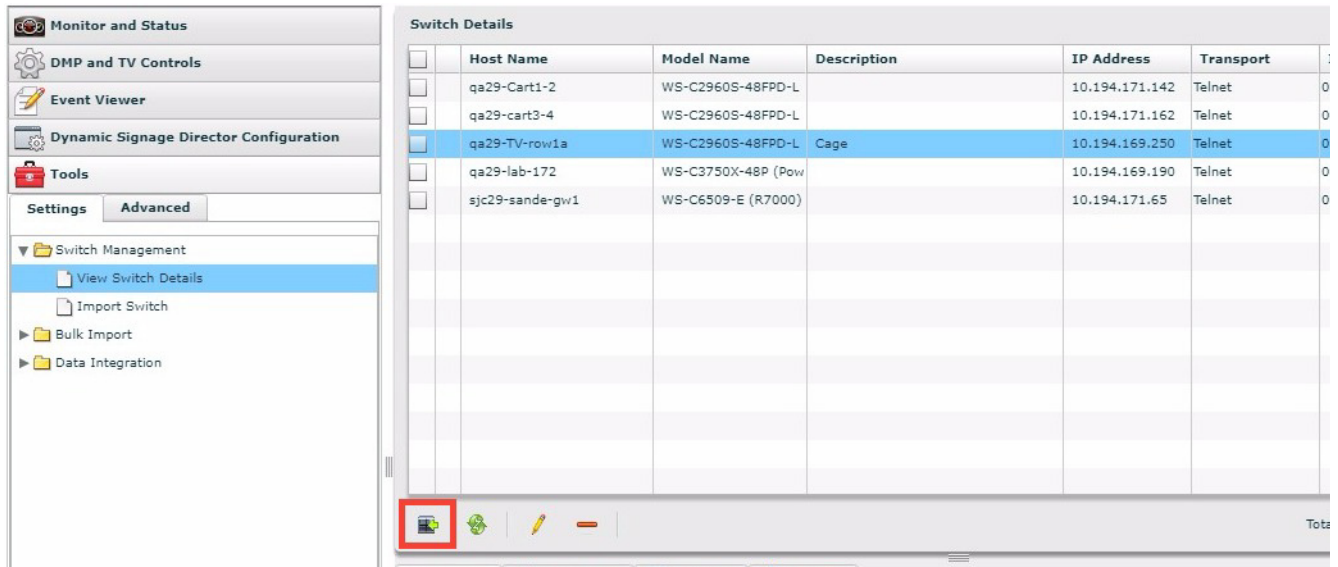
This task describes how to update Cisco Connected Stadium switch data in Cisco Vision Director after you have already done an initial import, but have made changes to your switch configuration—such as additions or moves of media players.

To reimport switch data:

1. From the Management Dashboard, go to: **Tools > Settings tab > Switch Management > View Switch Details**.
2. In the Switch Details box, select the switch that you want to update.
3. Click the reimport icon ([Figure 3 on page 190](#)).

Viewing Switch Details

Figure 3 Reimport Switch Data From View Switch Details



Viewing Switch Details

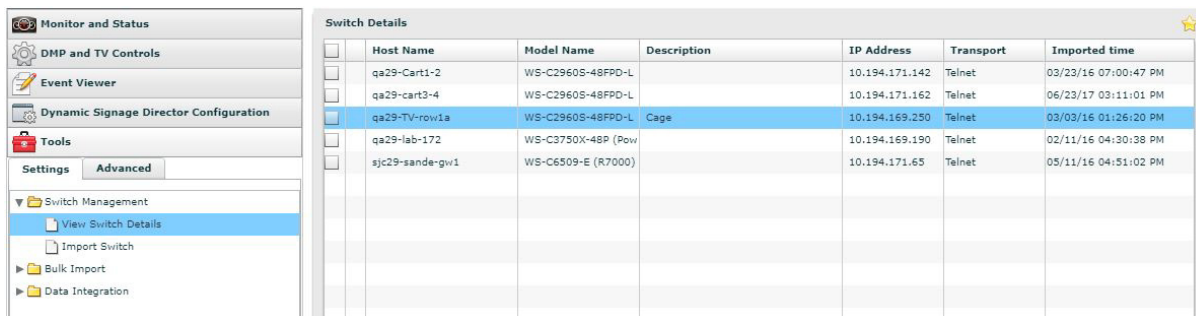
User Role: Administrator

To view switch details:

1. From the Management Dashboard, go to: **Tools > Settings tab> Switch Management > View Switch Details.**

Figure 4 on page 190 shows the default switch details view that provides basic information about the switch itself.

Figure 4 View Switch Details



2. To get information about the media player device connections on the switch, click **Interfaces.**

Figure 5 on page 191 shows information about the media players connected to the switch, including addressing, VLAN and POE values.

Viewing Switch Details

Figure 5 Switch Details–Interfaces View

The screenshot displays the Cisco Vision Director interface. On the left is a navigation pane with sections: Monitor and Status, DMP and TV Controls, Event Viewer, Dynamic Signage Director Configuration, Tools, and Settings (Advanced). Under Switch Management, 'View Switch Details' is selected. The main area shows a 'Switch Details' table with columns: Host Name, Model Name, Description, IP Address, Transport, and Imported time. The row for 'qa29-TV-row1a' is highlighted. Below this is a toolbar and a status bar indicating 'Total number of Switches: 5'. At the bottom, the 'Interfaces' tab is active, showing a table with columns: Interface, IP Address, MAC, Vlan, Admin, Oper, Power, Connected DMP, and Device Type.

Host Name	Model Name	Description	IP Address	Transport	Imported time
qa29-Cart1-2	WS-C2960S-48FPD-L		10.194.171.142	Telnet	03/23/16 07:00:47 PM
qa29-cart3-4	WS-C2960S-48FPD-L		10.194.171.162	Telnet	06/23/17 03:11:01 PM
qa29-TV-row1a	WS-C2960S-48FPD-L	Cage	10.194.169.250	Telnet	03/03/16 01:26:20 PM
qa29-lab-172	WS-C3750X-48P (Pow		10.194.169.190	Telnet	02/11/16 04:30:38 PM
sjc29-sande-gw1	WS-C6509-E (R7000)		10.194.171.65	Telnet	05/11/16 04:51:02 PM

Interface	IP Address	MAC	Vlan	Admin	Oper	Power	Connected DMP	Device Type
Gi1/0/36		00:22:bd:d3:5b:8a	225	auto	on	15.4		CIVS-IPC-4500
Gi1/0/18				auto	off	0.0		n/a
Gi1/0/2				auto	off	0.0		n/a
Gi1/0/37		00:22:bd:d3:5b:97	225	auto	on	15.4		CIVS-IPC-4500



Managing System Services in Cisco Vision Director

First Published: 2017-11-21

This section includes the following topics:

- [Information About Monitored Services, page 193](#)
- [Using the Monitored Services Screen, page 194](#)

Information About Monitored Services

Service alerts are reported based on the monitored services enabled in the Management Dashboard under **Monitor and Status > Services**.

[Figure 1 on page 193](#) shows the Cisco Vision Director services available for monitoring and their status.

Figure 1 Monitored Services in the Management Dashboard

Monitored Services					
	Polling	Mode	Interval	Service Name	Service Status
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Cisco POS Server 3	Cisco server at qa-test-07/10.194.170.142 is running normally.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Config Server	Server is available.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Director Server OS	CPU 3% Memory 16% Disk usage 30% System running normally.
<input checked="" type="checkbox"/>	Enabled	Automatic	10 minutes	Director Database	Database is running normally.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Local Control Server	Server is available.
<input checked="" type="checkbox"/>	Enabled	Automatic	10 minutes	Proof Of Play Database	Database iapps_pofp is running normally.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Control Server	Server is available.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Monitor Server	Server is available.
<input checked="" type="checkbox"/>	Enabled	Automatic	5 minutes	Network Configuration	Network name resolution is ok.
<input checked="" type="checkbox"/>	Enabled	Automatic	10 minutes	High Availability Hardware	No HA system configured in registry entry backup.secondaryIp.
<input checked="" type="checkbox"/>	Enabled	Automatic	10 minutes	Integration Broker	Server is available.
<input checked="" type="checkbox"/>	Enabled	Automatic	10 minutes	CUCM Server	CUCM at 10.194.170.137 is running normally.
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Quest POS Server 4	Quest service is pingable at 10.194.170.162
<input checked="" type="checkbox"/>	Enabled	Automatic	30 seconds	Content Management CMS Server	Server is available.

Table 1 Monitored Services Descriptions

Service Name	Description
{Cisco Micros Quest} POS Server n	Monitors connectivity between Cisco Vision Director and the POS vendor configured as a store in Cisco Vision Director. The POS store can be "Cisco," "Micros," or "Quest." A numbered service "n" is used to distinguish multiple integration instances.
Config Server	Monitors the status of the Cisco Vision Director sub-component that supports auto-registration, system configuration, and Management Dashboard functions.
Content Management CMS Server	Monitors the status of the content management database.

Using the Monitored Services Screen

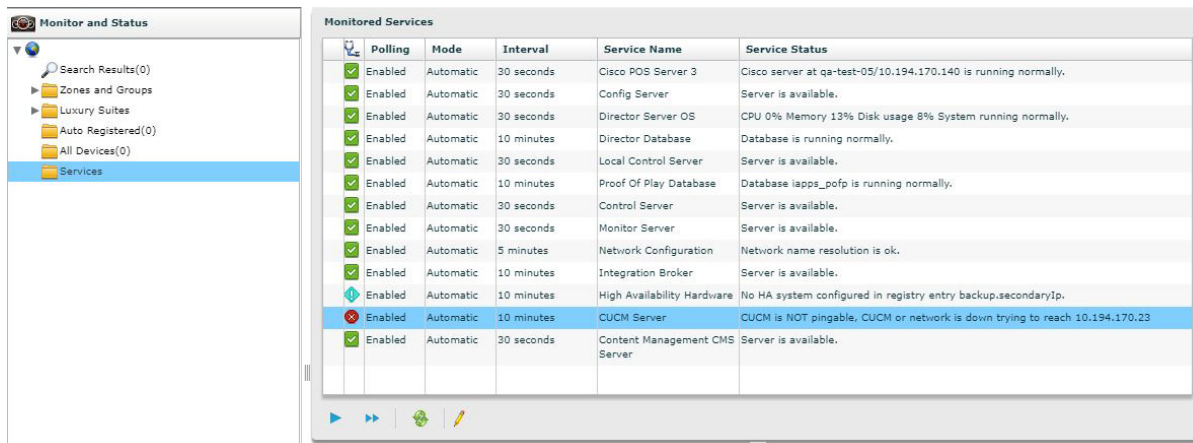
Service Name	Description
Control Server	Monitors the status of the Cisco Vision Director sub-component that supports IP phone and script functions.
CUCM Server	Monitors the connectivity and availability of the Cisco Unified Communications Manager (CUCM) server that supports the proper operation of in-suite phone speed-dial operation in the Cisco Vision Director phone service.
Director Database	Monitors that the Cisco Vision Director database (which stores internal system configuration information) is running properly and accessible by other Cisco Vision Director services.
Director Server OS	Monitors the overall health of the Cisco Vision Director server, including the CPU, memory, and disk utilization.
High Availability Hardware	Monitors that a configured secondary Cisco Vision Director server is running and available.
Integration Broker	Monitors the sub-component that supports the Data Integration functionality.
Local Control Server	Monitors the status of the Cisco Vision Director sub-component that supports the Local Control API.
Monitor Server	Monitors the overall status of the sub-component that supports monitoring functions in the Management Dashboard.
Network Configuration	Monitors the configuration and operation of DNS services, that are required for legacy RSS ticker support and certain external data sources configured in the Data Integration feature.
Proof of Play Database	Monitors the status of the Proof of Play database.

Using the Monitored Services Screen

Use the Monitored Services screen to verify the health of your Cisco Vision Director services.

[Figure 2 on page 195](#) shows an example of the High Availability service in critical (red) state, and a description of its status. Click the **Problems** tab for suggested actions to resolve the service back to normal state.

Figure 2 Monitored Services Details



Use the tabs at the bottom of the panel to obtain more details about that service, as described in [Table 2 on page 195](#).

Table 2 Service Information Tabs

Tab Name	Description
Status	Displays detailed status for the selected service. Data displayed is service-specific.
Problems	Displays the actions you can take to change the state of the specific service from critical (Red) state to Normal (Green) state. The Problems tab is only relevant for services that are in the red state.
Polling Interval	Displays the poll interval, the last time status was checked, and the next scheduled status check.
Service Information	Displays details about the information monitored by the selected service.
Console	Displays the log and other message output during the service check operation.
System	Displays log messages about internal events that occurred during the service check.



Managing Server Resources in Cisco Vision Director

First Published: 2017-11-21

Before an event, you should validate system readiness for CPU, memory (RAM), and disk utilization to be sure that you have enough resources.

Note: Measurement units for storage in Cisco Vision Director are based on a KB equivalent of 1024 bytes [known as a kibibyte (KiB)], not 1000 bytes.

Therefore, a notation of MB actually means 1,048,576 (1024 x 1024) bytes in Cisco Vision Director.

This section includes the following topics:

- [Information About Monitoring System Utilization, page 197](#)
- [Running Database Maintenance, page 201](#)

Information About Monitoring System Utilization

This section includes the following topics:

- [Server Utilization Information, page 197](#)
- [Server Alert Thresholds, page 198](#)
- [CPU Utilization, page 198](#)
- [Memory Utilization, page 199](#)
- [Disk Utilization, page 199](#)

Server Utilization Information

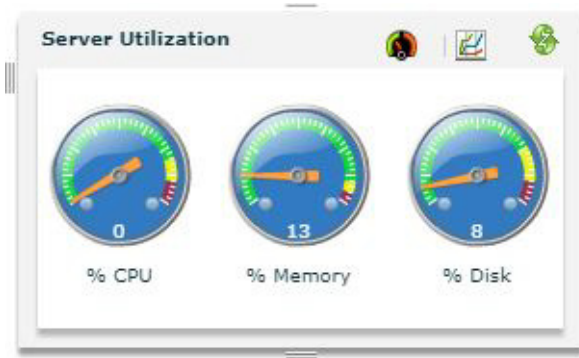
The Cisco Vision Director Server monitoring service (named Director Service OS) polls system status every 30 seconds for the CPU, memory (RAM), and disk utilization.

Utilization status is reported based on the server alert thresholds configured in the Management Dashboard.

The gauges in the SV Director Server Utilization panel in the Management Dashboard provide an at-a-glance view of the percentage of CPU, memory, and disk space usage for the Cisco Vision Director Server ([Figure 1 on page 198](#)).

Note: The browser does not automatically update the utilization status; you must click the refresh button.

Figure 1 Cisco Vision Director Server Utilization



IMPORTANT: The Management Dashboard shows a critical alert when the CPU or Disk utilization goes above 90%, or if the Memory utilization goes above 95%.

TIP: You can also find the current CPU, memory, and disk utilization percentages in the daily Vision Health Report.

Server Alert Thresholds

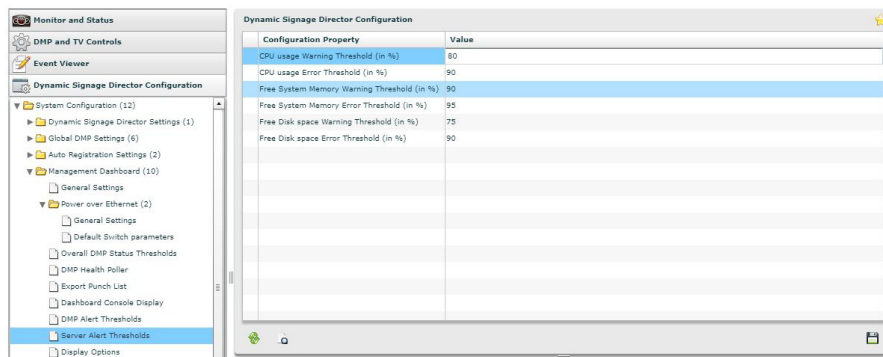
Utilization status and alerts are reported based on the server alert thresholds configured in the Management Dashboard.

Two alert thresholds are defined for CPU, free memory, and disk space:

- **Warning**—Warning thresholds define the yellow area of the server utilization gauges.
- **Error**—Error thresholds define the red area of the server utilization gauges and correspond to critical alerts.

Figure 2 on page 198 shows the default threshold values for the different system areas.

Figure 2 Default Values for Server Alert Thresholds



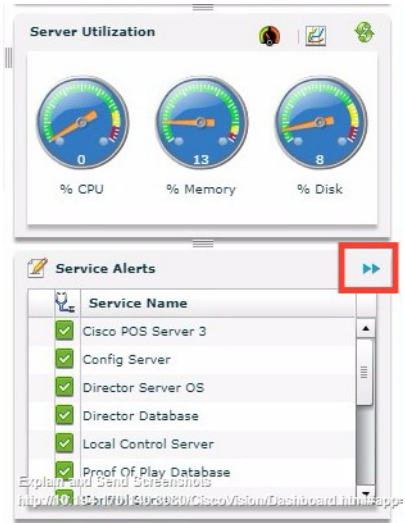
CPU Utilization

If CPU utilization is above the 90% alarm threshold for a short period of time, it is probably acceptable. However, if CPU utilization remains elevated, there is a problem with a runaway process or task that is consuming all of the available CPU, which can result in reduced responsiveness in the system.

Look at the system to determine how to resolve. The Management Dashboard caches the last executed report. Always make a new request /refresh to get the most up-to-date information (Figure 3 on page 199).

If necessary, open a case with Cisco Technical Support and provide a thread dump taken from the System State Report tool.

Figure 3 Management Dashboard Server Utilization and Monitored Services



Memory Utilization

If memory utilization is above the 90% alarm threshold for over a long period of time, there could be something running in the system which is using more memory than it should. Identify which processes are using the most memory.

Table 1 on page 199 shows the total memory on a Cisco Vision Director server and the usage that crosses the alarm threshold.

IMPORTANT: If memory utilization is above 90%, open a case with Cisco Technical Support.

Table 1 Memory Utilization and Threshold Values

RAM	Size
Total Memory	32 GB (Platform 3) 16 GB (Platform 2)
Cisco Vision Director Cached Memory	10 GB
Memory Usage that Crosses the Alarm Threshold	14.5 GB

Disk Utilization

If disk utilization is above the threshold, the disk space is filling up. The disk might fill up from having a lot of backup files, proof-of-play files, or log files, in addition to your content.

Table 2 on page 200 shows the total hard disk size and recommended minimum free space.

Table 2 Hard Disk Values

Disk Size	Size
Total Disk Size	320 GB
Minimum Free Space	15 GB

IMPORTANT: The Daily backup task might consume the hard disk space limit, which can cause the system to fail in unexpected ways.

How to Manage Disk Utilization

This section includes the following topics:

- [Modifying File Retention Periods on the Cisco Vision Director Server, page 200](#)
- [Using the Event Viewer to Monitor Disk Alerts, page 200](#)
- [Deleting System Files, page 201](#)

Modifying File Retention Periods on the Cisco Vision Director Server

User Role: Installer (Administrator)

Cisco Vision Director allows you to define retention periods for backup and log files in the Text Utility Interface (TUI).

The default settings are:

- Backup files—One file. The backup retention policy can be modified to 2, 5, 7, or 10 files.
- Log files—15 days. The log retention policy can be modified to 5 or 10 days.

CAUTION: Be aware of your overall disk utilization and the size of your backup content to be sure that the number of files that you want to keep can be supported by your system resources.

For more information about using the TUI, see the "[Cisco Vision Director Text Utility Interface](#)" module of the [Cisco Vision Director Server Administration Guide](#).

To modify the file retention periods:

Note: The retention policy must be changed on both the primary and secondary servers.

1. Log into the TUI.
2. Go to Vision Server Administration > Retention Policy.
3. Select the Backup/restore Files menu or the Log Files menu and type the letter for the retention period.

Using the Event Viewer to Monitor Disk Alerts

User Role: Administrator

If you have the Director Server enabled for monitoring (recommended), you can look for any alerts on the Director Server in the Service Alerts window in the Management Dashboard.

Disk space alerts are based on the disk alert thresholds set for the server.

To use the event viewer to monitor disk alerts:

1. From the Management Dashboard, go to: **Event Viewer> All Events> System**.
2. In the Events panel, look for “DEGRADED” in the Sub Type column for the “Service Monitor” in the Source column.

Deleting System Files

User Role: Installer (Administrator)

You can use the TUI to remove the following types of system files:

- Log files
- System state reports
- ISO upgrade files
- Backup files

IMPORTANT: The TUI clean file options remove all instances of the selected file type.

For more information about using the TUI, see the "[Cisco Vision Director Text Utility Interface](#)" module of the [Cisco Vision Director Server Administration Guide](#).

To delete system files:

1. Log into the TUI.
2. Go to Troubleshooting > Disk Monitoring > Delete Files.
3. From the Delete Files menu, type the letter option for the file type that you want to delete.
4. At the prompt, confirm the removal.

Running Database Maintenance

User Role: Installer (Administrator)

Beginning in Cisco StadiumVision Director Release 4.1, the backup task can run even while an event script is running. As part of this change, the database is no longer optimized or repaired during the backup process—a new TUI option is added to run database maintenance manually, if needed.

One way to see if you might need to run database maintenance is to look at the backup log (`/var/log/svd-config/backup-YYMMddHHMMSSz.log`). If you see that the table updates are other than "OK" or not up-to-date, then run database maintenance.

Note: Slow performance is another possible sign that database maintenance is needed.

For more information about using the TUI, see the "[Cisco Vision Director Text Utility Interface](#)" module of the [Cisco Vision Director Server Administration Guide](#).

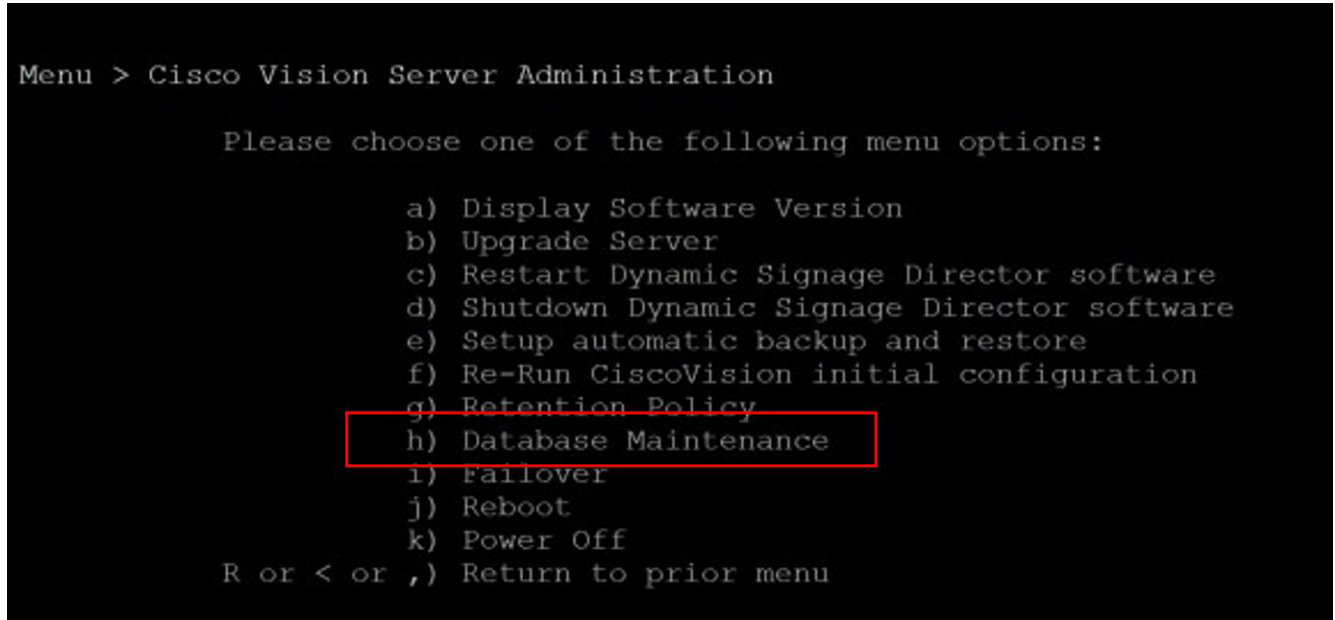
IMPORTANT: You must be sure to restart Cisco Vision Director software after maintenance is complete. The best practice is to shut down the Cisco Vision Director software **before** running database maintenance and then restart it after maintenance is complete. However, even if you did not shut down prior to running maintenance, you still must restart the Cisco Vision Director software.

To run database maintenance:

1. Log into the TUI.

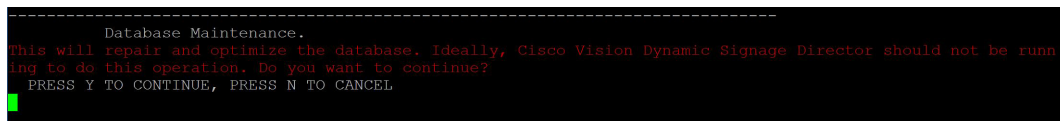
2. (Recommended) Shut down the Cisco Vision Director software. From the main menu, go to: Cisco Vision Server Administration > Shutdown Dynamic Signage Director Software.
3. From the Cisco Vision Server Administration menu, select Database Maintenance (Figure 4 on page 202).

Figure 4 TUI Database Maintenance Option



4. At the confirmation prompt, press Y to start the process (Figure 5 on page 202).

Figure 5 Database Maintenance Confirmation Prompt



5. As the maintenance runs, the status of each table update is shown (Figure 6 on page 203).

Running Database Maintenance

Figure 6 Database Maintenance Table Updates

iapps_1.x_script_schedule	OK
iapps_1.x_scriptinstance	OK
iapps_1.x_services_in_servicetype	OK
iapps_1.x_servicetype	OK
iapps_1.x_site	OK
iapps_1.x_site_user	OK
iapps_1.x_stagingassetinfo	OK
iapps_1.x_staginginfo	OK
iapps_1.x_state	OK
iapps_1.x_stateinstance	OK
iapps_1.x_suites_in_zone	OK
iapps_1.x_switch	OK
iapps_1.x_t_activescript	OK
iapps_1.x_t_activescript_destinations	OK
iapps_1.x_t_activescript_runtime	OK
iapps_1.x_t_activescript_siteids	OK
iapps_1.x_t_current_dmp_status	OK
iapps_1.x_t_multicast_routing_entry	OK
iapps_1.x_t_multicast_routing_entry_sitemulticastlisteners	OK
iapps_1.x_t_multicast_routing_entry_sitemulticastsenders	OK
iapps_1.x_tag	OK
iapps_1.x_template	OK
iapps_1.x_ticker	OK
iapps_1.x_tickercontent	OK
iapps_1.x_tomcat_roles	OK
iapps_1.x_tomcat_users	OK
iapps_1.x_trigger_history	OK
iapps_1.x_trigger_history_logentries	OK
iapps_1.x_trigger_history_logentries	OK

6. When database maintenance is complete, restart the Cisco Vision Director software.
7. From the TUI main menu, go to: **Cisco Vision Server Administration > Restart Cisco Vision Director Software.**



Managing Media Player Operation in Cisco Vision Director

First Published: 2017-11-21

This module provides information about maintaining normal operation of your media players. It includes the following topics:

- [Information About the System Health Report, page 205](#)
- [Best Practices for Using the System Health Report, page 207](#)
- [How to Obtain the System Health Report, page 208](#)
- [Viewing Media Player Device Status, page 210](#)
- [Replacing a Failed Media Player While an Event Script is Running, page 218](#)
- [Troubleshooting the SV-4K Media Player, page 219](#)

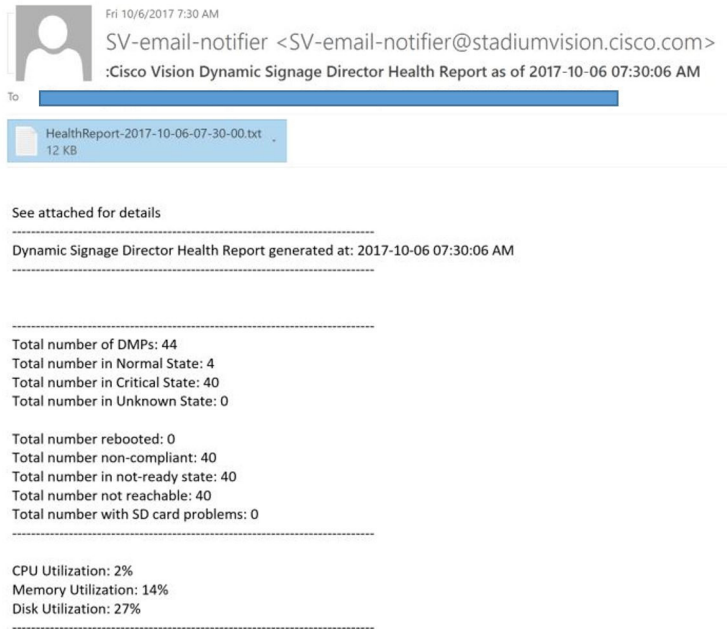
Information About the System Health Report

As a best practice, you should review the daily Vision health report to monitor and maintain the media players and overall health of the Cisco Vision Director system. This report runs automatically at 08:00 daily, and you can configure the system to send it to one or more email addresses.

[Figure 1 on page 206](#) shows a typical email notification for the Cisco Vision health report. In the email body, a summary of the report is provided, with the full report details provided in an attached .txt file.

Information About the System Health Report

Figure 1 Sample Cisco Vision Health Report Email Notification



To see the details for the devices by category, open the text file attachment in the email. [Figure 2 on page 207](#) shows an excerpt of the device details report provided for the different status categories.

Figure 2 Cisco Vision Health Report Details (Excerpt)

```

-----
Dynamic Signage Director Health Report generated at: 2017-10-06 07:30:00 AM
-----

Total number of DMPs: 44
Total number in Normal State: 4
Total number in Critical State: 40
Total number in Unknown State: 0
Total number rebooted: 0
Total number non-compliant: 40
Total number in not-ready state: 40
Total number not reachable: 40
Total number with SD card problems: 0
Total number with Flash Application problems: 0
-----

Devices in critical state, count = 40
-----
CRT1-R1-C1    CV-HD  10.194.171.130    2017-10-06 07:12:00 AM
CRT1-R1-C2    CV-HD  10.194.171.133    2017-10-06 07:12:00 AM
CRT1-R1-C3    CV-HD  10.194.171.141    2017-10-06 07:12:00 AM
CRT1-R2-C1    CV-HD  10.194.171.138    2017-10-06 07:12:00 AM
CRT2-R1-C1    CV-UHD 10.194.171.146    2017-10-06 07:12:00 AM
CRT2-R1-C2    CV-UHD 10.194.171.147    2017-10-06 07:12:00 AM
CRT2-R1-C3    CV-UHD 10.194.171.148    2017-10-06 07:12:00 AM
CRT2-R2-C1    CV-UHD 10.194.171.149    2017-10-06 07:12:00 AM
CRT2-R2-C2    CV-UHD 10.194.171.150    2017-10-06 07:12:00 AM
CRT2-R2-C3    CV-UHD 10.194.171.151    2017-10-06 07:12:00 AM
CRT2-R3-C1    CV-UHD 10.194.171.152    2017-10-06 07:12:00 AM
CRT2-R3-C2    CV-UHD 10.194.171.153    2017-10-06 07:12:00 AM
CRT2-R3-C3    CV-UHD 10.194.171.154    2017-10-06 07:12:00 AM
CRT2-R4-C1    CV-UHD 10.194.171.155    2017-10-06 07:12:00 AM

```

Best Practices for Using the System Health Report

- Verify your system regularly to be sure that the Cisco Vision health report is being sent as expected:
 - Confirm your health report email configuration.
 - Check often with venue IT personnel that the SMTP server that is configured for the Cisco Vision health report is running normally.
- Review the Cisco Vision health report daily to monitor the media players and overall health of the Cisco Vision Director system.
- Investigate all of the devices reported in the "Devices in critical state" and the "Devices not reachable" sections.

Note: The device counts in these two sections are typically equal, but not necessarily.

- Inform the Event Manager about these devices.
- Investigate the affected devices and bring to Normal state. Replace if necessary.
- Do not ignore the devices reported in these sections. The media players almost always will be showing black screens on the TV displays.
- If you see that an unusual number of devices have recently rebooted, investigate further. This could be due to a power fluctuation issue in the edge switch, the edge switch itself was rebooted, or another issue caused a break in power supply to the affected devices.
- Non-compliant devices:
 - If you know that you normally have a certain number of devices in non-compliant state, then ignore this entry.

- If the number of non-compliant devices is not what you expect, investigate and correct the issue(s).

How to Obtain the System Health Report

This section includes the following topics:

- [Configuring the System Health Report for Email Notification, page 208](#)
- [Modifying the Time of the System Health Report Task, page 209](#)
- [Running the System Health Report Task Manually, page 209](#)

Configuring the System Health Report for Email Notification

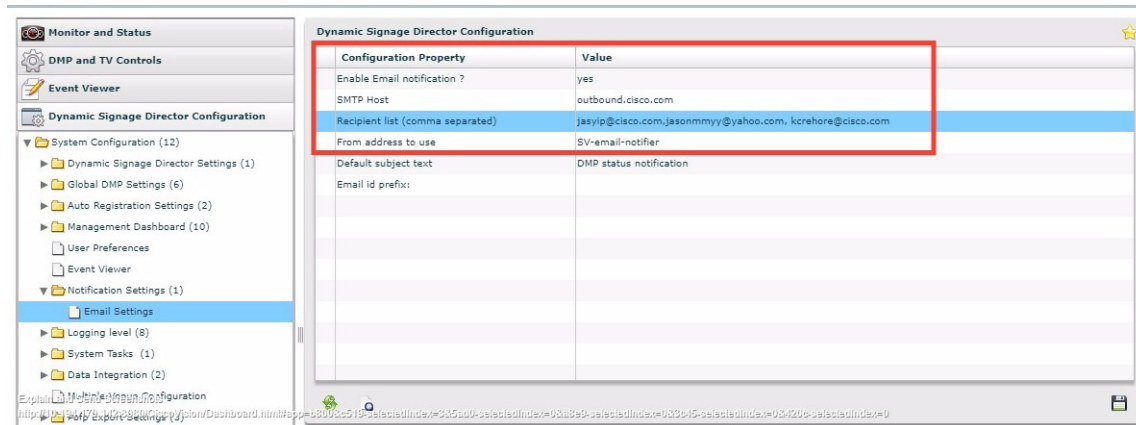
User Role: Administrator

By default, Cisco Vision Director automatically runs a system health report at 08:00. However, email notification is disabled.

To configure the system health report for email notification:

1. From the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Notification Settings > Email Settings**.
2. In the Configuration Property box, set the required properties shown in [Figure 3 on page 208](#).

Figure 3 System Health Report Configuration Properties



[Table 1 on page 209](#) describes the properties and possible values.

Table 1 Email Notification Configuration Properties

Property	Values
Enable email notification?	Yes—Enables email notification. No—(Default) Disables email notification.
SMTP host	IP address or hostname of the SMTP email server for the venue. (If hostname is used, it must be resolvable by your network DNS server.)
Recipient list (comma separated)	Comma-separated list of email recipients to receive the report. (For example: email1@domain.com, email2@domain.com)
From address to use	(Optional) Email sender name. The default is "SV-email-notifier."
Default subject text	(Optional) Text to appear in the email subject field. The default is "Cisco Vision Health Report as of year-month-day hh:mm:ss am/pm."
Email id prefix:	(Optional) Prefix to use in the beginning of the email subject field. This can be used to organize email alerts from multiple customers or sites.

Modifying the Time of the System Health Report Task

User Role: Administrator

By default, Cisco Vision Director runs a system health report daily at 08:00.

To modify the time of the system health report task:

1. From the **Management Dashboard**, go to **Tools > Advanced tab > Scheduled Tasks**
2. In the Scheduled Task Data box, find the task named HPMReportTask.
3. Click in the Task Time column and specify the time (in 24:00 format) when you want the report to run.
4. Click **Apply**.

Figure 4 Changing the Health Report Time

Task ID	Task Type	Task Time	Servers
10	MulticastStateChange	periodic-5-seconds	control
13	HPMMonitorTask	periodic-180-seconds	config
14	HPMReportTask	07:30	config
15	HPMDMPCCommandTa	07:30	config
16	CleanupScriptInstanc	05:30	config

Add Row Delete Row

Running the System Health Report Task Manually

User Role: Administrator

To run the system health report task manually:

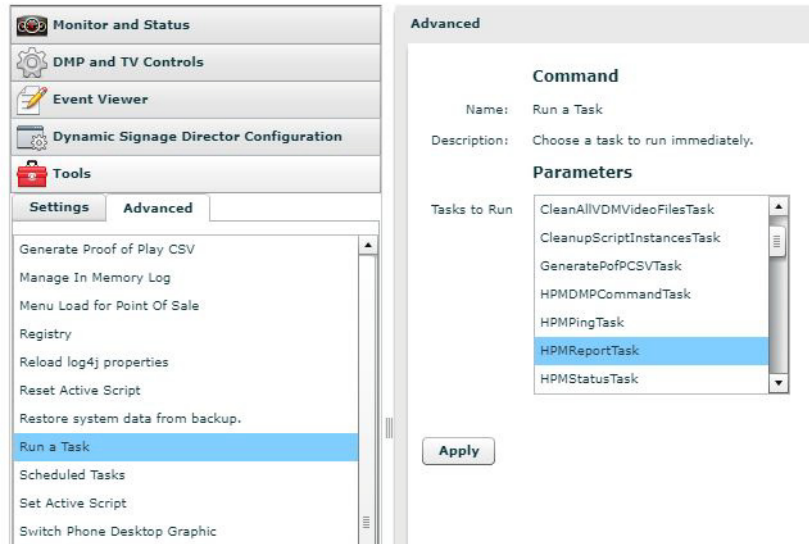
1. From the Management Dashboard, go to **Tools > Advanced tab > Run a Task**.

Viewing Media Player Device Status

In the Tasks to Run box, select the **HPMReportTask** (see [Figure 5 on page 210](#)).

2. Click **Apply**.

Figure 5 Run HPMReportTask Detail



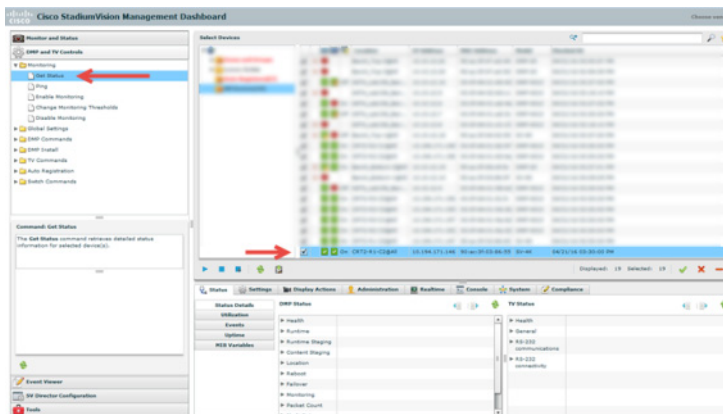
Viewing Media Player Device Status

User Role: Administrator / Help Desk / Support / Venue Administrator / Venue Operator

The Management Dashboard provides a number of levels and ways to obtain information about the status of your media player devices. This topic describes how to obtain detailed device status as shown in [Figure 6 on page 210](#)

IMPORTANT: Not all commands or display areas are supported for the SV-4K and DMP-2K media player. Therefore, some areas of the display might not report any information for an SV-4K and DMP-2K. Also, under the Utilization tab, the CPU Usage reports an average load for the SV-4K and DMP-2K that is normally always between values of 0 and 1.

Figure 6 Management Dashboard Media Player Device Status



To view media player device status:

1. To get the most recent device status, run the Get Status command from the Management Dashboard:
2. Go to DMP and TV Controls > Monitoring > Get Status

3. In the Select Devices panel, select the devices that you want an updated status for.
4. To execute the command, click the play (>) button located at bottom left of the panel.
5. In the Device List panel, select the device that you want to verify.
6. Go to the device details area at the bottom of the panel and click Status.

Use the buttons on the Status panel to obtain more details about the media player as described in [Table 2 on page 211](#).

Table 2 Management Dashboard Status Panel Buttons

Button	Description
Status Details	Displays a combination of device details for both the media player and its associated TV displays.
Utilization	Displays media player-specific resource information such as CPU usage, memory, and disk storage.
Events	Displays system events that pertain to media players.
Uptime	Displays information about how long the device has been running.
MIB Variables	Displays internal settings for the media player.

Note: When using the `dmp.monitorPower` display parameter, you can run the `Get Status` command from the Management Dashboard to get the latest TV health status known to the DMP. This information can be up to two minutes old, or a few seconds depending on when the power query last ran. If the “`dmp.monitorPower`” parameter is set to false then you will not get the correct TV health status.

Managing SV-4K and DMP-2K Operation in Cisco Vision Director

This section provides information about maintaining normal operation of your SV-4K and DMP-2K media players.

It includes the following topics:

- Management Dashboard Commands for the SV-4K Media Player, page 211
- Performing a Regular Reboot of the SV-4K and DMP-2K Media Players, page 216
- Clearing the Storage on the SV-4K and DMP-2K Media Player, page 216
- Clearing Registries on the SV-4K and DMP-2K Media Player by Restoring Factory Defaults, page 217
- Recovering SV-4K Operation After Server Power Loss, page 218

Management Dashboard Commands for the SV-4K Media Player

This section provides a summary of the new and existing Management Dashboard commands that are supported by the SV-4K media player.

- Auto-Registration Commands for the SV-4K and DMP-2K Media Player, page 213
- DMP Commands for the SV-4K and DMP-2K Media Player, page 213

- DMP Install Commands for the SV-4K and DMP-2K Media Player, page 213
- Global Settings Commands for the SV-4K and DMP-2K Media Player, page 214
- Monitoring Commands for the SV-4K and DMP-2K Media Player, page 214
- Switch Commands for the SV-4K and DMP-2K Media Player, page 214
- TV Commands for the SV-4K and DMP-2K Media Player, page 216

Auto-Registration Commands for the SV-4K and DMP-2K Media Player

Table 3 Management Dashboard Auto-Registration Commands

Command Name	Supported on SV-4K and DMP-2K
Change DMP State	Yes
Provision DMP	No

DMP Commands for the SV-4K and DMP-2K Media Player

Table 4 Management Dashboard DMP Commands

Command Name	Supported on SV-4K and DMP-2K
Display IP	Yes
Restart Runtime	Yes
Disable DHCP	No
Enable DHCP	No
Disable HDMI Autodetection	No
Enable HDMI Autodetection	No
Disable Diagnostic Web Server	Yes (SV-4K and DMP-2K only)
Enable Diagnostic Web Server	Yes (SV-4K and DMP-2K only)
Reset Storage	Yes (SV-4K and DMP-2K only)
Update MIB	No
Send RS232	Yes
Reboot Device	Yes
Play SWF	No
Stop SWF	No
Play Media URL	No
Stop Media URL	No
Set Alpha Transparency	No

DMP Install Commands for the SV-4K and DMP-2K Media Player

Table 5 Management Dashboard DMP Install Commands

Command Name	Supported on SV-4K and DMP-2K
Firmware Upgrade	Yes (only for firmware upload; not to provision firmware)
Restore Default Settings	Yes
Initial Config	No
Stage Template	No
Initialize Touchscreen	No
Show Calibration	No
Setup NTP	No

Global Settings Commands for the SV-4K and DMP-2K Media Player

Table 6 Management Dashboard Global Settings Commands

Command Name	Supported on SV-4K and DMP-2K
Global DMP Settings	No

Monitoring Commands for the SV-4K and DMP-2K Media Player

Table 7 Management Dashboard Monitoring Commands

Command Name	Supported on SV-4K and DMP-2K
Get Status	Yes
Ping	Yes
Enable Monitoring	No
Change Monitoring Thresholds	No
Disable Monitoring	No

Switch Commands for the SV-4K and DMP-2K Media Player

Table 8 Management Dashboard Switch Commands

Command Name	Supported on SV-4K and DMP-2K
Power Cycle DMP	Yes
Power On DMP	Yes

Command Name	Supported on SV-4K and DMP-2K
Power Off DMP	Yes
Run Cabling Test using TDR	Yes
Show TDR Test Results	Yes
Ping Test	Yes
Clear ARP Cache	Yes

TV Commands for the SV-4K and DMP-2K Media Player

Table 9 Management Dashboard TV Commands

Command Name	Supported on SV-4K and DMP-2K
TV On	Yes
TV Off	Yes
Set Display Input	Yes
Set Display Banner	Yes
Set Closed Caption	Yes
Set Volume	Yes
Set Video Channel	Yes
Show Diagnostics	Yes
Hide Diagnostics	Yes
Show Diagnostics with Message	Yes
Show Custom Swf	No
Hide Custom Swf	No
Display PIN	Yes
Hide Channel Guide	Yes
Disable User Control	No
Enable User Control	No

Performing a Regular Reboot of the SV-4K and DMP-2K Media Players

The best practice for maintaining normal operation of the SV-4K and DMP-2K media players is to perform a **daily** reboot of the devices.

Note: The Cisco Vision Director reboot task applies globally to all media player devices.

For information about how to configure the Reboot DMP system task, see the [How to Configure the Reboot DMP System Task](#) task note.

Clearing the Storage on the SV-4K and DMP-2K Media Player

The SV-4K and DMP-2K devices have different sizes of solid-state storage:

- The SV-4K provides a minimum of 120 GB of solid-state storage, with 100 GB available for content.
- The DMP-2K provides 64 GB of solid-state storage.

If you begin to run out of storage or otherwise need to recover the SSD, you can clear the storage on the media player.

To find information about available storage, select an SV-4K and DMP-2K device in the Management Dashboard device list. Then, go to **Settings > Storage** in the device details area of the dashboard.

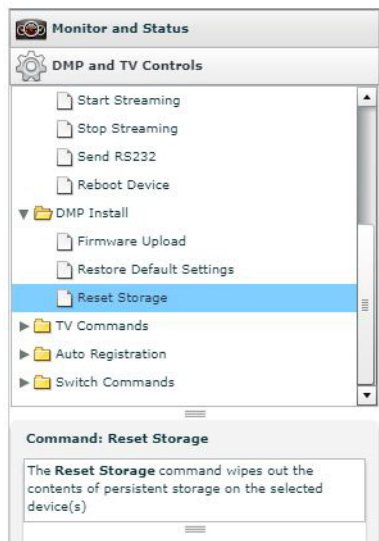
TIP: The HTML runtime must be running on the SV-4K and DMP-2K media player to use this task.

Beginning in Release 4.1, you also can find information about available storage if you view device details from thumbnail view in Device Management.

To clear the storage on the SV-4K and DMP-2K media player:

1. Go to the **Management Dashboard**.
2. Select the SV-4K and DMP-2K devices that you want to clear.
3. Go to **DMP and TV Controls > DMP Install > Reset Storage** (Figure 7 on page 217).

Figure 7 Reset Storage Command



6. Click **Play**.
7. The contents of the SSD storage is removed (including the Cisco Vision Director runtime software and script contents) on the SV-4K and DMP-2K devices. The devices will not automatically reboot after this command.
8. Select **Reboot Device**.
9. Click **Play**. The selected SV-4K and DMP-2K devices reboot and reprovision firmware and settings.

Clearing Registries on the SV-4K and DMP-2K Media Player by Restoring Factory Defaults

If you need to clear the registry settings on the SV-4K and DMP-2K and re-provision the device, use the **Restore Default Settings** command.

To clear the registries on the media players:

1. Go to the **Management Dashboard**.
2. Select the SV-4K and DMP-2K devices that you want to clear.

Replacing a Failed Media Player While an Event Script is Running

3. Go to **DMP and TV Controls > DMP Install > Restore Default Settings**.

4. Click **Play**.

Any persistent device settings on the SV-4K and DMP-2Ks are erased and the box will be in factory default state. The SV-4K and DMP-2K automatically reboots and reprovisions its firmware and settings.

Recovering SV-4K Operation After Server Power Loss

User Role: Installer (Administrator)

If the Cisco Vision Director server should lose power while the SV-4K devices remain powered, you will need to recover the SV-4K devices after power is restored to the server.

To recover SV-4K operation after server power loss:

1. Restore power to the Cisco Vision Director server.
2. Reboot the SV-4K devices.

IMPORTANT: If for some reason you needed to restore the SV-4K operation to a new Cisco Vision Director server (not a failover operation), then change the DHCP server option 43, reconfigure the new server for auto-provisioning of the SV-4K, and reboot the SV-4K devices similar to a new deployment of the SV-4K devices. For more information, see the [Cisco Vision SV-4K Media Player Deployment Guide](#).

Replacing a Failed Media Player While an Event Script is Running

This task describes the steps to replace a failed media player with a new device that continues to follow the same script.

After replacement, the new media player should:

- Belong to the same groups and zones.
- Respond to the zone/group state actions.
- Display the same content as the media player it replaces.

To replace a failed media player while an event script is running:

1. Unplug the failed device and replace it with a new device.
2. Wait until auto-registration and provisioning completes, and the new device appears in the Management Dashboard.
3. From **Control Panel > Setup > Zones & Groups**, un-map the failed device from its Location, and map the new device to this Location.
4. From **Control Panel > Control**, manually stage content to the new device.
5. (For SV-4K only) From the **Management Dashboard**, go to:
 - a. **DMP and TV Controls > DMP Commands**
 - b. Run the **Restart Runtime** command for the new SV-4K device only.
6. Verify that the new device is showing the expected content.
7. Delete the failed device from Cisco Vision Director. This device will be named in the format "Unassigned-xx-xx-xx-xx-xx-xx", where xx-xx-xx-xx-xx-xx is the MAC address.

Troubleshooting the SV-4K Media Player

This section includes the following topics:

- Before You Begin Troubleshooting the SV-4K and DMP-2K, page 219
- Troubleshooting PTP Operation for the SV-4K and DMP-2K Media Player, page 219
- Troubleshooting SV-4K and DMP-2K Hardware Operation, page 221
- Troubleshooting SV-4K and DMP-2K TV and Video Display Problems, page 222

Before You Begin Troubleshooting the SV-4K and DMP-2K

Before you begin troubleshooting the SV-4K and DMP-2K, follow the information in these topics:

- RMA Process for the SV-4K and DMP-2K, page 219
- SV-4K and DMP-2K Diagnostic URL, page 219

RMA Process for the SV-4K and DMP-2K

The Return Materials Authorization (RMA) process is covered by the Cisco Solution Support Service for Cisco Vision.

Before you open a Cisco Solution Support case for the SV-4K and DMP-2K:

1. Locate your symptom in the SV-4K and DMP-2K troubleshooting topics and begin to isolate the problem by following the suggested troubleshooting steps.
2. If you cannot resolve the problem with any of the recommended troubleshooting steps, open a Cisco Solution Support case to further troubleshoot and coordinate the return process with the vendor.

SV-4K and DMP-2K Diagnostic URL

Some of the troubleshooting steps for the SV-4K and DMP-2K recommend that you open a browser and navigate directly to the device using the following URL to further diagnose a problem:

http://dmp-ip-address

The diagnostic URL requires a password for use. The password is set in the "defaultDmpAdminPwd" registry key in the Management Dashboard. The default username is "admin."

Be sure to reset the password from the default value as a security best practice.

CAUTION: Do not manually power off the SV-4K and DMP-2K after changing the password. To change the SV-4K and DMP-2K password, you must use the Power Cycle DMP switch command from the Management Dashboard to restart the device properly. To use this command, be sure that you have imported the switch data first.

Note: This password is also used for the Diagnostic Web Server (DWS).

Troubleshooting PTP Operation for the SV-4K and DMP-2K Media Player

This section identifies some of the symptoms related to problems with PTP operation:

- Symptom: Local PNGs are not synchronized across SV-4K and DMP-2K devices, page 220
- Symptom: Playlists do not advance to the next content item on the SV-4K or DMP-2K, page 220

Symptom: Local PNGs are not synchronized across SV-4K and DMP-2K devices

Troubleshooting steps:

1. Verify the PTP configuration on your SV-4K and DMP-2K devices: Go to **Management Dashboard > Dynamic Signage Director Configuration > Global DMP Settings > SV-DMP Common Settings**.

Verify that the PTP domain and PTP master candidates property configuration is correct for your network.

2. Open your browser and navigate to one of the devices:

http://sv4k-ip-address/ptp.html

3. Enter the username and password.
4. Look for the message "PTP is not enabled."

This message might mean that the device was not rebooted after changes to the Management Dashboard settings.

5. If the message appears, reboot the SV-4K or DMP-2K device.

Symptom: Playlists do not advance to the next content item on the SV-4K or DMP-2K

If the current PTP master becomes unreachable (shuts down, or becomes unreachable on the network), the PTP members will be unable to update their clocks and this condition will occur.

Troubleshooting steps:

1. Verify the PTP configuration on your SV-4K or DMP-2K devices: Go to **Management Dashboard > Dynamic Signage Director Configuration > Global DMP Settings > SV-DMP Common Settings**

2. Verify that the PTP domain and PTP master candidates property configuration is correct for your network.

3. Open your browser and navigate to one of the devices:

http://sv4k-ip-address/ptp.html

4. Enter the username and password.
5. Identify the PTP master by finding the unit that has an "offsetFromMaster" value of 0.0.

Figure 8 Identify the PTP Master

PTP clock status

```
Status from local PTP:
sending: GET CURRENT_DATA_SET
90ac3f.ffff.03964a-0 seq 0 RESPONSE MANAGMENT CURRENT_DATA_SET
  stepsRemoved 0
  offsetFromMaster 0.0
  meanPathDelay 0.0

Status from remote PTP devices:
sending: GET CURRENT_DATA_SET
90ac3f.ffff.039637-1 seq 0 RESPONSE MANAGMENT CURRENT_DATA_SET
  stepsRemoved 1
  offsetFromMaster 2997.0
  meanPathDelay 15377.0
```

6. Ping the master PTP device.

Troubleshooting the SV-4K Media Player

7. If the master is not reachable and you have configured alternate masters but they are not reported as master after waiting for a minute, reboot one of the reachable PTP master candidates.

Note: Identifying the alternate master for this step can more easily be done if you are explicitly identifying the IP address of alternate masters, and not using the "*" wildcard to specify possible election of any SV-4K device on the network.

8. If a device shows that it has not synchronized, reboot the device to force synchronization.

Troubleshooting SV-4K and DMP-2K Hardware Operation

This section identifies some of the symptoms related to problems with the SV-4K and DMP-2K media player hardware:

- [Symptom: " Please Insert Card" message on SV-4K or DMP-2K startup screen, page 221](#)
- [Symptom: Pwr and Eth LEDs are not lit and no signs of activity on the SV-4K or DMP-2K, page 221](#)
- [Symptom: SV-4K or DMP-2K Err or Err/Upd LEDs blinking, page 222](#)
- [Symptom: SV-4K and DMP-2K rebooting automatically after startup, page 222](#)

Symptom: " Please Insert Card" message on SV-4K or DMP-2K startup screen

Troubleshooting steps:

1. Verify that an IP address is assigned to the device.
2. Verify proper DHCP Option 43 configuration.
3. Verify that the Cisco Vision Director server is running and reachable.
4. Contact Cisco Technical Support to do further troubleshooting and proceed with RMA process.

Symptom: Pwr and Eth LEDs are not lit and no signs of activity on the SV-4K or DMP-2K

Troubleshooting steps:

1. Verify any visible damage to the Ethernet port on the SV-4K or DMP-2K device.
2. If there is not any visible port damage on the SV-4K or DMP-2K:
 - a. Connect a 12V 5A power supply to the media player to confirm startup and normal operation.
 - b. Replace the Ethernet cable.
 - c. Connect the media player to a known-working switch port for another SV-4K or DMP-2K device.
 - d. Verify the POE+ settings on the switch.

TIP: If you have imported the switch settings to Cisco Vision Director, you can view the POE+ settings.

From the **Management Dashboard**, go to **Tools > Settings > Switch Management > View Switch Details**.

Power normally displays " 29.5" for the SV-4K and DMP-2K after LLDP negotiation with the switch.

- e. If none of these steps locate the problem, contact Cisco Technical Support to proceed with the RMA process.

Symptom: SV-4K or DMP-2K Err or Err/Upd LEDs blinking

Troubleshooting steps:

1. Refer to the LED documentation.
2. Troubleshoot according to the description of the problem.

Symptom: SV-4K and DMP-2K rebooting automatically after startup

Troubleshooting steps:

1. Verify whether multiple devices are doing an auto-reboot.
2. If multiple devices are automatically rebooting at startup:
 - a. Verify that the devices are obtaining an IP address. If the devices are not getting an IP address ("Unable to get IP address" message on the TV display), verify communication to the DHCP server.
 - b. Verify proper DHCP Option 43 configuration.
3. If the SV-4K or DMP-2K stays at the loading screen with the progress bar, verify communication with the Cisco Vision Director server.
4. (Advanced) Verify that an HTTP request comes in to the /var/log/httpd/access_log (use the System State Report [SSR]).

Look for a message like the following:

```
10.194.169.242 - - [13/Oct/2014:13:10:05 -0700] "GET /CiscoVision/dmp_v4/scripts/boot.brs HTTP/1.1" 200
89403 "-" "-"
```

Troubleshooting SV-4K and DMP-2K TV and Video Display Problems

This section identifies some of the symptoms related to problems with the SV-4K and DMP-2K displays:

- Symptom: Black screen on the SV-4K and DMP-2K TV display/no multicast video stream, page 222
- Symptom: No local control when external volume strategy configured, page 223

Symptom: Black screen on the SV-4K and DMP-2K TV display/no multicast video stream

Troubleshooting steps:

1. Verify if multiple TV displays are showing a black screen for the same multicast video stream.
2. If multiple TV displays are showing a black screen for the same multicast stream:
 - a. Verify the media player LEDs.
 - b. If the LEDs are in normal state, verify that the Cisco Vision Director server has power and is reachable.
 - c. If all TV displays are the same and/or new model, test with a different, known-working TV display model.
 - d. (Advanced) Test with laptop connected to the same switch port/interface as the device with a problem, and see if the problematic video stream can be displayed using the open source VLC player.
 - e. Test a different multicast video stream.
 - f. Test with local video content. If local video works, troubleshoot video headend and/or other network problems.



Managing Backups in Cisco Vision Director

First Published: 2017-11-21

This module includes the following topics:

- [Information About Backups, page 225](#)
- [How to Manage Backups, page 226](#)
- [How to Restore From Backup, page 231](#)

Information About Backups

This section includes the following topics:

- [Backup Environment, page 225](#)
- [What System Data is Backed Up, page 225](#)
- [When to Run a Backup, page 226](#)

Backup Environment

While you can run a backup for a network environment where there is only a single Cisco Vision Director server, the recommended environment that is described in this document is a redundant environment for either Platform 2 or Platform 3 servers or a virtualized environment. In a redundant environment, you are running Cisco Vision Director on a primary server, with a secondary server connected to the same subnet where the backup data from the primary server is saved.

The backup process can be scheduled and also run manually. When a backup is completed, the CMS is automatically restarted.

What System Data is Backed Up

There are several areas of Cisco Vision Director that need to be backed up. The backup process backs up the following areas of the Cisco Vision Director server:

- Cisco Vision Director Content Management System (CMS)
- Cisco Vision Director database
- Cisco Vision Director system configuration files
- Content Integration data
- Dynamic Menu Board data (including GAR files)

CAUTION: The Proof of Play raw data in the `/var/sv/pofp/rawdirectory` is *not* backed up.

- Proof of play report data in the `/var/sv/pofp/data` directory

When to Run a Backup

You should run a manual backup whenever you perform any of the following tasks:

- Add/modify the Channel Guide
- Content update (menu board , L-Wrapper) JPG, SWF, and so on
- Add/modify zones and groups
- Add /modify DMP and phone
- Add /modify Luxury Suite
- Update Management Dashboard registry
- Update Control Panel

CAUTION:

1. Stop any running script before starting a manual backup.
2. Do not start a game/event script during a backup.
3. Do not operate the Cisco Vision Control Panel / Management Dashboard until the backup is complete.

How to Manage Backups

This section includes the following topics:

- [Prerequisites for Running Backups, page 226](#)
- [Best Practices for Managing Backups, page 226](#)
- [Scheduling a Regular Backup, page 227](#)
- [Starting a Backup Manually for Immediate Execution, page 227](#)
- [Verifying Backup Completion, page 228](#)
- [Modifying the Number of Backup Files to Retain, page 231](#)

Prerequisites for Running Backups

Note: Configure the primary and secondary servers for backup operation as part of the initial server setup. For more information about configuring the servers for backup, see [Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers, page 63](#) in the Cisco Vision Director Server Administration Guide.

Before you can run backups, meet the following conditions:

- The backup account has been enabled on the secondary server
- The primary server has been set up for automatic backup and restore

Best Practices for Managing Backups

- Perform a manual system backup prior to starting the game script.
- Back up all components (highly recommended).
- Stop the active game/event script from the Management Dashboard before starting the manual backup.

Information About Backups

- In Cisco StadiumVision Director Release 4.1 and later releases, the backup task can run even while an event script is running. As part of this change, the database is no longer optimized or repaired during the backup process—a new TUI option is added to run database maintenance manually if needed.
- Do not operate the Cisco Vision Director Control Panel or Management Dashboard until the backup is complete.

Scheduling a Regular Backup

User Role: Administrator

After you have configured the servers to support the backup process, schedule backups using the Management Dashboard in the Cisco Vision Director software.

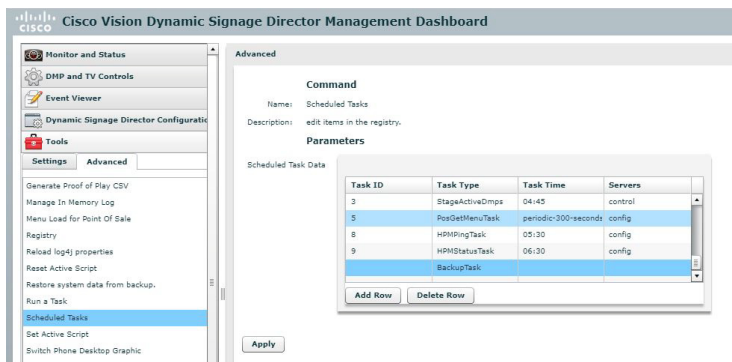
Note: We recommend that you schedule backups while the Cisco Vision Director servers are not actively running scripts or performing other event processing.

To configure a backup to run on a regular schedule:

1. From the **Management Dashboard**, go to **Tools > Advanced > Scheduled Tasks**.
2. Click **Add Row** and scroll to the new blank line.
3. Click in the Task Type column and type **BackupTask** (Figure 1 on page 227).

Note: Type the name of the task exactly as shown with upper and lowercase characters.

Figure 1 Scheduling a Regular Backup Task



4. Click in the Task Time column and specify the time (in 24:00 format) when you want the backup to run.
5. Click in the Servers column and type **config**.
6. Click **Apply**.

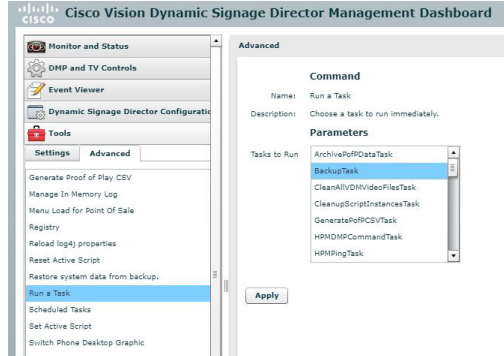
Starting a Backup Manually for Immediate Execution

User Role: Administrator

If you want to start a backup immediately, run a backup process manually.

To start a backup manually for immediate execution:

1. From the **Management Dashboard**, go to **Tools > Advanced > Run a Task**
2. In the Tasks to Run box, select the **BackupTask** (Figure 2 on page 228).

Figure 2 Running a Scheduled Backup Task Manually**3. Click **Apply**.**

The backup begins immediately. When completed, the CMS is automatically restarted.

IMPORTANT: The “success” message that appears means the backup task has started. It does NOT mean the backup task has completed.

Verifying Backup Completion

User Role: Administrator

To verify backup completion, confirm that a backup file exists and that no errors appear in the log file.

Verifying That a Backup File Exists

IMPORTANT: Verifying the existence of a backup file only tells you that a backup file was attempted but not necessarily if there were any errors.

To verify that a backup file exists:

1. From the **Management Dashboard**, go to **Tools > Advanced > Restore system data from backup**
2. Verify that backup files with dates and times appear.

Finding Backup Errors in the Log File

IMPORTANT: Be aware that the messages “Starting backup” and “Backup completed” will always appear in the log, regardless of success.

You can access log files in the following ways:

- TextUtility Interface (TUI)
- System State Report from the Cisco Vision Director main menu.
- By running `grep -i backup sv_dev_debug.log` (requires root access) .[Figure 3 on page 230](#) shows an example of log output for a successful backup without errors.

To find backup errors in the log file:

1. Open the `/opt/sv/servers/config/logs/sv_dev_debug.log` file.
2. In the `sv_dev_debug.log` file, find messages that include the string “com.cisco.sv.backup.”

These are the backup process messages.

3. Find the “Starting backup” message.

Information About Backups

4. After the “Starting backup” message (but before the “Backup completed” message), look for a “com.cisco.sv.backup” message that also includes “ERROR” in the string.

If you find this error, the backup did not complete successfully.

Figure 3 Successful Backup Log Output Example From Grep

```
grep -i backup sv_dev_debug.log
2025-01-23 14:18:41.254 [TP Prometheus] 33024@ admin DEBU@ com.cisco.vd.backupmgr: [api parameters: Tasks to Run: BackupTask
2025-01-23 14:18:41.256 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupTask - Initiating backup task.
2025-01-23 14:18:41.256 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Starting backup.
2025-01-23 14:18:41.274 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - Running hook /opt/vs/scripts/backup_sv/prebackup.sh
2025-01-23 14:18:42.457 [DefaultQuartzScheduler_Worker-3] DEBUG process.ProcessBuilder - Response starts Post Backup script started.
Post Backup script finished.
2025-01-23 14:18:42.457 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - /opt/vs/scripts/backup_sv/prebackup.sh response | Post Backup script started.
Post Backup script finished.
2025-01-23 14:18:42.456 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupPolicyDataCallable - Entering PeP Data File backup process
2025-01-23 14:18:42.456 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user menu in database sv_menu
2025-01-23 14:18:42.460 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - awaiting executor termination
2025-01-23 14:18:42.463 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - Starting CM process
2025-01-23 14:18:42.461 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user apps in database icppn_1
2025-01-23 14:18:42.466 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=icppn_1 destination /var/vs/BACKUP/mysql/icppn_1-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:42.466 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=sv_menu destination /var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:47.533 [TP Prometheus] 33024@ admin INFO com.cisco.vd.backupmgr.BackupMgrMtdB - GzipTarUtils tar -czf /var/vs/BACKUP/Content/20250123141842-0800.tar.gz CONTENT
2025-01-23 14:18:48.629 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:48.629 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of sv_menu result | return code : 0
2025-01-23 14:18:48.631 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning file backup process for icppn
2025-01-23 14:18:48.631 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - icppn backup skipping non-readable file /directory /opt/vs/users/control/icppn/upgrade
2025-01-23 14:18:48.631 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - icppn backup skipping non-readable file /directory /opt/vs/users/control/icppn/upgrade
2025-01-23 14:18:48.631 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - icppn backup skipping non-readable file /directory /etc/hosts
2025-01-23 14:18:49.687 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:49.687 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:49.687 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of icppn_1 result | return code : 0
2025-01-23 14:18:49.689 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning file backup process for cm
2025-01-23 14:18:51.975 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - Response from backup call is <contentID1> <contentID2> <zipFilename>/var/vs/BACKUP/Content/20250123141842-0800.tar.gz/zipFilename <contentID1> <contentID2> <contentID3>
2025-01-23 14:18:51.975 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - Finished content backup process, status=200 zip name /var/vs/BACKUP/Content/20250123141842-0800.tar.gz
2025-01-23 14:18:51.976 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user menu in database sv_menu
2025-01-23 14:18:51.980 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=sv_menu destination /var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:52.053 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:52.053 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:52.054 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupPolicyDataCallable - Finished PeP Data backup process, result code=0 response |
2025-01-23 14:18:52.055 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user apps in database icppn_1
2025-01-23 14:18:52.055 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=icppn_1 destination /var/vs/BACKUP/mysql/icppn_1-schedule-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:52.492 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:52.492 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:52.492 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of icppn_1 result | return code : 0
2025-01-23 14:18:52.494 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user apps in database icppn_policy
2025-01-23 14:18:52.496 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=icppn_policy destination /var/vs/BACKUP/mysql/icppn_policy-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:53.537 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:53.537 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:53.537 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of icppn_policy result | return code : 0
2025-01-23 14:18:53.538 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Beginning DB backup for user cms in database cms
2025-01-23 14:18:53.540 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - mysql backup process, db=cms destination /var/vs/BACKUP/mysql/cms-4.0.0.356-20250123141842-0800.sql.gz
2025-01-23 14:18:54.362 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:54.362 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:54.362 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of sv_menu result | return code : 0
2025-01-23 14:18:54.365 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts
2025-01-23 14:18:54.365 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:54.365 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Mysql dump of cms result | return code : 0
2025-01-23 14:18:54.366 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts /etc/passwd/entry
2025-01-23 14:18:54.366 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:54.366 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - Finished unix gpg process for gpg to /var/vs/BACKUP/unix-4.0.0.356-20250123141842-0800.tgz. Response |
/var/vs/unix/chainbackups.sh
2025-01-23 14:18:58.000 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts /opt/vs/entry/images/
2025-01-23 14:18:58.001 [BackupManager-ThreadPool] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response code 0
2025-01-23 14:18:58.001 [BackupManager-ThreadPool] INFO com.cisco.vd.backupmgr.BackupMgrMtdB - Finished unix gpg process for cms to /var/vs/BACKUP/cms-4.0.0.356-20250123141842-0800.tgz. Response |
2025-01-23 14:18:58.002 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupMgrMtdB - awaiting executor termination completed. [gpg=/var/vs/BACKUP/pof/pof-4.0.0.356-20250123141842-0800.tgz, mv=/var/vs/BACKUP/mv
20250123141842-0800.sql.gz, db=/var/vs/BACKUP/mysql/icppn_1-4.0.0.356-20250123141842-0800.sql.gz, sv=/var/vs/BACKUP/Content/20250123141842-0800.tar.gz, sv=/var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz, icppn=/var/vs/BACKUP/mysql/icppn_1-schedule-4.0.0.356-20250123141842-0800.sql.gz, icppn_policy=/var/vs/BACKUP/mysql/icppn_policy-4.0.0.356-20250123141842-0800.sql.gz, cms=/var/vs/BACKUP/mysql/cms-4.0.0.356-20250123141842-0800.sql.gz]
2025-01-23 14:18:58.002 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - Running hook /opt/vs/scripts/backup_sv/postbackup.sh
2025-01-23 14:18:59.050 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts Post Backup script started.
Post Backup script finished.
2025-01-23 14:18:59.050 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - /opt/vs/scripts/backup_sv/postbackup.sh response | Post Backup script started.
Post Backup script finished.
2025-01-23 14:18:59.050 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Backup results are [gpg=/var/vs/BACKUP/pof/pof-4.0.0.356-20250123141842-0800.tgz, mv=/var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz, db=/var/vs/BACKUP/mysql/icppn_1-4.0.0.356-20250123141842-0800.sql.gz, sv=/var/vs/BACKUP/Content/20250123141842-0800.tar.gz, sv=/var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz, icppn=/var/vs/BACKUP/mysql/icppn_1-schedule-4.0.0.356-20250123141842-0800.sql.gz, icppn_policy=/var/vs/BACKUP/mysql/icppn_policy-4.0.0.356-20250123141842-0800.sql.gz, cms=/var/vs/BACKUP/mysql/cms-4.0.0.356-20250123141842-0800.tgz, mv=/var/vs/BACKUP/mv20250123141842-0800.sql.gz, mv=/var/vs/BACKUP/mv-4.0.0.356-20250123141842-0800.tgz]
2025-01-23 14:18:59.050 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - Tar command is /bin/tar -czf /var/vs/BACKUP/Content/20250123141842-0800.tar.gz cms 4.0.0.356-20250123141842-0800.sql.gz icppn_policy-4.0.0.356-20250123141842-0800.sql.gz icppn_1-schedule-4.0.0.356-20250123141842-0800.sql.gz mv-4.0.0.356-20250123141842-0800.tgz
2025-01-23 14:18:59.050 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Response started file response
2025-01-23 14:18:59.053 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts /bin/32bit/72768995/548508028 /var/vs/BACKUP/Content/20250123141842-0800.tar
2025-01-23 14:18:59.053 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - getMD5sum computed checksum of /bin/32bit/72768995/548508028 /var/vs/BACKUP/Content/20250123141842-0800.tar
2025-01-23 14:18:59.054 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Writing checksum file to /var/vs/BACKUP/Content/20250123141842-0800.tgz/md5sum-message-3c26e33fa72768995548508028 / 4.0.0.356-20250123141842-0800.tar
2025-01-23 14:18:59.041 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Starting copy to secondary process to backup@10.124.170.243
2025-01-23 14:18:58.676 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.ProcessMocker - Response starts gpg of backup
gpg -czf /var/vs/BACKUP/Content/20250123141842-0800.tar &&
Uploading /var/vs/BACKUP/Content/20250123141842-0800.tar to /backups/vv-4.0.0.356-20250123141842-0800.tar
gpg -czf /var/vs/BACKUP/Content/20250123141842-0800.tar
2025-01-23 14:18:58.677 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - CopySecondary response | gpg of backup
gpg -czf /var/vs/BACKUP/Content/20250123141842-0800.tar &&
Uploading /var/vs/BACKUP/Content/20250123141842-0800.tar to /backups/vv-4.0.0.356-20250123141842-0800.tar
gpg -czf /var/vs/BACKUP/Content/20250123141842-0800.tar
Uploading /var/vs/BACKUP/Content/20250123141842-0800.tgz to /backups/vv-4.0.0.356-20250123141842-0800.tgzsum
2025-01-23 14:18:58.985 [DefaultQuartzScheduler_Worker-3] DEBUG com.cisco.vd.backupmgr.BackupManager - Sent event ["gpg","sv","eventSource":"",
"eventInfo":{"gpg","sv"},"BACKUP","eventSource":"NOTIFICATION","taskName":"com.cisco.vd.backupmgr.backup","eventTime":"23-Jan-2025 14:18:58","eventType":"SVT","fields":{"path":"/var/vs/BACKUP/Content/20250123141842-0800.tgz","sv":"/var/vs/BACKUP/Content/20250123141842-0800.sql.gz","db":"/var/vs/BACKUP/mysql/icppn_1-4.0.0.356-20250123141842-0800.sql.gz","sv_menu":"/var/vs/BACKUP/mysql/sv_menu-4.0.0.356-20250123141842-0800.sql.gz","icppn":"/var/vs/BACKUP/mysql/icppn_1-schedule-4.0.0.356-20250123141842-0800.sql.gz","icppn_policy":"/var/vs/BACKUP/mysql/icppn_policy-4.0.0.356-20250123141842-0800.sql.gz","cms":"/var/vs/BACKUP/mysql/cms-4.0.0.356-20250123141842-0800.tgz","mv":"/var/vs/BACKUP/mv20250123141842-0800.sql.gz"}]
2025-01-23 14:18:58.985 [DefaultQuartzScheduler_Worker-3] INFO com.cisco.vd.backupmgr.BackupManager - Backup completed.
```

Modifying the Number of Backup Files to Retain

User Role: Installer (Administrator)

To reduce the amount of disk storage required in your system, the default backup retention policy is to keep one backup file. This retention policy can be modified to retain 2, 5, 7, or 10 backup files.

For more information, see the [Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers, page 63](#) module in the [Cisco Vision Director Server Administration Guide](#).

How to Restore From Backup

Once the primary and secondary servers have been configured for automatic backup and restore, the Cisco Vision Director software automatically copies backup files between the primary and secondary servers.

When the restore process starts, the MD5 checksum of the file is verified. If for some reason you need to manually copy files between the servers, be sure that you copy both the .tar and .chksum files because the restore process automatically uses both files to verify the MD5 signature.

Note: If you need to failover to the secondary server and do a restore, follow the procedures in the [Configuring Failover Between Redundant Cisco Vision Dynamic Signage Director Servers, page 75](#) in the Cisco Vision Director Server Administration Guide.

This section includes the following topics:

- [Starting a Restore Manually for Immediate Execution, page 231](#)
- [Restarting Cisco Vision Director Software After a Restore, page 232](#) (Required)

Starting a Restore Manually for Immediate Execution

User Role: Administrator

As with backups, you can schedule the restore process or run it manually. When the manual restore screen is displayed, it lists backups from both the backup and restore directories, concatenated together. This allows you to run a manual restore on either the primary or the secondary server.

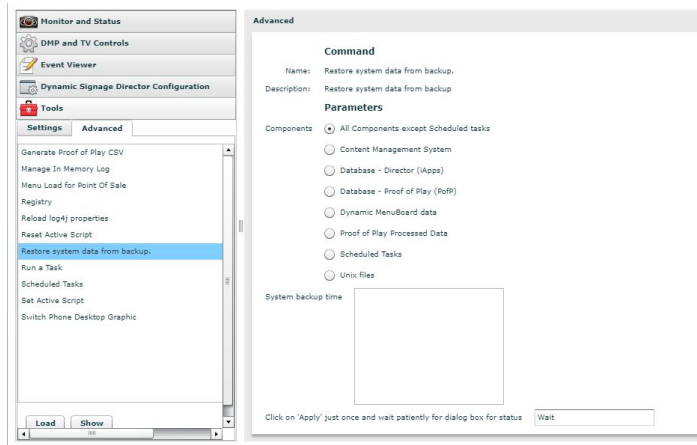
CAUTION: You cannot run a restore while an event script is running. Also, if your venue was running an event script when the backup took place, then those scripts will be running after the restore.

An automated restore always uses the most recent backup file in the restore directory.

To start a restore manually for immediate execution:

1. From the Management Dashboard, go to Tools > Advanced > Restore system data from backup
2. For Components, select **All components except Scheduled tasks** ([Figure 4 on page 232](#)).

Figure 4 Running a Restore Task Manually



3. (Optional) If you do not want to restore the latest backup (the default), then in the "System backup time" box, select the date and time of the backup file that you want to restore instead.
4. Click **Apply**. The restore begins immediately.

Note: If you need to also restore the scheduled tasks, you can rerun the Restore system data from backup and for Components, select Scheduled Tasks.

What to Do Next After Restoring

After the restore completes, be sure to restart the Cisco Vision Director software. For more information, see [Restarting Cisco Vision Director Software After a Restore, page 232](#).

Restarting Cisco Vision Director Software After a Restore

User Role: Installer (Administrator)

After you perform any restore on a Cisco Vision Director server, you must restart the Cisco Vision Director software to resume normal operation of the services.

For more information about using the TUI, see the [Cisco Vision Dynamic Signage Director Server Text Utility Interface, page 89](#) module of the [Cisco Vision Director Server Administration Guide](#).

To restart the Cisco Vision Director software:

1. Log into the TUI.
2. Go to **Cisco Vision Server Administration > Restart Dynamic Signage Director software**.



Glossary of Terms

3

3-region L-wrapper template

Fixed screen template provided by Cisco Vision Director to support the display of one video region and two non-video regions. The dimensions of the 3-region Lwrapper template cannot be customized.

A

album

A collection of one or more files of a common content type in an SSC user workspace.

asset

Any digital content that can be added to a playlist or script such as still images, videos, and external URL addresses to aid in creating channels, templates and widgets for your script design.

Asset Library

New feature application providing management of assets (content) in Cisco Vision Director.

B

Batch target

A special target that lets you build and/or publish multiple other targets in a single group (or "batch"). You can schedule batches to run at any time.

Block snippet

A snippet that is created out of one or more paragraphs.

C

category

Label that you can assign to an SSC album to abstract its contents and identify its purpose for selection in a script later by an administrator or content manager, without having to know specific album names.

CEC

Consumer Electronics Control—A feature of HDMI designed to allow users to command and control devices connected through HDMI by using only one remote control.

Cisco store

Collection of manually entered retail items that are not part of a POS system for use on menu boards in the DMB application. Cisco stores consist of family groups, major groups, and items.

Condition tag

A marker that you can apply to different areas of your content so that some sections show up in some of your outputs but not in others.

content

Digital media that is presented on a TV display using a media player in Cisco Vision Director.

Cross-reference

A navigation link that lets you connect text in one topic to another topic (or a bookmark within a topic). Cross-references let you create "automated" links that are based on commands you provide. This allows you to keep links consistent and change them in just one place by using the "xref" style.

D**display specification**

Set of TV display criteria and commands that are configured to ensure proper communication between the media player and the TV in the Cisco Vision Director Control Panel.

Drop-down text

A feature that lets you "scrunch up" content in your topic. The content is expanded (and therefore displayed) when the end user clicks a link.

E**event script**

Sets where and when the advertisements, video, and graphics will be displayed in the stadium and on a TV display. The event script is typically organized by a timeline of moments in a game or event, called event states, such as pre-game, first quarter, halftime, and game end.

event state

A point in an event script when content changes. Event states generally correspond to a timeline of moments in a game or event (such as pre-game, in-game, post-game, and so on) and define specific actions for a group and zone to perform in sequence during an event. There are two basic types of event states: sequential and adhoc.

F**family group**

Entity in a Cisco store in the DMB application that corresponds to the top level options on the menu such as Food, Beverages, Merchandise.

Flash content

Low-motion graphics that are used to enhance advertisements, welcome messages, menu boards, or directional signage for crowds. This type of content is stored locally on the the Cisco DMP 4310G.

Flash template

An Adobe Shockwave Flash (SWF) file that runs only on Cisco DMP 4310Gs as part of the Cisco Vision Director software. It is used for framing and displaying the ad graphics and video on the TV. The canvas size of the template is 1920x1080.

Footnote

A comment that is used to explain a specific area of the text. Both the area in the text and the comment contain a number or symbol that ties the two together. A footnote (or endnote) comment can be placed at the end of a page, document, chapter, section, or book.

full screen templates

Standard templates provided in Cisco Vision Director to display either full-screen video or full-screen graphics in a fixed 1920x1080 region. The dimensions of the full screen templates cannot be customized.

G**gadget**

An Adobe Shockwave Flash (SWF) file in the Cisco Vision Director software that provides communication between an application portlet (such as for the DMB application) and the DMP 4310G, and controls what is displayed on the TV through the DMP.

GAR file

A simple Java jar archive file that contains the XML, flash, and image files, as well as other information that Cisco StadiumVision Director server needs to deploy a menu board using the DMB application and make it available on the Cisco DMP 4310G.

group

Subset of a zone that defines a collection of devices (DMPs) that all display the same content, using the same template. Groups consist of a set of locations in the hierarchy of zones, groups, and locations.

L**location**

Subset of a group that defines a specific place in the venue where devices (DMPs) reside. Locations are the most granular level in the hierarchy of zones, groups, and locations. A location consists of the physical location and display type, as well as the DMP associated with the location and display.

M**Main Menu**

Landing page screen (after log-in) in Cisco Vision Dynamic Signage Director 6.0 release. This screen is dependent on user role privileges.

P**playlist**

A series of content items (static images, video, widgets) that are grouped together to display in sequential order (one-after-the-other) in a given region for a set duration and then repeat. Each playlist runs independently of other playlists, and multiple playlists can be run in any given event script.

POS store

A point-of-sale store is a collection of items that are configured through integration with a POS system in the DMB application, such as Micros or Quest, which determines the availability, content, and pricing of menu items for sale.

proxy DMP

A DMP with type “Location With Network” that can be set up as a proxy of another location in the venue so that you can view what is going to be displayed on a TV. This helps you to verify that the proper content is assigned for a particular group and location. It is only supported on the Cisco DMP 4310G.

R**RBAC**

Role-Based Access Control. Facility in the Cisco Vision Director software that determines which software functions are accessible by defined user roles in the system.

S**scaling**

Scaling refers to support of two things: 1) Stretching of the content. 2) Showing only a portion of the content per display in a multi-screen video wall.

screen template

Defines the video and non-video regions and layout of a DMP display. Screen templates are used to create various layouts for the presentation of different types of content. Screen templates are assigned to zones or groups and apply to all locations within them.

sequential state

A state that is associated with a period of time in an event script that can be controlled manually or by a timer.

Single-sourcing

"Single-sourcing" is a fancy term that means something very simple—to produce multiple outputs from one source.

Snippet

A pre-set chunk of content that you can use in your project over and over. Snippets are similar to variables, but snippets are used for longer chunks of content that you can format just as you would any other content in your topic. In snippets, you can also insert tables, pictures, and whatever else can be included in a normal topic.

Span

A tag that is used to group inline elements to format them with styles. A span tag doesn't perform any specific action; it simply holds the attributes (e.g., font size, color, font family) that you apply to inline content.

SSC

Self-Service Content. Feature that provides a way for business users from a variety of functional areas at a venue to independently upload custom content directly to the Cisco StadiumVision Director server and assign it to suites and devices for later presentation. SSC operates as an independent portal for content upload to Cisco StadiumVision Director.

staging content

Pre-positioning and uploading content that is active for a given event script to the media players.

staging Flash template

Uploading the Flash template application (a .swf file) that runs only on the Cisco DMP 4310G. This must be done whenever new Cisco DMPs are installed or when the Flash template application is modified, such as upon upgrade of the Cisco StadiumVision Director software.

static graphics

Images used for advertisements or informational messages that do not require motion. Static graphics are stored locally in Flash memory on the Cisco DMP 4310G.

stores

Collections of items that can be linked to appear on one or more menu boards in the DMB application. Stores can be POS-based or Cisco stores.

Style

An element that contain pre-set formatting properties. You can apply style classes to your content to change the way it looks. Using style classes instead of direct (or "inline") formatting helps you work faster, more efficiently, and with more consistency in your topics. If you need to make changes to the formatting in the future, you do not need to change the formatting in each topic (as you would with direct formatting). Instead, you only need to change the formatting properties for that style in the appropriate stylesheet.

suites

Physical or logical area in a venue.

T**Table**

A group of intersecting columns and rows that you can add to a topic for various purposes, such as comparing one thing with another or giving field descriptions for a software dialog.

tag

A label that can be applied to content items in the Cisco Vision Director Control Panel Content screen to ease organization and filtering of content items available in the CMS. A good practice can be to name tags according to groups and zones in the venue and teams.

Target

One "instance" of an output type. When you build your final output, you are essentially building one or more of the targets in your project.

template

See “Screen template” and “Flash template”.

Text snippet

A snippet that is created out of a portion of one paragraph.

ticker

Region that displays content received from an RSS feed (news, weather, or other dynamic information) over a customizable background. RSS feeds can come from external or internal sources.

Topic

A chunk of information about a particular subject. Topics are the most important part of a project. Everything else is contained within topics (e.g., hyperlinks, text, pictures) or points toward topics (e.g., table of contents, index, browse sequences). The very reason end users open a Help system is to find information, a little direction. They find that help within individual topics.

TV-based tile matrix

A video wall design that uses the native tile-matrix capabilities of the TV using RS-232 commands to control the display.

V**Variable**

A pre-set term or content that you can use in your project over and over. Variables are similar to snippets, but variables are used for brief, non-formatted pieces of content (such as the name of your company's product or your company's phone number). There are different kinds of variables: (1) those you create, (2) system variables, (3) Heading variables, or (4) Running HF variables for page headers and footers in printed output.

video wall

Group of multiple displays that show synchronized content and convey a single, much larger screen.

W**widget**

Content object for external data. A widget is created using the Widgets layout tool for the External Content Integration feature, which is used to map real-time statistics or content from external data sources for output display in Cisco Vision Director.

X**XML Editor**

The window in the Flare interface where you can add content and formatting to elements such as topics and snippets.

Z

zone

Physical area of a Cisco Vision venue. Zones help classify broader sections of a venue to associate content and contain groups and locations.

¹Venue Administrators can only edit the Display Specifications panel.

²Support users can set up TV control PINs and channel guides for suites.

³Venue Administrators can delete content associated (tagged) to the venues for which that venue admin is authorized. External content, channels, and Dynamic Menu Board (DMB) content items are global to all venues. Therefore, these global content items also can be deleted by the venue admin.

⁴Venue Administrators and Venue Operators have script control only, and only for venues authorized by the Administrator for that user.

⁵Help Desk users can view and monitor information on the Management Dashboard with read-only access. They also can run Get Status, Ping, Display IP, and Ping Test commands for DMPs in the Management Dashboard.

⁶Support users can run Get Status, Ping, Display IP, Ping Test, TV On/Off, Set Display Input, Set Display Banner, Set Closed Captions, Set Video Channel, Cabling Test using TDR, and Show TDR Test Results commands.

⁷Venue Administrators can view and monitor information on the Management Dashboard with read-only access to the venues for which permissions are granted. They also can run Get Status, Ping, Display IP, and Ping Test commands in the Management Dashboard for the DMPs in the venues at which that Venue Administrator is authorized.

⁸Venue Operators can view and monitor information on the Management Dashboard with read-only access to the venues for which permissions are granted. They also can run Get Status, Ping, Display IP, and Query Syslog commands in the Management Dashboard for the DMPs in the venues at which that Venue Operator is authorized.

⁹The SSC portal cannot be accessed directly from the Cisco Vision Dynamic Signage Director main menu or Control Panel. Access to the user-specific portal is opened only by logging into Cisco Vision Dynamic Signage Director as an SSC user.

¹⁰Synchronization applies only to video and still images. Synchronization cannot be guaranteed for other content such as tickers, external URLs, or widgets.

