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   Cisco Vision Dynamic Signage Director Main Menu
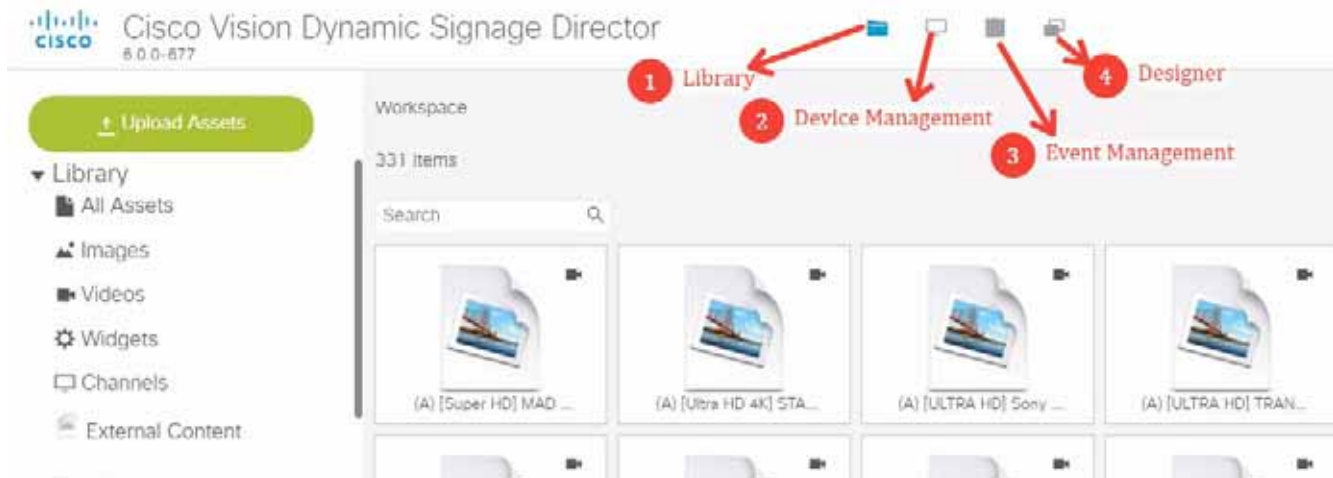
Main Menu

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
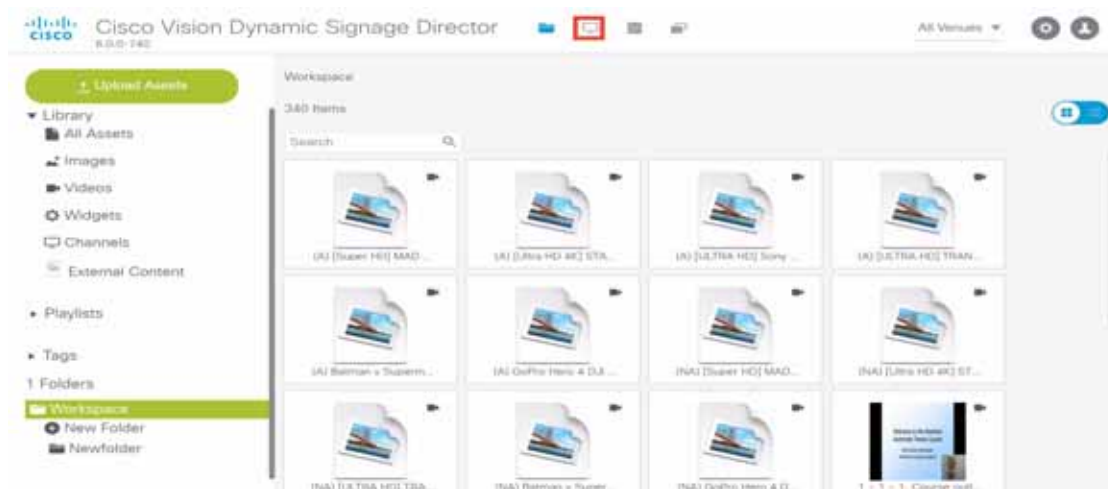
Device Management (CCM) Application Highlights

- 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.
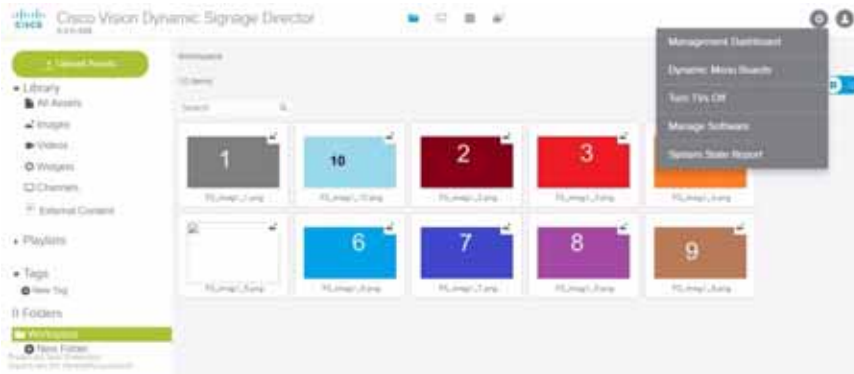
Using the Management Dashboard, you can:

- 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
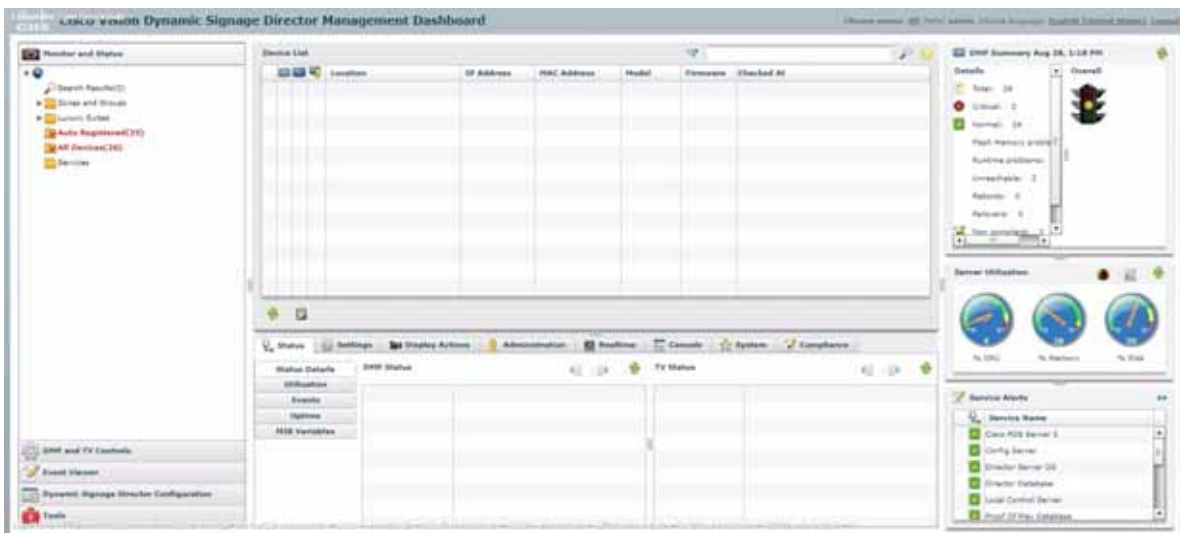
Layout of the Management Dashboard

Figure 5 on page 8 shows the six primary panels available in the dashboard.

Figure 5   Areas of the Management Dashboard
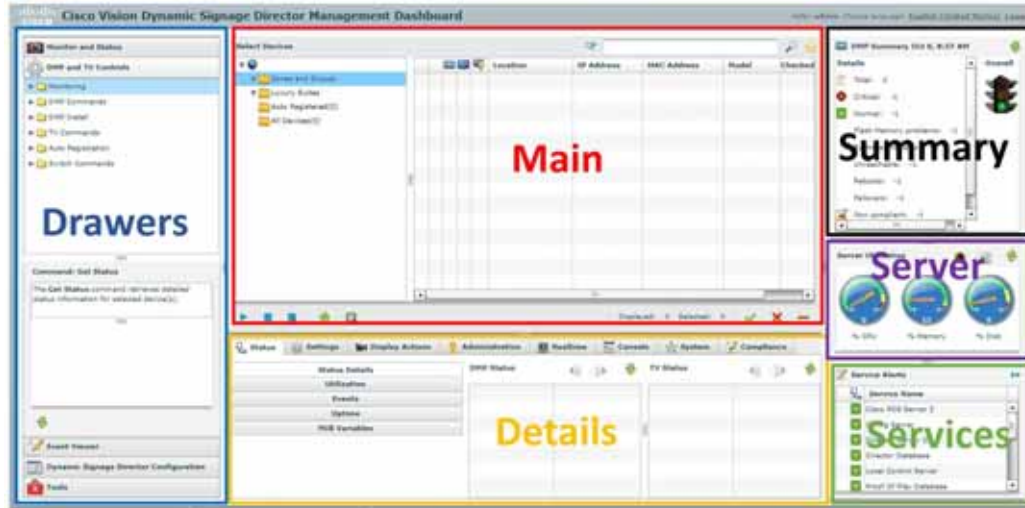
Table 1 on page 9 provides a breakdown of what each panel displays.

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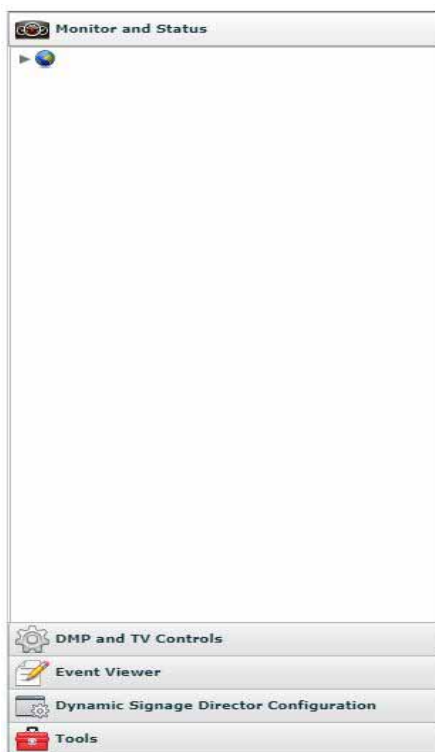
Each drawer opens a group of related commands and options for monitoring, configuring, and managing the operation of Cisco Vision hardware and software components.

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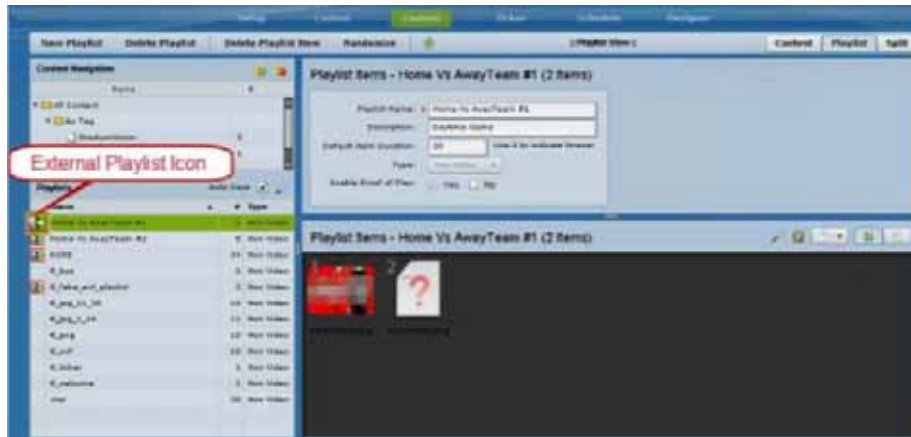
The playlist is populated with existing content in Cisco Vision Director, and you are alerted to any missing content in the playlist by a red box around the external playlist icon on the Content screen. The missing content item is identified with a question mark. Once you import any missing content,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

- 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.

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

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	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. All content uploaded by the concessionaire is available to all users that have sufficient permissions based on the roles assigned to them. 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.
Content Manager	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. The Content Manager role has permissions in Cisco Vision Director to configure event states/scripts, zones, groups, screen templates, playlists, and tickers. Content Managers can also assign widgets for custom menus and create playlists for those menus.
Event Operator	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. 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). Additionally, the event operator can execute state changes and is responsible for performing the pre-game walk- through. Event Operators also can use the TV Off application.
Facility Operator	Facility Operators have access only to the TV Off application. The facility operator must access this application directly using the http://*ipaddress*:9090/web/sv/home, where *ipaddress* is the IP Address of the Cisco Vision Director server.
Help Desk	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. For more information on the tasks performed by the help desk role, see the Vision Director Management Dashboard Guide.

Table 2   Cisco Vision Dynamic Signage Director Roles

Role	Description
Support	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. For more information on the tasks performed by the help desk role, see the Cisco Vision Director Management Dashboard Guide.
Venue Administrator	(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: Control Panel—Content, Control (Script control and Staging), Schedule. Management Dashboard—Read-only access with limited command support. Command Center Monitoring—Read-only access. Setup—Devices (Display specifications only); Read-only access to Zones & Groups, Channels, Luxury Suites.
Venue Operator	(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. **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.

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	–	–	–	–	–	–	Limited1	–
Menus	Yes	–	Yes	–	–	–	–	–	–
My Profile	–	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Understanding User Roles

Proof of Play	Yes	—	—	—	—	—	—	—	—
Stores	Yes	—	—	—	—	—	—	—	—
Suites	Yes	—	—	—	—	—	Limited2	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	—	—	—	—	Limited3	—
Control	Yes	—	—	Yes	—	—	—	Limited4	Limited4
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	—	—	—	—	Limited5	Yes6	Limited7	Limited8
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.