



Overview of Content Support in Cisco Vision Dynamic Signage Director

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Cisco Vision Dynamic Signage 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 Dynamic Signage Director.

Content is defined as any digital media that is presented on a TV display using a digital media player in Cisco Vision Dynamic Signage Director. Cisco Vision Dynamic Signage Director supports a variety of content types and sources to create an impressive presentation of digital content at your venue.

Cisco Vision Dynamic Signage Director is a very flexible content design and presentation system. It allows you to:

- Upload existing content.
- Integrate external content or data.
- Design content presentation using widgets and templates.

Cisco Vision Dynamic Signage Director supports three primary categories of content:

- Images (locally stored)
- Videos (locally stored or streamed)
- External Content (variety of content forms and data integrations)

This module provides a summary of the types and sources of content supported in Cisco Vision Dynamic Signage Director:

- [Images, page 11](#)
- [Videos, page 12](#)
- [External Content, page 12](#)
- [Menu Boards, page 15](#)
- [Widgets, page 16](#)

Images

Images are static graphic assets used for advertisements or informational messages that do not require motion. This could include Welcome messages for luxury suites or directional information after an event. They are also used as backgrounds for other content such as menu boards.

Images are uploaded to the content library in Cisco Vision Dynamic Signage Director and are stored locally on the media players when content is staged. Once the image is in the content library, it can be used in the graphic component of the Widgets tool or in a non-video template region. Images can also be used in a “Video or Mixed Media” template region.

Images also can be uploaded as icons for assignment to channels in Cisco Vision Dynamic Signage Director channel guides.

Note: Static images, widgets, and external URLs are not scalable.

Videos

Videos can be locally stored by upload to the content library in Cisco Vision Dynamic Signage Director, or they can be streamed from a variety of sources and display methods.

Video streaming can be implemented through the following content sources and display methods:

- Video streamed from the headend.

Video streamed from the headend can be in-house, terrestrial TV, satellite, or cable-provider feeds, which are typically multicast. The format of video provided from the headend is dependent upon the source.

For more details, see [Cisco Vision Video Headend Design and Implementation Guide](#) (available to qualified Cisco Vision partners).

- Video locally stored in Cisco Vision Dynamic Signage Director.

Locally-stored video is an external video that is uploaded to the Cisco Vision Dynamic Signage Director content library. It is stored in Cisco Vision Dynamic Signage Director and played through a video or mixed-media playlist.

- Video streamed to a local HDMI-In channel (HDMI-In Pass-Through).

Note: Local HDMI-In video is supported by the CV-UHD and SV-4K DMPs only, for HDCP-compliant devices and content.

Use the local HDMI-In channel when you want to easily send local content to a single TV display using the HDMI-In port of the DMP on an SV-4K or CV-UHD device. See [Content Deployed From Local HDMI-In \(HDMI-In Pass-Through\)](#), page 22.

- DMP-encoded video streamed as a multicast channel for video only (no audio).

DMP-encoded video can be deployed from several sources:

- (Introduced in Release 6.0) Full-screen DMP display output (including multiple template regions). Also known as *display encoding*.
- (Introduced in Release 6.0) External URL channel content (including HTTP, HTTPS, and HLS channels).
- (Release 5.0 and later releases) Local HDMI-In channel content.

External Content

External content includes a number of different forms of content and supported data integrations, from referenced external URLs and HTML pages, to data feeds and scoreboard controller integrations, among others.

- [External URLs](#), page 13
- [Data Integration Sources](#), page 14

External URLs

There are several ways to bring content from external URLs into Cisco Vision Dynamic Signage Director and for different reasons. [Table 2 on page 13](#) summarizes these methods, why you might use them, and where to configure them.

Table 1 Summary of External URL Ingestion Methods

Ingestion Method	Why Use	Where Configure
Channels	<ul style="list-style-type: none"> ■ Display the entirety of content from a URL as a multicast channel to which other DMPs can be tuned. ■ For HTTP, HTTPS, and HTTP Live Streaming (HLS) content, including full HTML pages. 	Control Panel > Setup > Channels
Data Integration	<p>For more advanced data customization, you can:</p> <ul style="list-style-type: none"> ■ Introduce a sample XML schema. ■ Select certain data objects. ■ Create custom mapping expressions for the output. ■ Design custom content layout for the data using Widgets tool. <p>See “Generic Data Sources” in Data Integration Sources, page 14.</p>	Control Panel > Setup > Data Integration
HTML Pass-Through	<ul style="list-style-type: none"> ■ Simple HTML browser content (not full HTML pages) with restrictions. ■ Content intended for more limited or short-term use. 	Library > External Content. Right click > Create

Note: Use only external URLs that do not set the X-Frame Options’ header.

External URLs as Channels

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

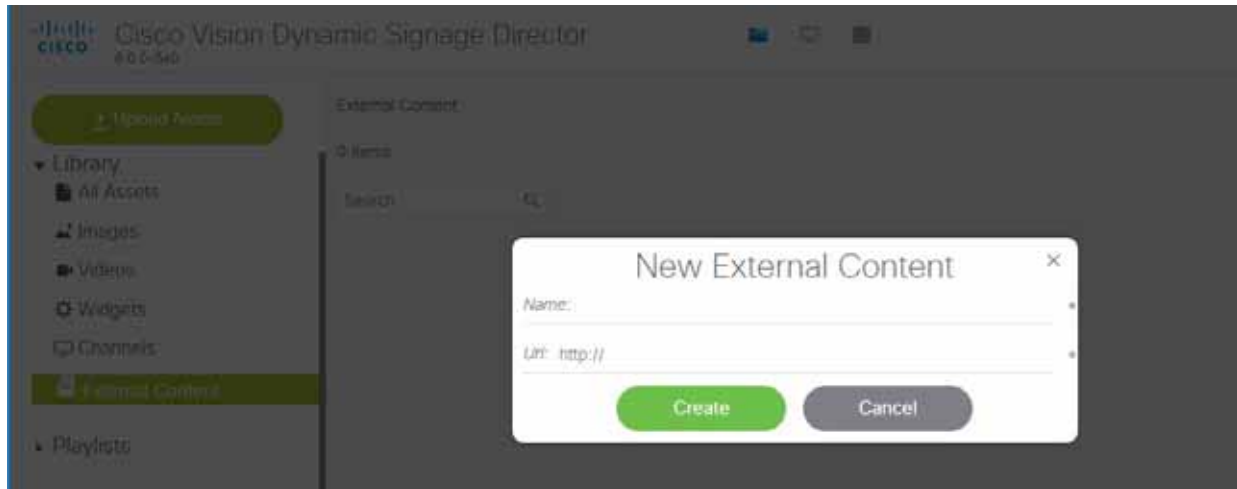
HLS sources are hardware-accelerated on the DMP. The content is specified as an External URL source type in the Channels setup. The system recognizes the content as an HLS source based on the Allowed HLS file formats designated in the Management Dashboard. The default extensions allowed are m3u and m3u8.

For more information, see [Channel Content Deployment, page 21](#).

HTML Pass-Through

The HTML Pass-Through feature is a legacy feature that supports reference to an external URL in the Control Panel Content screen. When you select **Library > External Content**, then right click > **Create** to specify the external URL, an external URL asset is created in the content library. When referencing an external URL in this way, you can render simple HTML browser content (with some restrictions) on the media players, by including the external URL object in a playlist and scheduling it in a script. [Figure 1 on page 14](#) shows creating new external content urls.

Note: Use only external URLs that do not set the X-Frame Options’ header.

Figure 1 Referencing an External URL to Content

Although the External Content URL is referenced in the content library, the content itself is not actually stored in the content library in Cisco Vision Dynamic Signage Director. Any changes to the content on the external site page are dynamically updated on the media players when the external URL is referenced, such as when the external URL playlist item is played.

Data Integration Sources

Cisco Vision Dynamic Signage Director predefines some data structures for ease of integration with the system. These sources are configured using Data Integration in the Control Panel Setup interface in Cisco Vision Dynamic Signage Director, and layout is designed using the Widgets tool. For details, see [Cisco Vision Director Data Integration Guide](#).

■ Content Feeds

- Atom Feed
- RSS Feed (RSS 2.0)

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.

■ NFL Content

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

■ Scoreboard Controllers

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

■ POS Data Sources

- Generic PoS
- Internal Database PoS
- Menu Theme

Menu Boards

■ Generic Data Sources

Generic data sources can be used for other forms of XML or JavaScript Object Notation (JSON) sources that you want to ingest into Cisco Vision Dynamic Signage Director whose format does not conform to some of the standard out-of-the-box data source types, such as RSS 2.0.

Cisco Vision Dynamic Signage Director also can support Generic Data Sources in JSON or XML format from the following source types:

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

■ Table Lookup

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.

Menu Boards

Menu boards are a special content form in Cisco Vision Dynamic Signage Director that are generally used for venue concessions to display images, descriptions, and pricing ([Figure 2 on page 16](#)). Frequently they are integrated with a Point of Sale (POS) data source to automatically manage item and pricing changes in the system.

Figure 2 Menu Board Example

<i>Burgers</i>			
SANDWICH & ENTREE		BEVERAGES	
Chili Cheese Fries	\$6.50	Regular Soda Cup	\$4.50
Grilled Cheese	\$5.00	Souvenir Soda Cup	\$6.00
Custom Grind Burger -NY Style	\$8.00	Bottled Water	\$4.75
Bacon and Cheddar Fries	\$6.50	Gatorade	\$4.75
SNACKS		ALCOHOLIC BEVERAGES	
French Fries	\$5.00	Draft Beer	\$8.75
Peanuts	\$4.75		

Cisco Vision Dynamic Signage Director supports the following methods of data integration for menu board implementation:

- Hybrid Dynamic Menu Board (DMB) and External Content Integration
POS Integration (NCR/Quest and Micros) using internal DMB data integration and widgets.
- External Content Integration Only
Third-party POS vendor integration using the POS API and data integration and widgets.

For More Information

- [Cisco Vision 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, configuration tasks, and widgets tool information and examples.

Widgets

Widgets are content objects for external data. A widget is created using the Widgets designer tool, which is used to map real-time statistics or content from external data sources for output display in Cisco Vision Dynamic Signage Director.

The Widgets tool includes image-based and text-based components and a tabular list component to help you design the layout of external data.

As content assets, widgets are stored in the Cisco Vision Dynamic Signage Director Asset Library once published from the Widgets tool. They are deployed using the standard template, playlist, and script configuration elements.

Note: Widget content is not scalable.

For details, see [Cisco Vision Director Data Integration Guide](#).