

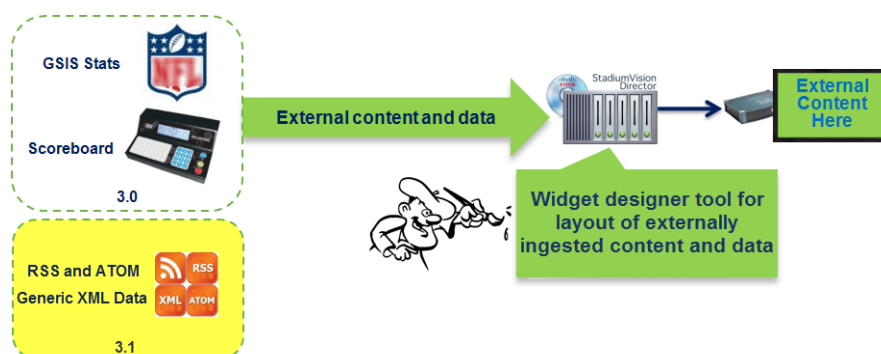


Overview of External Content Integration in Cisco StadiumVision Director

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Figure 1 shows a high-level overview of the content support in the External Content Integration feature in Cisco StadiumVision Director. Cisco StadiumVision Director Release 3.0 introduced integration with external data sources for content ingestion and presentation for NFL GSIS statistics, game clock, and certain scoreboard devices. Cisco StadiumVision Director Release 3.1 adds support for predefined data feeds such as RSS and Atom, as well as support for generic data sources.

Figure 1 External Content Integration High-Level Overview



This module includes the following topics:

- [Supported External Content Sources, page 2](#)
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- [Information About NFL GSIS Integration in Cisco StadiumVision Director, page 3](#)
- [Information About Scoreboard Integration in Cisco StadiumVision Director, page 4](#)
- [Information About Generic Data Sources in Cisco StadiumVision Director, page 5](#)
- [Information About Content Feeds in Cisco StadiumVision Director, page 6](#)
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Supported External Content Sources

Cisco StadiumVision Director Release 3.1 predefines the data structures to support the following external content sources:

- National Football League (NFL) Game Statistics and Information System (GSIS) Cumulative Statistics
- NFL GSIS Game Clock
- Daktronics All Sport 5000 Scoreboard Controller (basketball and hockey only)
- OES ISC9000 Intelligent Scoreboard Controller (basketball and hockey only)
- Atom Feed
- RSS Feed (RSS 2.0)

In addition to these predefined data sources, Cisco StadiumVision Director also can support generic data sources.

Restrictions for External Content Integration

Before you configure External Content Integration, consider the following restrictions:

- The External Content Integration feature is not venue aware. This means that any configuration applies to all venues and cannot be made venue-specific.
- The frequency of the scoreboard clock updates is no more than once per second and a delay of up to 2 seconds can occur.
- Only basketball and hockey scoreboard statistics are currently supported.
- RSS feed approvals must be done pre-ingestion of the content by Cisco StadiumVision Director.
- Up to 5 images can be supported from a data source using the PicToScreen widget. For more information on the Widgets tool, see the [“Designing the Layout of External Content Using the Widgets Tool”](#) module.
- HTTPS URLs and authentication are not supported.
- Data from a generic data source is not cached in Cisco StadiumVision Director. This means that DMPs must be able to reach any externally referenced source data (for example, referenced images) on the network. If the DMPs, do not have access to the external data source, then you need to set up an intermediary server to cache external data internally to the Cisco StadiumVision Director network.

**Caution**

The import of any external flows must only be done by trained Cisco Systems personnel or partners due to potentially severe risks to the normal operation of the External Content Integration system.

Information About NFL GSIS Integration in Cisco StadiumVision Director

This section includes the following topics:

- [Network Considerations for NFL GSIS Integration, page 3](#)
- [Supported NFL GSIS Data, page 3](#)

Network Considerations for NFL GSIS Integration

The NFL GSIS statistics supported by the External Content Integration feature are transferred from data stored on an NFL Stats-in-a-Box (SIAB) server installed at the venue using an FTP connection to the Cisco StadiumVision Director server. The NFL SIAB server is a local server that connects to the central NFL GSIS database external to the venue and managed by the NFL.

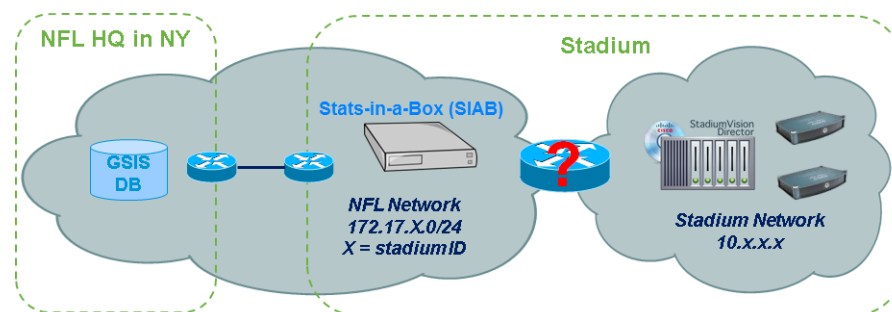
[Figure 2](#) shows a sample network architecture for NFL GSIS integration with Cisco StadiumVision Director.



Note

The actual network configuration with the NFL network is site-dependent and could vary at your venue.

Figure 2 Network Architecture for NFL GSIS Integration



It is important to note that the network where the SIAB server is installed is not necessarily (and likely not) on the same network where the Cisco StadiumVision Director server is installed. Therefore, depending on your specific network configuration, you might have some network configuration to do to ensure that the SIAB server is reachable by the Cisco StadiumVision Director server.

To configure the network connectivity to the NFL SIAB server you must specify the IP address, port, data path, username, and password for the NFL SIAB server on the Cisco StadiumVision Director server.

Supported NFL GSIS Data

Cisco StadiumVision Director supports the NFL GSIS Game Clock and all of the statistics in the Cumulative Statistics XML file (CumulativeStatisticsFile). For more information and documentation for these statistics, go to:

<http://www.nflgsis.com/gsis/>

From the NFL GSIS Home page, click **Documentation**. Click the corresponding documentation links for the Cumulative Statistics Report and the Real-time Game Information (Game Clock).

Information About Scoreboard Integration in Cisco StadiumVision Director

This section includes the following topics:

- [Overview of Scoreboard Integration Support, page 4](#)
- [Network Considerations for Scoreboard Integration, page 4](#)

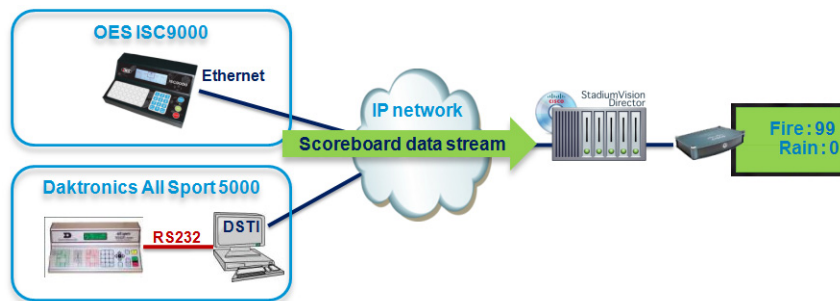
Overview of Scoreboard Integration Support

Cisco StadiumVision Director scoreboard integration allows you to display real-time information (such as period, score, and clock) on Cisco StadiumVision Director TV displays.

[Figure 3](#) shows a high-level overview of the scoreboard integration support. Cisco StadiumVision Director Release 3.0 supports the following devices and sports:

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

Figure 3 **Scoreboard Integration High-Level Overview**



Network Considerations for Scoreboard Integration

Cisco StadiumVision Director communicates with the supported scoreboard controllers through a User Datagram Protocol (UDP) port connection. Both the corresponding controller interface and the Cisco StadiumVision Director server must be configured to establish the network connectivity between these devices.

Information About Generic Data Sources in Cisco StadiumVision Director

Beginning in Cisco StadiumVision Director Release 3.1, support for external content integration with generic data sources in Cisco StadiumVision Director is introduced. Generic data sources can be used for other forms of XML sources that you want to ingest into Cisco StadiumVision Director whose format does not conform to some of the standard out-of-the-box data source types such as RSS 2.0.

**Note**

If your data feed does not strictly conform to the standard format of the predefined data source types in the External Content Integration feature, then the Generic Data Source type is recommended for best results.

Generic Data Source Message Types

The generic data source can be configured as one of the following message types:

- FTP
- HTTP
- TCP
- UDP

**Note**

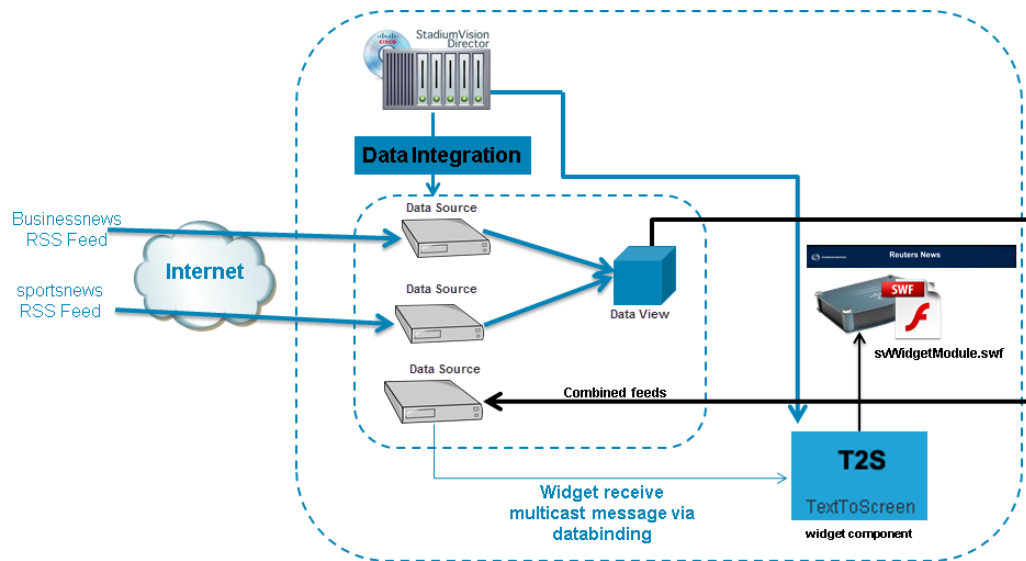
HTTPS URLs are not supported.

Data Views

Data views can be configured to support ingestion of multiple feeds as an advanced data configuration option. Data views allow you to merge data from multiple feeds and use an expression editor to select certain data elements from those feeds to be put into a single combined data source for presentation. The data source can be laid out for presentation using the PicToScreen or TextToScreen components of the Widgets tool.

Figure 4 shows receipt of two independent RSS feed sources into Cisco StadiumVision Director with data integration of those sources into a data view that is then re-ingested into the External Content Integration feature as a single data source of the combined feeds.

Figure 4 Multiple RSS Feeds Combined into Single Data Source



The newly combined data source of the two RSS feeds can be bound to a TextToScreen component in the Widgets tool to lay out its final presentation for use in the standard script/playlist publishing methods of Cisco StadiumVision Director.

For more information about configuring data views, see the “Working with Data Views” section on page 37.

XML Schema for Generic Data Sources

If you want to use a generic data source in the External Content Integration feature, then you must be able to provide the XML for a single sector (that is representative of all of the sectors) in the data feed. This sample data can then be used for the configuration of your data source.

Information About Content Feeds in Cisco StadiumVision Director

Cisco StadiumVision Director Release 3.1 enhances support for RSS feed design using the External Content Integration feature. It includes support for a predefined RSS data feed, and an Atom feed.



Note

The legacy Ticker feature remains available from the Control Panel in Cisco StadiumVision Director Release 3.1.

This section includes the following topics:

- [Differences Between Legacy Ticker Feature and External Content Integration for RSS Support, page 7](#)
- [Predefined Feed Sources, page 7](#)

Differences Between Legacy Ticker Feature and External Content Integration for RSS Support

[Table 1](#) provides a comparison of the differences between the legacy Ticker feature available from the Control Panel, and the new RSS feed support available from the External Content Integration feature in the **Control Panel > Setup** screen.

Table 1 Comparison of Ticker Feature with External Content Integration RSS Support

Feature	Customized Layout	UI Support for Content Approvals
Ticker (Control Panel)	No	Yes
External Content Integration RSS (Control Panel / Setup)	Yes	No

When using External Content Integration to configure your RSS feeds, approvals must be done outside of the Cisco StadiumVision Director software and prior to its ingestion by Cisco StadiumVision Director. However, the External Content Integration feature allows you to customize the layout of your RSS information on the display using the PicToScreen and TextToScreen components of the Widgets tool.

The primary advantage of the legacy Ticker feature is that you can do approvals of your content from within the user interface, but you do not have any control over the layout design.

Predefined Feed Sources

The External Content Integration feature in Cisco StadiumVision Director Release 3.1 adds support for the following predefined data sources for RSS and Atom support:

- Atom Feed
- RSS Feed

Atom Feed Data Fields

[Table 2](#) describes the data fields that are supported in Cisco StadiumVision Director for the predefined Atom feed data source.

Table 2 Data Fields for Mapping Atom Feeds

Data Field	Description
Title	Title element in original Atom feed.
Content	Content element in original Atom feed.

Table 2 Data Fields for Mapping Atom Feeds

Data Field	Description
Id	Id element in original Atom feed.
Image	First enclosure URL within a link element, if available. Otherwise, source URL of the first HTML image element within content.

RSS Feed Data Fields

[Table 3](#) describes the data fields that are supported in Cisco StadiumVision Director for the predefined RSS feed data source, which can be used as a generic data source for other RSS feeds.

Table 3 Data Fields for Mapping RSS Feeds (Generic)

Data Field	RSS Feed
Title	Title element in original RSS feed.
Description	Description element in original RSS feed.
Link	Link element in original RSS feed.
Image	First enclosure URL, if available. Otherwise, source URL of the first HTML image element within description.

Overview of the External Content Integration Interface

The External Content Integration feature is implemented using two basic areas of the Control Panel:

- **Control Panel > Setup > Data Integration**

The Data Sources configuration consists of two tabs:

- Configuration—Use to specify the network-related and data parameters for the selected data source.
- Field mapping—Use to select and map statistics for output display.

- **Control Panel > Widgets**

The Widgets tool is used to add graphics and design the layout for the data that you want to display from the External Content Integration feature.

The remainder of the tasks associated with publishing external content to a TV display use the existing Cisco StadiumVision Director playlist and script creation interfaces.