



Release Notes for Cisco StadiumVision Director Release 4.1

First Published: May 16, 2016

Cisco StadiumVision Director Release 4.1.0-508 (SP1)
Cisco StadiumVision Director Remote Release 4.1.0-10

Table 1 Document Revision History

Date	Change Summary		
September 12, 2016	A new version of language packs is released for localization fixes in Cisco StadiumVision Director Release 4.1.0-508 (SP1).		
	For more information, see:		
	• "Language Packs for Localization" section on page 21.		
	• "Resolved Defects in Cisco StadiumVision Director Release 4.1.0-508" section on page 49.		
	• "Open Defects in Cisco StadiumVision Director Release 4.1.0-508" section on page 50.		
July 28, 2016	The following updates are made:		
	• Clarified statement about DMP-2K production support in Release 4.1.0-419 and later releases in the "Key Considerations for This Release" section on page 3.		
	• Added new links to the Cisco Connected Stadium Design Guide and Cisco StadiumVision Video Headend Design and Implementation Guide available to qualified Cisco StadiumVision partners in the Sports & Entertainment Partner Portal.		



Table 1 Document Revision History (continued)

Date	Change Summary
July 18, 2016	The following updates are made for Cisco StadiumVision Director Release 4.1.0-508 (SP1):
	• "Key Considerations for This Release" section on page 3.
	• Introduction of a new common DMP setting for the SV-4K and DMP-2K media player in the "Configurable Multicast Video Tune-In Timeout" section on page 30.
	• "Upgrade Paths" section on page 44.
	• "Resolved Defects in Cisco StadiumVision Director Release 4.1.0-508" section on page 49 and "Open Defects in Cisco StadiumVision Director Release 4.1.0-508" section on page 50.
June 22, 2016	Revised defect "CSCuz49064—Widgets fail to display data integration when a bound XML value is blank." section on page 52.
June 13, 2016	The following updates are made:
	• Language pack support is introduced for Release 4.1.0-419. See "Language Packs for Localization" section on page 21.
	• Defect "CSCuz89148—Localization defect summary for 4.1.0-GA release." section on page 51 is added.
	• Additional resources are added in the "Release-Specific Documents" section on page 58.
May16, 2016	Initial release of Cisco StadiumVision Director Release 4.1.0-419 and Cisco StadiumVision Director Remote Release 4.1.0-10.

Contents

This release note includes the following topics:

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- Key Considerations for This Release, page 3
- System Requirements for Cisco Stadium Vision Director Release 4.1, page 4
- Security Information and Advisories for Cisco Stadium Vision Director Release 4.1, page 18
- API Summary, page 18
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- New and Changed Information in Cisco StadiumVision Director Release 4.1, page 22
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- Related Documentation and Resources, page 58
- Service and Support for Cisco Stadium Vision, page 60

Introduction

This document provides information about the Cisco StadiumVision solution for all releases of Cisco StadiumVision Director Release 4.1. It includes hardware and software requirements, new and changed features, installation and upgrade information, known issues, and defects.

This document is for Cisco StadiumVision system administrators and technical field engineers who are responsible for designing and deploying the Cisco StadiumVision solution. Readers of this document should be familiar with basic IP networking technology and the Cisco StadiumVision solution.

Key Considerations for This Release



This section provides a highlight of several important considerations for Cisco Stadium Vision Director Release 4.1. Be sure to read the entire release note to obtain all relevant information for the release.

- Cisco StadiumVision Director Release 4.1.0-508 (SP1) is considered a mandatory upgrade from Release 4.1.0-419.
- The Platform 2 server (Cisco UCS C200) is no longer supported in Release 4.1 due to memory and performance limitations.
 - Cisco Stadium Vision Director is supported in a virtual server environment or on the Platform 3 (Cisco UCS C220) as a bare metal install.
 - For more information about migrating, see the "Migrating From Platform 2 Servers to a Virtual Environment" module in the *Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.1.*
- A new auto-registration configuration is required after you install Release 4.1 and before you reboot your SV-4K and DMP-2K devices. For more information, see the "Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player" section on page 33.
- The SV-4K and DMP-2K media player firmware can render most unicode characters as part of the DMP system fonts. This means that the font is available as a substitution font to external content sources such as HTML pages and feeds that might not explicitly reference web fonts in their CSS.
- There is a new URL for download of the SV-4K and DMP-2K production firmware.

- DMP-2K considerations:
 - The DMP-2K is supported in production environments beginning in Release 4.1.0-419 and later releases.
 - In prior firmware versions, the DMP does not negotiate 30W of power from the switch port and the DMP fails to turn on or otherwise displays unexpected behavior (CSCuy39197). This defect is resolved in Release 4.1.0-419 with firmware version 6.0.83. However, the following guidelines must be followed when deploying a new DMP-2K for the first time:



For initial deployment of a new DMP-2K, be sure that:

- —No other accessories are attached to the DMP-2K.
- —You are using standard Category 5e or 6 cabling up to 100 m in length.
- The DMP-2K does not support any content with 4K resolution.
- The DHCP Option 60 Vendor Class Identifier string for new, factory-delivered DMP-2Ks is "Cisco DMP-2K".
- HDMI-In encoder features are not supported on the DMP-2K.
- The DMP-2K uses the same firmware as the SV-4K.
- The DMP-2K has less total storage capacity (64 GB) than the SV-4K (120 GB). Available storage space on the DMP-2K is 65536 MB.
- The DMP-2K has 2 GB RAM compared with 3 GB RAM on the SV-4K. This can make a difference in how the same content might play on different media player models. This difference might more likely be seen when playing HTML pass-through (URL) content.
- Release 4.1 introduces support for content with 4K resolution for *video content only* on the SV-4K media player. Graphics content remains capable of resolutions up to 1920 x 1080 only.
- The new Cisco Solution Support Service is now available for Cisco Stadium Vision.

System Requirements for Cisco StadiumVision Director Release 4.1

This section describes the hardware and software supported by the Cisco StadiumVision solution for Cisco StadiumVision Director Release 4.1. It includes the following topics:

- Browser and Flash Player Support, page 5
- Digital Media Player Support, page 5
- Cisco Stadium Vision Director Server Support, page 8
- Cisco Stadium Vision Director Remote Server Support, page 12
- Cisco Stadium Vision Headend Support, page 13
- Cisco Unified Communications Support, page 16
- Commerce Integration Systems Support, page 16
- Media Controller Systems Support, page 17
- Touch Screen Devices and Controller Support, page 17
- Unsupported Hardware in Cisco Stadium Vision Director Release 4.1, page 17

Browser and Flash Player Support

You can use an Apple Mac or Microsoft Windows PC or laptop to access Cisco StadiumVision Director Release 4.1.

Table 2 describes the browser software versions that have been tested with Cisco StadiumVision Director Release 4.1, with the corresponding Flash player support.



- Microsoft Windows 10 has not been tested and is not officially supported. Compatibility issues have been reported.
- Unless specifically identified as unsupported, other browser versions might work, but their compatibility with Cisco StadiumVision Director cannot be assured.
- Be aware that if you allow automatic updates to your browser and Flash software you might run into an incompatibility with Cisco StadiumVision Director.

Table 2 Tested Browser Software

PC or Laptop OS	Browser Version ¹	Flash Player ²	
Apple Mac OS X	Google Chrome Version 50.0.2661.102	Adobe Flash Player Version 21.0.0.242	
	Mozilla FireFox Version 46.0.1	Adobe Flash Player Version 21.0.0.226	
Microsoft Windows (Windows 7)	Google Chrome Version 50.0.2661.102	Adobe Flash Player Version 21.0.0.242	
	Mozilla FireFox Version 46.0.1	Version 20.0.0.267	

^{1.} Other than what is listed in this table, no additional browser software is tested (for example, not Apple Safari or Microsoft Internet Explorer). However, other untested browser software might work. Microsoft IE is no longer tested.

Digital Media Player Support

Cisco Stadium Vision Director Release 4.1 supports three models of media players:

- Cisco DMP 4310G, page 5
- DMP-2K Media Player, page 6 (New in Release 4.1)
- SV-4K Media Player, page 7

Cisco DMP 4310G

The DMP firmware image is not bundled with the Cisco StadiumVision Director software. You must download the firmware image separately at the software download center site.



DMP-4310G Version 5.4.1 RB2P is required for the GNU Bash fix.

If necessary, you can find older versions of Adobe Flash Player by going to the Adobe archived Flash player versions site on the Adobe website. Be sure not to load any debug versions of this software which are unsupported by Cisco StadiumVision Director

Table 3 describes the Cisco Digital Media Player (DMP) hardware and firmware supported in Cisco StadiumVision Director Release 4.1.

Table 3 Supported Cisco DMP Hardware and Firmware

Hardware	Firmware Version	
Cisco DMP 4310G	DMP-4310G Version 5.4.1 RB2P	

Cisco DMP 4310G Firmware Download Guidelines



DMP-4310G Version 5.4.1 and later supports MP4 (H.264 encoded only) video files and adds support for ELO IntelliTouch+ technology.

To download the DMP-4310G Version 5.4.1RB2P firmware, go to the Cisco Digital Media Players product page for the Cisco DMP 4310G:

http://www.cisco.com/c/en/us/support/video/digital-media-player-4310g/model.html

- 1. Click the Downloads tab and then Digital Media Player (DMP) System Upgrades.
- 2. Go to All Releases > 5 > 5.4.1_RB_2P.
- **3.** Click **Download** to get the 5.4.1_RB2_2P_FCS_4310.fwimg file.

Cisco DMP 4310G Firmware Upgrade Procedure

For information about how to upgrade the DMP firmware, see the "Upgrading the Cisco DMP 4310G Firmware" module of the *Cisco StadiumVision Director Software Installation and Upgrade Guide*, *Release 4.1*.

DMP-2K Media Player

The DMP-2K Media Player is introduced in Cisco StadiumVision Director Release 4.1. The DMP-2K has a smaller form-factor and supports less storage and fewer features than the SV-4K, including support of a maximum HD resolution of 1080p. For more information, see the "Feature Summary by Media Player Model" section on page 18.



For more information about deployment and firmware installation, see also the "Deployment Guidelines for the SV-4K and DMP-2K Media Players" section on page 46.

DMP-2K Firmware Versions

The DMP-2K supports the same firmware versions as the SV-4K media player.



Both the base firmware and production firmware versions are required in Cisco StadiumVision Director Release 4.1. For information about obtaining the firmware, see the "Firmware Download for the SV-4K and DMP-2K Media Player" section on page 47. For information about the new multi-firmware configuration, see the "Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player" section on page 33.

Table 5 describes the DMP-2K hardware and firmware supported in Cisco StadiumVision Director Release 4.1.

Table 4 Supported DMP-2K Media Player Hardware and Firmware

Hardware	Product ID	Firmware Version
DMP-2K Media Player	DMP-2K-WW-K9 ¹	Release 4.1.0-419 and Later
(worldwide)		• Base firmware—5.1.68.1
		• Production firmware—6.0.83

^{1.} There is only a single product ID for the DMP-2K for worldwide ordering.

SV-4K Media Player

The SV-4K media player is a fan-less, solid-state, commercial digital media player that supports new technology standards. In addition to support of 4K video resolution, the SV-4K enhances the capabilities of the Cisco solution by adding support for dual video regions, an enhanced processor, improved video wall and virtual ribbon board synchronization, and an HTML5 runtime environment.

For more information about the software features supported by the SV-4K media player, see the "Feature Summary by Media Player Model" section on page 18.



For more information about deployment and firmware installation, see also the "Deployment Guidelines for the SV-4K and DMP-2K Media Players" section on page 46.

SV-4K Firmware Versions

Table 5 describes the SV-4K hardware and firmware supported in Cisco StadiumVision Director Release 4.1.



Both the base firmware and production firmware versions are required in Cisco StadiumVision Director Release 4.1. For information about obtaining the firmware, see the "Firmware Download for the SV-4K and DMP-2K Media Player" section on page 47. For information about the new multi-firmware configuration, see the "Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player" section on page 33.

Table 5 Supported SV-4K Media Player Hardware and Firmware

Hardware	Product ID	Firmware Version
SV-4K Media Player	SV-DMP-4K-NA-K9	Release 4.1.0-419 and Later
(North America)		• Base firmware—5.1.68.1
		• Production firmware—6.0.83
SV-4K Media Player	SV-DMP-4K-ROW-K9	Release 4.1.0-419 and Later
(rest of the world)		• Base firmware—5.1.68.1
		• Production firmware—6.0.83

Table 6 lists the latest supported upgrade paths for SV-4K firmware in Cisco StadiumVision Director Release 4.1, which depends on the required multi-firmware version upgrade configuration.



For upgrades from devices with firmware version 5.1.52, 5.1.65, or 5.1.68.1, you can simply select that existing firmware as your "Base firmware image to use" since that firmware version is already uploaded to Cisco StadiumVision Director and is a valid pre-requisite firmware.

Table 6 Supported Upgrade Paths for SV-4K Firmware in Release 4.1

From Firmware Version:	To Production Firmware Version:		
5.1.68.1	6.0.83		
	Tip	Configure 5.1.68.1 as the base firmware version.	
, III	6.0.83		
5.0.22.5 or 5.1.37)	Note	Requires you to upload and configure 5.1.68.1 (recommended) as the base firmware.	

Cisco StadiumVision Director Server Support

Cisco StadiumVision Director supports upgrades from Release 4.0 to Release 4.1 software on the Platform 3 server hardware. Software versions prior to Release 4.0 must be upgraded serially to the supported 4.0 version before upgrading to Release 4.1. For more information, see the "Upgrade Paths" section on page 44.

New installations of Release 4.1 are supported in a virtual server environment using other third-party hardware.



Use the Cisco Commerce Workspace (CCW) tool when placing Cisco StadiumVision orders at:

https://apps.cisco.com/Commerce/home

Product IDs in Cisco StadiumVision Director Release 4.1 for Software Licenses

In Cisco StadiumVision Director Release 4.1, the Cisco StadiumVision Director software, video management, and display licenses are unbundled. This allows you to purchase hardware separately for the Cisco StadiumVision Director server and install Cisco StadiumVision Director software in a virtual environment (for more information, see the "Virtualized Server Environment Support" section on page 10.)

Table 7 provides information about the supported product IDs for Cisco StadiumVision Director and related software.

Table 7 Product IDs in Cisco StadiumVision Director Release 4.1 for Software Licenses

Product ID	Description
R-SV-DR-DIR-SW-K9	Cisco StadiumVision Director software license only.
	StadiumVision Director Commerce License per Display (POS integration for In-Suite Ordering and DMB).

Table 7 Product IDs in Cisco StadiumVision Director Release 4.1 for Software Licenses

Product ID	Description
L-SV-DR-DISP-FSV	StadiumVision Director Full SV Display License SV-4K and DMP-2K.
L-SV-DR-DISP-SGN	Stadium Vision Director Signage Only Display License SV-4K DMP (no multicast video or video walls).
L-SV-DR-DISP-UPGRD	Stadium Vision Director SV Display License Upgrade from SGN to FSV.
L-SV-DR-DISP-4310	Stadium Vision Director DMP 4310 display license.
L-SV-DIR-ENCODER	Stadium Vision Director SV-4K encoder license to support 10 DMPs.
L-SV-DR-LCTRL-IPPS	IP Phone service per IP phone.
(replaces SV-DIR-1SVM)	
L-SV-DR-LCTRL-WEB	License per device for third-party products that use the web control
(replaces SV-DIR-1ALT)	API.
L-SV-DR-LOCAL	Localization license per non-English language support.
(replaces Localization SoW)	

Platform 3 Server Support

Table 8 describes the Cisco Stadium Vision Director server hardware and software supported and tested in Cisco Stadium Vision Director Release 4.1.



Table 8 identifies *minimum tested versions* of CIMC/BIOS with Cisco StadiumVision Director. These should not be interpreted as the required versions that you must run. As long as your server CIMC/BIOS firmware is at this minimum tested version *or later*, no change is required to operate Cisco StadiumVision Director.

The table also documents the latest firmware versions that are currently available for download and have been successfully tested in Release 4.1.

Table 8 Supported Cisco Stadium Vision Director Server Hardware and Software in Release 4.1

Hardware Product ID			Minimum Tested CIMC/BIOS Firmware ¹	Other Tested CIMC/BIOS Firmware	Spare Hard Drives
SV-DIR-DIRECTOR-K9 ²			Cisco UCS Server Firmware versions: • BIOS—1.5.1g.0 • CIMC—1.5(11)	Cisco UCS Server Firmware versions: • BIOS—2.0.8(0) • CIMC—2.0(8d)	Not required
	Note	For details about all supported upgrade paths, see the "Upgrade Paths" section on page 44.			

^{1.} Unless there is another reason why an upgrade has been found to be needed, no upgrade should be needed if your server firmware is at the minimum tested version (or later) for the Cisco StadiumVision release that you are running.

^{2.} This product ID includes both the hardware platform and the Cisco StadiumVision Director software.



For more information about verifying and upgrading the Cisco UCS Server firmware on the Platform 3 server, see the "Appendix C: CIMC Configuration and Firmware Upgrade Guidelines on the Cisco UCS C220 Server" module in the Cisco Stadium Vision Director Software Installation and Upgrade Guide, Release 4.1.

Virtualized Server Environment Support

You can use another Cisco device or third-party server to run the Cisco Stadium Vision Director software. Follow the requirements in this section to be sure that your virtual environment meets the minimum and tested specifications.

This section includes the following topics:

- Minimum Virtual Machine System Requirements for Cisco Stadium Vision Director, page 10
- VMware vSphere Tested Versions for Cisco StadiumVision Director, page 11
- Restrictions for Virtual Server Support, page 11

Minimum Virtual Machine System Requirements for Cisco Stadium Vision Director

Be sure that your configuration meets the minimum system requirements in Table 9 and supports a VMware virtual machine environment with a compatible vSphere version (See "VMware vSphere Tested Versions for Cisco StadiumVision Director" section on page 11.)



Cisco StadiumVision Director servers are meant to be physically located close to the DMPs that they operate with, and communicating to the players over a LAN. For information about installation-related licensing compliance, see the "Installation Requirements for Licensing Compliance" section on page 43.

Table 9 Minimum System Requirements for the Cisco StadiumVision Director Server in a Virtualized Environment

System Component	Minimum Requirement
Processor	Two processors each equivalent to an Intel Xeon Processor E5-2640 (15 MB cache, 2.50 GHz clock, 7.20 GT/s Intel® QPI)
Forward write (fwrite) operations per second	10,000
Virtual CPUs	24
Virtual Disk Space	900 GB
Virtual RAM (VRAM)	32 GB

Table 10 provides additional information about the tested VM hardware and OS specifications that you should use when configuring a virtual machine to support Cisco StadiumVision Director.

Table 10 Virtual Machine Hardware and OS Specifications Tested for Cisco Stadium Vision Director Server

System Component	Specification
VM Hardware	Version 8
Guest Operating System	RedHat Enterprise Linux 5 (64-bit)
Network Adapter	E1000
SCSI Controller	LSI Logic Parallel or LSI Logic SAS
Disk Provisioning	Thick

VMware vSphere Tested Versions for Cisco StadiumVision Director

Cisco StadiumVision Director has been tested with VMware vSphere Version 5.1 and 5.5 using the minimum requirements described in Table 9. Other VMware vSphere versions cannot be guaranteed to work with Cisco StadiumVision Director.



Any VMware license that does not allow your virtual machine to be set to the minimum requirements described in Table 9 is not supported.

For more information about installing Cisco StadiumVision Director servers, see the *Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.1.*

Restrictions for Virtual Server Support

Be sure that you consider the following restrictions before you configure a virtual server environment for Cisco StadiumVision Director:

• Migrating to a virtual environment on your existing Platform 2 or Platform 3 servers is not supported. For more information, see the "Important Migration and Upgrade Notes" section on page 44.

- When using a virtual server environment, Cisco Technical Support only provides support for the Cisco StadiumVision software. No support is provided for third-party hardware or the virtual OS environment installed by the customer.
- The recommended configuration is for a dual virtual server environment to support a primary and backup server using the standard Cisco Stadium Vision Director backup/restore and failover tools.
- Cisco has not tested and does not provide support for any VMware tools in a Cisco StadiumVision system. If your site chooses to use backup, recovery or other tools outside of the Cisco StadiumVision Director software to manage your virtual servers, then you accept the risks and responsibility associated with securing your data.

Cisco Stadium Vision Director Remote Server Support



Cisco Stadium Vision Director Remote is supported by the Cisco DMP 4310G only.

You can use your own server or install a Cisco UCS C22 server¹ to run the Cisco StadiumVision Director Remote software. Be sure that your configuration meets the minimum system requirements in Table 11 and supports a VMware virtual machine environment with a compatible vSphere version (See "VMware vSphere Tested Versions for Cisco StadiumVision Director Remote" section on page 12.)



Cisco StadiumVision Director Remote servers are meant to be physically located close to the DMPs that they operate with, such as at the remote venue edge, and communicating to the players over a LAN. For information about installation-related licensing compliance, see the "Installation Requirements for Licensing Compliance" section on page 43.

Table 11 Minimum System Requirements for the Cisco Stadium Vision Director Remote Server

System Component	Minimum Requirement		
Hard Drive Capacity	300 GB		
	Note The hard drives must be configured as a single logical volume. A RAID volume is strongly recommended.		
Processor	Single processor equivalent to an Intel Xeon Processor E5-2420 (15 MB cache, 1.90 GHz clock, 7.20 GT/s Intel® QPI)		
Virtual RAM (VRAM)	16 GB		

VMware vSphere Tested Versions for Cisco StadiumVision Director Remote

Cisco StadiumVision Director Remote has been tested with VMware vSphere Version 5.1 and 5.5 using the minimum requirements described in Table 11. Other VMware vSphere versions cannot be guaranteed to work with Cisco StadiumVision Director Remote.



Any VMware license that does not allow your virtual machine to be set to the minimum requirements described in Table 11 is not supported.

1. The Cisco UCS C22 server has reached End-of-Sale.

For more information about installing Cisco StadiumVision Director Remote servers, see the *Cisco StadiumVision Director Remote Installation and Upgrade Guide, Release 4.1.*

Cisco StadiumVision Headend Support

Table 12 describes the Cisco StadiumVision headend hardware and software supported in Cisco StadiumVision Director Release 4.1.

Table 12 Supported Cisco Stadium Vision Headend Hardware and Software

Hardware Device		Software Version			
Core/I	Distribution and Access Layer Switches				
Note	-	efer to the Recommended Equipment Lists documented an <i>Guide</i> (available to qualified Cisco Stadium Vision t Partner Portal).			
Cisco	Atlas MKII Digital Terrestrial Receiver	Note	This device is EOS/EOL and is replaced by the Cisco 9887B DVB-T Digital Terrestrial Receiver.		
	TLV 400 DVB-T2 Digital Terrestrial	The re	lease that ships with the device is recommended.		
Receiv	ver	Note	Other DVEO demodulators/receivers models might be recommended depending on the requirements of the customer.		
Cisco D9094 HD Encoder		Note	This device is EOS/EOL and is replaced by the Cisco D9096 encoder.		
Cisco D9096 4:2:2 10-Bit AVC Encoder (HD and SD encoder) ¹		• 2.0.1.3 (build 25.0.5)—Currently shipping with all new hardware and the <i>only</i> qualified SV release.			
		Note	Do <i>not</i> use any firmware versions other than the specific build qualified here. Also, <i>do not</i> downgrade any 2.0.1.3 release to 2.0.0.0 or any other release.		
		Note	Non-upgradable hardware PID D9096-1C8-NU-K9 is EOS/EOL.		
	D9854 Advanced Program Receiver	The re	lease that ships with the device is recommended.		
(DVB-S/S2/ Satellite receiver)		Note	This is one of the replacements for the EOS/EOL of the DCM DVB-S/S2 2-Port Receiver module for low-density implementation for DVB-S2/Satellite reception.		
	D9858 Advanced Receiver Transcoder	R3.96			
(MPE	G-4 to MPEG-2 HD transcoder)	Note	This product is now EOS/EOL and is replaced by the Cisco D9859.		
Cisco D9859 Advanced Receiver Transcoder (MPEG-4 to MPEG-2 HD transcoder) ²		The re	lease that ships with the device is recommended.		

Table 12 Supported Cisco Stadium Vision Headend Hardware and Software (continued)

Hardware Device		Software Version			
Cisco D9887B HDTV Modular Receiver	6.3.2	and later			
		This product is used for DVB-T reception only and is no longer used for 8VSB. The 8-Port DCM DRD 8VSB Receiver module is recommended for ATSC/8VSB Demodulation in North America.			
	Note	This product is EOS/EOL and replaced by the third-party product Sencore MRD 4400.			
Cisco DCM Series D9900 Digital Content	• 8.	.01.86 and later			
Manager (DCM) (MKI chassis)	• 1	6 Gb Flash—8.7.0 and later			
	Note	DCMs with only 1G flash do not support releases past 8.1.86.and will need a Flash card upgrade to 16G to upgrade past DCM release 8.1.86. DRD DVB-S2 cards require DCM 9.1.x and later.			
	Note	This device is EOS/EOL and is replaced by the Cisco D9902 DCM.			
Cisco DCM Series D9902 Digital Content	• 16 Gb Flash—10.0 and later				
Manager (MKII chassis)	Note	The DCM 9902 uses the MKII Chassis instead of the MKI used in the replaced Cisco DCM 9900.			
	Note	The existing MKI DVB-S/S2 Satellite receiver modules and the 8-VSB Terrestrial receiver modules are compatible with the MKII.			
Cisco DCM 8-Port 8-VSB/ ATSC/ Off-Air	DCM	Release 8.01.86 (minimum version)			
Receiver Module ³	Note	DCM Release 8.07.00 is recommended, and the operations of the 8-VSB receiver modules on the DCM require 16 GB Flash. This is used only in North America for Terrestrial/Off-Air reception.			
	Note	The Cisco DCM 4-Port 8-VSB receiver module for ATSC/Off-Air/Terrestrial reception used in North America will be EOL/EOS by April 2014. The replacement is the Cisco DCM 8-Port 8-VSB ATSC Terrestrial receiver module.			
		Cisco DCM 8-VSB modules are compatible with the DCM MKI and MKII Chassis.			

Table 12 Supported Cisco Stadium Vision Headend Hardware and Software (continued)

Hardware Device	Software Version			
Cisco 4-Port DVBS/S2 Satellite Receiver	DCM Release V9.10.00 and later			
Module ⁴	Note The Cisco DCM 2-port DVB-S/S2 receiver modules are EOS/EOL and are replaced by the DCM 4-port DVB-S/S2 receiver module for high density implementation.			
	Note The Cisco D9854 is the replacement for low-density implementations of DVB-S2/Satellite reception.			
	This module is compatible with both the Cisco DCM D9900 (MKI) and Cisco DCM 9D902 (MKII) chassis.			
Cisco RF Gateway 1 (QAM modulator)	The release that ships with the device is recommended.			
Cisco Spectra QAM Demodulator	Note This device is EOS/EOL and is replaced by the DVEO DVB-C Digital QAM Receiver.			
	The selection of modules/part numbers recommended for DVB-C clear QAM demodulation is per-DVEO discretion for each customer specification and could change.			
DVEO TLV 400 DVB-C Digital QAM	The release that ships with the device is recommended.			
Receiver ⁵	Note The selection of modules/part numbers recommended for DVB-C clear QAM demodulation is per-DVEO discretion for each customer specification and could change.			
DVEO OnRamp Analog Terrestrial Receiver—MPEG-2 output	The release that ships with the device is recommended.			
DVEO GearBox Analog Terrestrial Receiver—MPEG-4 output	The release that ships with the device is recommended.			
Scientific Atlanta Titan S2 DVB-S2 Digital	Software Version V02.01.03			
Satellite Receiver	Hardware Version F02 Bootloader Version V03.01.42528			
	Note This device has reached EOS/EOL and is replaced by the Cisco DCM 4-Port DVB-S/S2 Receiver Module.			
Technicolor COM100 with COM24 cards	ST02.00.3 or later (to support 3D or sonic Tap)			
Technicolor COM200 with COM24 cards	ST02.00.3 or later			

- 1. The Cisco D9096 4:2:2 10-Bit AVC Encoder is the replacement for the Cisco D9094 HD Encoder.
- 2. The Cisco D9859 Advanced Receiver Transcoder is the replacement for the Cisco D9858.
- 3. The Cisco DCM 8-VSB ATSC Off-Air Reception Module is the replacement for the Cisco D9887 HDTV Modular Receiver for North American ATSC implementations only.
- 4. The Cisco 4-Port DVBS/S2 Satellite Receiver Module is the replacement for the Cisco Titan DVB-S2 Digital Receiver and Cisco Indus MK II Transport Stream Descrambler.
- 5. The DVEO TLV 400 DVB-C Digital QAM Receiver is the replacement for the Cisco Spectra QAM Demodulator.

Cisco Unified Communications Support

The Cisco Stadium Vision solution supports the Cisco Unified IP Phone 7975G and 9971 models.

Cisco Unified IP Phone 7975G

Table 13 lists the combinations of Cisco Unified Communications Manager (CUCM) and firmware for the Cisco Unified IP Phone 7975G that were tested for compatibility with Cisco Stadium Vision Director Release 4.1.

Table 13 Tested Cisco Unified Communications Compatibility for the IP Phone 7975G

IP Phone Model	CUCM Version	Cisco Unified IP Phone Firmware
Cisco Unified IP Phone 7975G	9.1(2)	9.3(1) SR4
	10.5(2)	9.4.2

Cisco Unified IP Phone 9971

Table 14 lists the combinations of Cisco Unified Communications Manager (CUCM) and firmware for the Cisco Unified IP Phone 9971 that were tested for compatibility with Cisco Stadium Vision Director Release 4.1.

Table 14 Tested Cisco Unified Communications Compatibility for the IP Phone 9971

IP Phone Model	CUCM Version	Cisco Unified IP Phone Firmware
Cisco Unified IP Phone 9971	9.1(2)	9.3(1) SR4
	10.5(2)	9.4.2



Although not all combinations have been tested, earlier maintenance versions of CUCM are also likely to work with Cisco Stadium Vision Director Release 4.1. Avoid trying to use any major version other than 9.1 or 10.5.

Commerce Integration Systems Support

Table 15 provides information about the hardware and software for third-party commerce integration systems that have been tested with Cisco StadiumVision Director Release 4.1.

Table 15 Tested Commerce Integration Systems Compatibility

Hardware Device ¹	Software Version
Micros 9700 Enterprise Management Console	3.60.380
Micros 9700 Suites Management Application	1.0
Micros 9700 ContentManager	1.01

Table 15 Tested Commerce Integration Systems Compatibility (continued)

Hardware Device ¹	Software Version
Quest Venue Manager ²	1.5.157 Build 2
	2.0.1 Build 1 (new version for 4.0)
Quest Suite Catering Module ²	1.5.157 Build 2

- 1. For supported hardware configuration, contact Micros or for Quest software, NCR Corporation.
- 2. Quest Venue Manager and Quest Suite Catering Module software are now owned by NCR Corporation.

Media Controller Systems Support

Table 16 provides information about the hardware and software for third-party media controller systems that have been tested to support the External Event Trigger feature in Cisco StadiumVision Director Release 4.1.

Table 16 Tested Media Controller Systems Compatibility

Hardware Device	Minimum Firmware Version	Custom Software Module ¹
Crestron Room Media Controller (QM-RMC)	4.001.1012	Cisco_StadiumVision_Alert_Trigger-v2.spz

^{1.} Available to certified Crestron integrators through Crestron.



To support the Crestron Room Media Controller with Cisco Stadium Vision Director it requires that you work with a Crestron reseller to install the appropriate software on the QM-RMC.

Touch Screen Devices and Controller Support



Touch screens are not supported for the SV-4K and DMP-2K media player in Cisco StadiumVision Director Release 4.1.

Cisco StadiumVision Director supports a limited number of touch screen drivers for the Cisco DMP 4310G. To ensure compatibility of your devices, contact your Cisco Systems sales representative.

See the "Installation Notes" section on page 43 and the "How to Enable a DMP for Touch Screen Control" task note for more information about how to configure this support.

Unsupported Hardware in Cisco StadiumVision Director Release 4.1

The following hardware products are no longer supported in Cisco Stadium Vision Director Release 4.1:

• Platform 2 Server (SV-DIRECTOR-K9 or SV-PLATFORM2=)

Security Information and Advisories for Cisco StadiumVision Director Release 4.1



These release notes do not qualify any specific details about possible security issues for your Cisco StadiumVision network or products, and do not call attention to all possible relevant security information.

For the most up-to-date information about different levels of security information for Cisco Systems products, go to:

http://tools.cisco.com/security/center/home.x

API Summary

Release 4.1 introduces support for start/stop streaming of encoded video as a multicast channel using the HDMI-In port on the SV-4K media player in the User Control API.

For information about supported APIs, see the "Introduction to Cisco StadiumVision Director APIs" section of the *Cisco StadiumVision Director Operations Guide*.



All APIs in Cisco StadiumVision Director are made available by special agreement. Contact your Cisco Systems representative for more information.

Feature Summary by Media Player Model

Table 17 provides a summary of the software features supported in Cisco StadiumVision Director Release 4.1 by media player model.

Table 17 Software Feature Map

Cisco StadiumVision Director Feature	SV-4K	DMP-2K	DMP 4310G
4K Local Video ¹	Yes	No	No
AC3/AC3+ (Dolby Digital audio decode) ²	Yes	Yes	No
Auto-Registration	Yes	Yes	Yes
Bulk Administration Tool (BAT)	Yes	Yes	Yes
Cisco StadiumVision Director Remote Server	No	No	Yes
Closed Caption	Yes	Yes	Yes
Command Center Monitoring ¹	Yes	Yes	Yes ³
Content Replacement ⁴	Yes	Yes	Yes
Content Synchronization (between same media player models only)	Yes	Yes	Yes ⁵
Custom applications using GAR	No	No	Yes

Table 17 Software Feature Map (continued)

Cisco StadiumVision Director Feature	SV-4K	DMP-2K	DMP 4310G
Custom fonts (through Software Manager)	Yes	Yes	Yes
Dual Video Regions	Yes	Yes	No
External Content Integration	Yes	Yes	Yes
Event Script Scheduler	Yes	Yes	Yes
Flash Content	No	No	Yes
Group/Zone configuration	Yes	Yes	Yes
HDMI-In as a Video Source ¹	Yes	No	No
Luma key support for second video region	Yes	Yes	No
Management Dashboard Commands ⁶	Yes	Yes	Yes
Management Dashboard Firmware configuration	Yes	Yes	Yes
Management Dashboard Model Filtering	Yes	Yes	Yes
Management Dashboard Monitoring	Yes	Yes	Yes
Network Time Protocol (NTP) configuration	Yes	Yes	Yes
Precision Time Protocol (PTP) configuration	Yes	Yes	No
POS Integration with Dynamic Menu Board (DMB) GAR application	No	No	Yes
POS Integration with DMB using Widgets	Yes	Yes	Yes
Proof of Play (PoP)	Yes	Yes	Yes
Proxy device support	No	No	Yes
Self-Service Content (SSC)	No	No	Yes
Suite Ordering	No	No	Yes
Ticker (legacy) from Control Panel Setup	No	No	Yes
Ticker (RSS in External Content Integration)	Yes	Yes	Yes
Touchscreen (with Channel Guide)	No	No	Yes
TV Control using RS-232 and IR Remote	Yes	Yes	Yes
Video Encoding as a Channel ¹	Yes	No	No
Video Streaming Through HDMI-Out ¹	Yes	No	No
Widgets tool	Yes	Yes	Yes

^{1.} Introduced in Cisco Stadium Vision Director Release 4.1.

^{2.} Support for AC3+ audio decodes is introduced with the SV-4K and DMP-2K firmware version 6.0.83.

^{3.} Thumbnail view in CCM is not supported on the Cisco DMP 4310G.

Content replacement for the SV-4K and DMP-2K is only supported through an update of the playlist.
 Performing content replacement from the Control screen using the content replacement icon is not supported.



- 5. The Cisco DMP 4310G does not support PTP. Therefore, there will be more variance across DMPs when playing the same video file.
- The SV-4K and DMP-2K support a subset of original Dashboard commands. See the "Appendix:
 Management Dashboard Commands for the SV-4K Player" in the Cisco Stadium Vision SV-4K Media
 Player Deployment Guide.

Internationalization and Localization



A Cisco StadiumVision Director system that is using language support from Release 4.0.0-707 (SP2) or Release 4.0.0-732 (SP3), will lose that support when first upgraded to Release 4.1, until language packs for the new release are installed. For more information, see the "Language Packs for Localization" section on page 21.

Internationalization (i18n)

Internationalization (known as i18n) support refers to the software infrastructure that is designed to accommodate multiple language translations (localization) without requiring additional engineering changes to that software.

The Cisco Stadium Vision Director Release 4.1 software supports i18n for the following general areas of the solution:

- Control Panel in Cisco Stadium Vision Director
- Dynamic Menu Board application
- Management Dashboard in Cisco StadiumVision Director
- IP Phone user interface
- Software Manager
- TV user interface

Localization (L10n)

Localization (known as L10n) refers to the implementation of the specific regional language translation support within a software interface that has been designed for i18n. In Cisco StadiumVision Director Release 4.1 English is the default language for the Cisco StadiumVision solution.



Certain locales are not supported in Release 4.1, such as right-to-left languages.

Language Packs for Localization



Language packs are release-specific. They are not available with the initial release of Cisco StadiumVision Director Release 4.1. You can install available language packs for Release 4.1, after you have installed or upgraded to Release 4.1, and when the 4.1 version of the language pack for the desired language is available.

An update to the initial set of language packs has been released to support localization fixes in Cisco StadiumVision Director Release 4.1.0-508 (SP1). Although the latest release of language packs can be installed with Cisco StadiumVision Director Release 4.1.0-419, you need to upgrade to Release 4.1.0-508 first to get the full benefits of the localization changes.

Cisco StadiumVision Director provides increased flexibility to upload and install only the specific language(s) that you want to support through the independent installation of Language Packs. The upload and installation of the language packs is performed using the Software Manager from the Cisco StadiumVision Director main menu. For more information about how to install language packs, see the Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.1.



A Cisco StadiumVision Director system that is using language support from Release 4.0.0-707 (SP2) or Release 4.0.0-732 (SP3) will lose that support when first upgraded to Release 4.1, until language packs for Release 4.1 are available and installed.

The supported languages in Cisco StadiumVision Director Release 4.1.0-419 and later are:

- Deutsch (de_DE)
- English (en_US). This is the default locale in all Cisco StadiumVision Director releases.
- French (fr_FR)
- Portuguese (pt_BR)
- Russian (ru_RU)
- Simplified Chinese (zh_CN)
- Spanish (es_ES)
- Swedish (sv_SE)
- Traditional Chinese (zh_TW)
- Turkish (tr TR)

For more information about requirements and restrictions in configuring localization in Cisco StadiumVision Director, including IP phone support, see the *Cisco StadiumVision Director Localization Guide*.

Translated User Documents

Available versions of translated end-user documents for Cisco Stadium Vision Director can be found at:

http://www.cisco.com/c/en/us/support/video/stadiumvision/tsd-products-support-translated-end-user-g uides-list.html

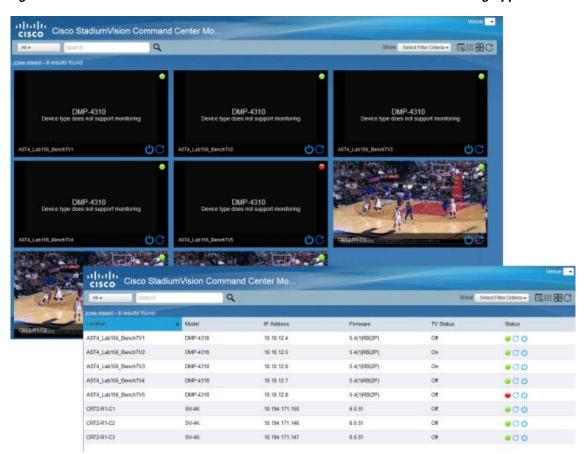
New and Changed Information in Cisco StadiumVision Director Release 4.1

This section describes new features, enhancements and changes in support or behavior in Cisco Stadium Vision Director Release 4.1. It includes the following sections:

- Command Center Monitoring Application, page 22
- Content Feature Enhancements, page 23
- Disable Display of Address Information on Media Player Startup, page 29
- Media Player Enhancements, page 29
- System Enhancements, page 35
- Text Utility Interface, page 36
- User Control API, page 38
- User Interface Change Summary, page 38

Command Center Monitoring Application

Figure 1 Thumbnail View and Grid View in the Command Center Monitoring Application



WHAT IS IT

- A remotely-accessible monitoring application from the Cisco Stadium Vision Director Main Menu that polls media players every 120 seconds to show at-a-glance device status information for the media player and attached TV display during an event.
- Supports different ways to view device status, including:
 - Grid view—Provides detailed device status information.
 - 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.



The Cisco DMP 4310G does not support display of the content thumbnail.

- 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.

WHY USE IT

Use the feature for overall device health monitoring during an event across the venue and for a quick way to restart a device.

FOR MORE INFORMATION

Cisco Stadium Vision Director Operations Guide

Content Feature Enhancements

Cisco Stadium Vision Director Release 4.1 provides the following content enhancements:

- Guidelines for 4K Video Content on the SV-4K Media Player, page 23
- 4K Local Video on the SV-4K Media Player, page 25
- HDMI-In Encoding on the SV-4K Media Player to Stream Video as a Channel in Cisco Stadium Vision Director, page 26
- HDMI-In as a Video Source in a Region on the SV-4K Media Player, page 27
- Improvement in Requirements for Video Content Synchronization on the SV-4K and DMP-2K Media Players, page 28

Guidelines for 4K Video Content on the SV-4K Media Player



Only 4K video content is supported in Release 4.1. 4K graphics are not supported.

4K Video Encoding Guidelines



Be sure to test the devices that you plan to connect to the SV-4K HDMI-In port to stream content for support of HDCP. 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.

Before preparing 4K video content for the SV-4K media player, be sure that your content meets the following requirements:

- Video encoding—H.265 High Efficiency Video Coding (HEVC).
- H.265 version 1 profiles only—Main and Main 10.
- Video encode bit rate (vbitrate)—2000 to 25000 Kbps.
- Maximum streaming bit rate (with HDMI-In encoding)—Two times the video encode bit rate is recommended.
- Constant Bit Rate (CBR)—Recommended for all local video on the SV-4K.

For more information about content guidelines, see the Cisco Stadium Vision Content Creation Design and Specification Guide.

4K Video Restrictions

Before preparing 4K video content for the SV-4K media player, consider the following restrictions:

- H.264 video encoding is not supported. Be sure that your content tools support H.265 encoding.
- Display of dual 4K video regions is not supported.
 - The 4K video region should be played in the primary video region only. A secondary video region can support up to HD (1920x1080) video resolution.
- 4K video can be displayed in full ultra HD resolution (3840x2160) when using any of the Cisco Stadium Vision Director templates using the primary video region.
- Video with 4K resolution is not supported for HDMI-In streaming on the SV-4K.
- No luma key can be applied to 4K video. Luma keying is only supported with 4K for dual video when an HD video in the secondary region uses a luma key over a 4K video in the primary region.
- The Screen Template editor in Cisco StadiumVision Director presents all region sizes based on an HD 1920x1080 canvas size—do not configure templates based on the ultra HD size of 3840x2160 when using a 4K display.



Tip

The best practice when using any templates with native 4K video, is to design all content/regions for HD 1920x1080. The image content that is displayed with the 4K video will resize proportionally to a 3840x2160 canvas size automatically.

• 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 (Figure 2).

Figure 2 Fixed 4K Resolution Setting in the sv4k.videoMode Serial Command



For more information about how to specify the TV display resolution, see the "Configuring Resolution Under Control Panel Display Specifications" in the *Cisco StadiumVision Director Operations Guide*, *Release 4.1*.

4K Local Video on the SV-4K Media Player



This feature is only supported on the SV-4K media player.

WHAT IS IT

Feature to support import of 4K video into the Cisco Stadium Vision Director content library and playing it through a playlist.

WHY USE IT

When you want to display an independent 4K video as part of a typical playlist setup for an SV-4K media player.

FOR MORE INFORMATION

- "Guidelines for 4K Video Content on the SV-4K Media Player" section on page 23.
- "Importing Local Video and Content Images to the Content Library" topic in the *Cisco StadiumVision Director Operations Guide*.
- "Working With Playlists in Cisco Stadium Vision Director" topic in the *Cisco Stadium Vision Director Operations Guide*.

HDMI-In Encoding on the SV-4K Media Player to Stream Video as a Channel in Cisco Stadium Vision Director



- This feature requires a separate encoder software license. For more information, see the "Product IDs in Cisco StadiumVision Director Release 4.1 for Software Licenses" section on page 8.
- Be sure to 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.

WHAT IS IT

- Feature to support streaming video from a laptop or other supported device connected to the HDMI-In port on an SV-4K media player to be played as a multicast-based channel in Cisco StadiumVision Director.
- The allowable multicast range to use for this feature in the Connected Stadium network is 239.193.20.0/24.
- Start/stop of video streaming is performed by script action (see Figure 7), IP phone, IR remote, User Control API, or command in the Management Dashboard.
- Control of playing the video at the location is through local control—IP phone, IR remote, or user control (local control) API.
- If you set up a channel guide for multiple suites, then you will also need to select the logical local channel that you set up for HDMI-In. Figure 3 shows an example of an IR remote menu with HDMI-In channels available for selection.





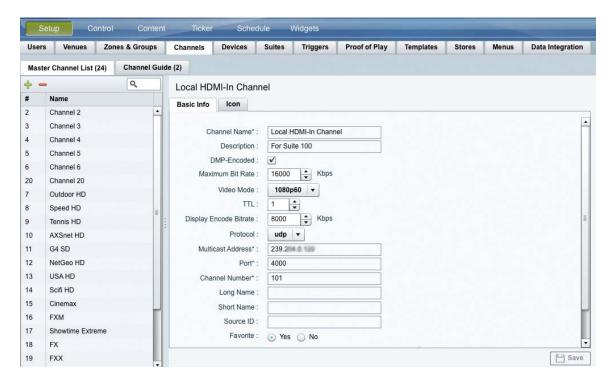
WHY USE IT

When you want to stream video from a laptop (or other supported device) to a particular suite or area in the venue as a channel that you can tune to from the location by local control.

WHERE TO CONFIGURE IT



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.



FOR MORE INFORMATION

- "How to Configure HDMI-In Video Sources on the SV-4K" module of the *Cisco StadiumVision Director Operations Guide*.
- "Guidelines for 4K Video Content on the SV-4K Media Player" section on page 23.
- Cisco StadiumVision Content Creation and Specification Guide
- "How to Configure Channels" topic in the Cisco Stadium Vision Director Operations Guide.
- Cisco Connected Stadium Design Guide (available to qualified Cisco Stadium Vision partners in the Sports & Entertainment Partner Portal)

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



Be sure to 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.

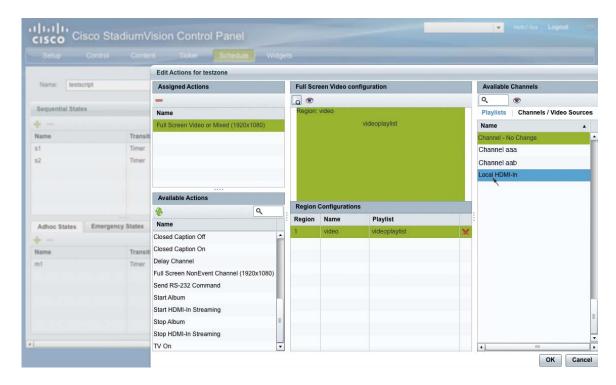
WHAT IS IT

- Feature to support streaming video from a laptop or other supported device connected to the HDMI-In port on an SV-4K media player to be played in a video region that is set up as a video source when scheduling a script and without creating a playlist.
- Local HDMI-In is added under Channels/Video Sources tab.
- Control of playing the video at the location is through the script.

WHY USE IT

When you want to play video through HDMI-In and control it through script scheduling. You can also set this up for a private event to start streaming and then be able to play video when ready in that location.

WHERE TO CONFIGURE IT



FOR MORE INFORMATION

• "How to Configure HDMI-In Video Sources on the SV-4K" module of the *Cisco StadiumVision Director Operations Guide*.

Improvement in Requirements for Video Content Synchronization on the SV-4K and DMP-2K Media Players

Cisco Stadium Vision Director Release 4.1 eliminates the following requirements for video content synchronization from Release 4.0:

- Templates no longer need to be identical.
- Only video regions (primary and secondary) are compared. Primary regions are compared to
 primary regions, and secondary regions are compared to secondary regions. Non-video regions are
 ignored for synchronization.

Disable Display of Address Information on Media Player Startup

WHAT IS IT

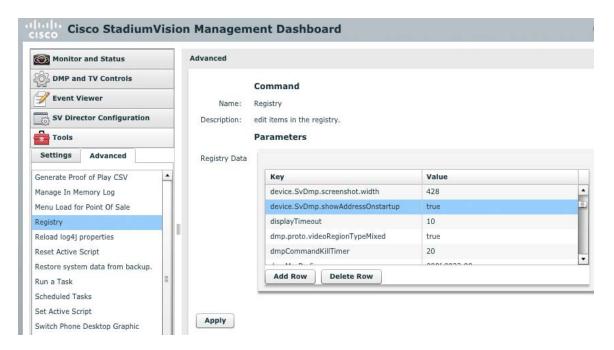
Feature that adds a registry key in the Management Dashboard to control display of IP and MAC address information on the TV display when a media player starts up. By default, the address information is displayed to help with media player deployment and troubleshooting.

WHY USE IT

Use this feature to disable the display of device address information on the TV display in a public area when the media player is restarted to help protect network information at the venue.

WHERE TO CONFIGURE IT

Go to the Registry in the Management Dashboard and change the value for the device.SvDMP.showAddressOnstartup key to false.



Media Player Enhancements

Cisco Stadium Vision Director Release 4.1 introduces the following media player enhancements:

- AC3+ Support on the SV-4K and DMP-2K Media Player, page 30
- Configurable Multicast Video Tune-In Timeout, page 30
- New HTML5 Rendition Engine for the SV-4K and DMP-2K Media Player, page 30
- Portrait Mode Content Renditions for SV-4K and DMP-2K Media Players (Beta Feature Only), page 31
- PTP Master Election Per VLAN for SV-4K and DMP-2K Media Players, page 32
- SNMP Agent Service for the SV-4K and DMP-2K Media Player, page 32
- SV-4K and DMP-2K System Font Support, page 33

AC3+ Support on the SV-4K and DMP-2K Media Player

Beginning in Release 4.1.0-419 the SV-4K and DMP-2K media player support Dolby Digital AC3+ audio decodes.

Configurable Multicast Video Tune-In Timeout



This feature is introduced in Cisco Stadium Vision Director Release 4.1.0-508 (SP1).

WHAT IS IT

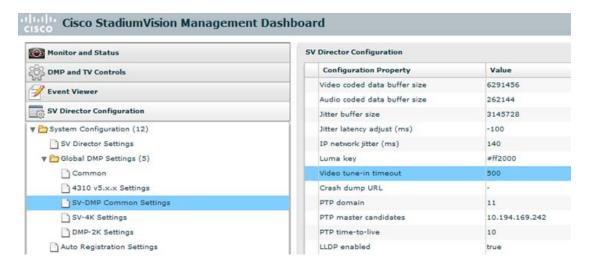
The **Video tune-in timeout** is a new common DMP setting for the SV-4K and DMP-2K media player that allows the default timeout of 500 ms to be changed. The value is used for receiving multicast video information on the network and for DCM failure detection.

WHY USE IT

Certain venues might encounter network conditions requiring a change in this value to properly tune multicast video operation.

WHERE TO CONFIGURE IT

Go to Management Dashboard > SV Director Configuration > System Configuration > Global DMP Settings > SV-DMP Common Settings and configure a new value in milliseconds for the "Video tune-in timeout" property. After you change and refresh the property value, you must reboot the DMP(s).



New HTML5 Rendition Engine for the SV-4K and DMP-2K Media Player

Firmware version 6.0.83 introduces a new rendition engine for HTML5 content. For information about HTML5 content guidelines, see the *Cisco StadiumVision Content Design and Specification Guide*.

Portrait Mode Content Renditions for SV-4K and DMP-2K Media Players (Beta Feature Only)



Portrait mode rendition support is introduced as a Beta feature. As a Beta feature, the portrait mode functionality is not fully tested *or supported*. Therefore, it is not intended for production environments due to the potential of unexpected behavior.

WHAT IS IT

Portrait mode is a new rendition mode enabled by serial command for TV displays controlled by SV-4K or DMP-2K media players. It allows the DMPs to automatically rotate content for proper orientation on vertically-positioned displays.

Consider the following restrictions:

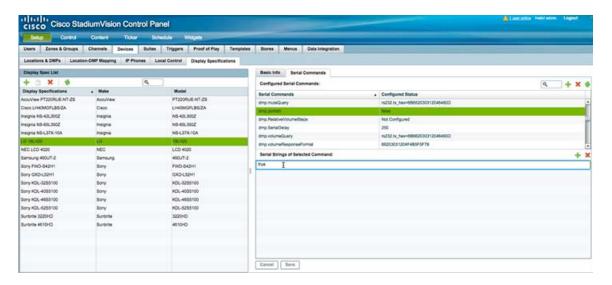
- Portrait mode is not supported with HDMI-In encoding or streaming on the SV-4K.
- Certain startup and diagnostic screens do not rotate and appear cut off on the display.

WHY USE IT

Use portrait mode for vertical TV displays to test auto-rotation of content that would otherwise be improperly cut off and displayed sideways with the default landscape orientation.

WHERE TO CONFIGURE IT

Go to **Control Panel > Setup > Devices > Display Specifications** and select or add your display. In the Serial Commands panel, add the "dmp.portrait" command and set it to true.





The use of portrait mode implies that your video mode (sv4k.videoMode) is set to 1920x1080x60p and that you are using templates designed for content up to 1920 pixels high and 1080 pixels wide. The default canvas will still show horizontal orientation, but you can add regions that extend beyond the canvas.

PTP Master Election Per VLAN for SV-4K and DMP-2K Media Players

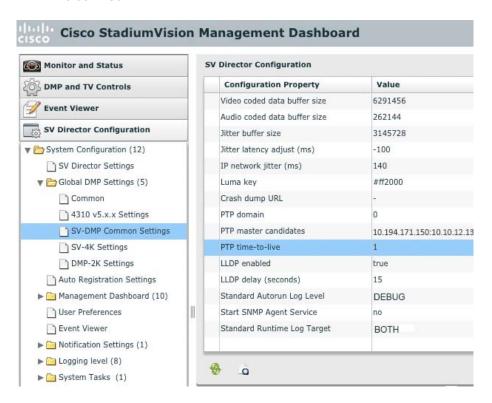
WHAT IS IT

Feature that implements a new Precision Time Protocol (PTP) Time To Live (TTL) setting that controls the number of VLANs that can be crossed for selection of a PTP master. The default value of 1 means that each VLAN will elect its own PTP master.

WHY USE IT

Best practice is to retain the default value of 1 for election of a PTP master per video wall. With a TTL > 1, degradation in local video synchronization can occur.

WHERE TO CONFIGURE IT



FOR MORE INFORMATION

See the "Configuring the Cisco Stadium Vision Director Server System Settings" module in the Cisco Stadium Vision Director Server Administration Guide, Release 4.1.

SNMP Agent Service for the SV-4K and DMP-2K Media Player

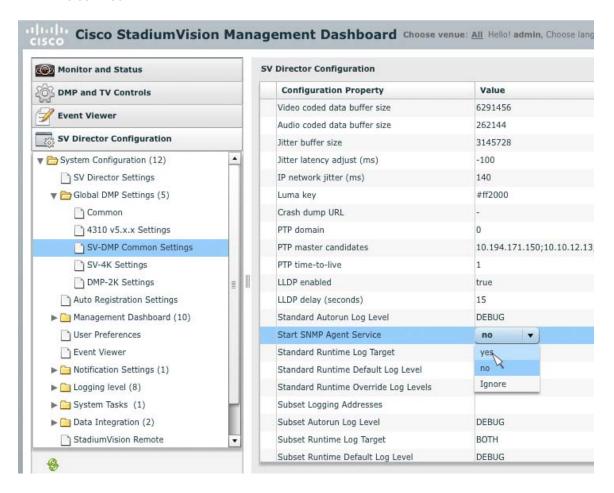
WHAT IS IT

The **Start SNMP Agent Service** is a new common DMP setting for the SV-4K and DMP-2K media player that uses port 161 for both input/output on the device. The service supports SNMPv1 and SNMPv2 and GET operations. You can use the **snmpwalk** command to retrieve MIB values. SNMP traps are not supported.

WHY USE IT

The Simple Network Management Protocol (SNMP) Agent Service should be enabled as determined by the venue's requirements for the exchange of device management information in their network.

WHERE TO CONFIGURE IT



SV-4K and DMP-2K System Font Support

The SV-4K and DMP-2K media player firmware can render most unicode characters as part of the DMP system fonts. This means that the font is available as a substitution font to external content sources such as HTML pages and feeds that might not explicitly reference fonts in their CSS.

Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player



Immediately after installing Cisco StadiumVision Director Release 4.1, you must configure the new auto-registration settings in the Management Dashboard described here and in the "Upgrading the SV-4K and DMP-2K Firmware" module of the *Cisco StadiumVision Director Software Installation and*

Upgrade Guide, Release 4.1.

Failure to perform this configuration can cause the media player to repeatedly boot.

WHAT IS IT

- A new auto-registration process that preserves a required firmware upgrade sequence in Release 4.1 for the SV-4K and DMP-2K media player.
- Introduces concept of base firmware version, in addition to the current production firmware version.
 - Base firmware—A prerequisite firmware version that is required before provisioning of the production firmware version. Can be version 5.1.52, 5.1.65, or 5.1.68.1.
 - Production firmware version—Firmware version required to operate the media player in Release 4.1.
- With proper configuration, allows the run-time software to identify the existing firmware version on the device, automatically provision the base firmware (as required), and provision the production firmware version.

WHY IT IS REQUIRED

Early versions of media player firmware (such as on factory-shipped devices) are not supported for direct upgrade to the production firmware version in Cisco StadiumVision Director Release 4.1.

The Multi-Firmware Version Upgrade feature automates this upgrade sequence as required to simplify the process.

WHERE TO CONFIGURE IT

Go to Management Dashboard > SV Director Configuration > System Configuration > Auto Registration Settings and configure the four required properties shown in Figure 4 and according to Table 18.



For upgrades from devices with firmware version 5.1.52, 5.1.65, or 5.1.68.1, you can simply select that existing firmware as your "Base firmware image to use" since that firmware version is already uploaded to Cisco StadiumVision Director and is a valid prerequisite firmware version. Then, type the corresponding firmware version number in the "base.version" field.

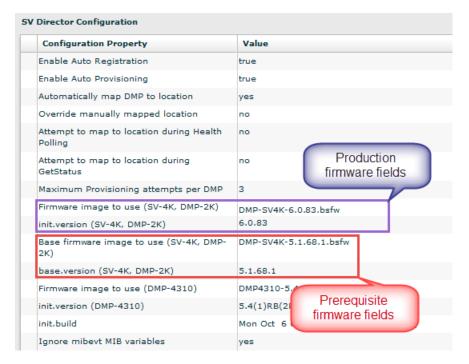


Figure 4 Firmware Image and Version Properties Required to Provision the SV-4K and DMP-2K

Table 18 Required Firmware Properties for the SV-4K and DMP-2K

Firmware Property	Value for Release 4.1
Firmware image to use (SV-4K, DMP-2K)	DMP-SV4K-6.0.83.bsfw
init.version (SV-4K, DMP-2K)	6.0.83
Base firmware image to use (SV-4K, DMP-2K)	If a prerequisite firmware is not already installed, upload and select the 5.1.68.1 firmware file.
	Note Contact your Cisco Systems representative for information about how to obtain the 5.1.68.1 firmware.
base.version (SV-4K, DMP-2K)	5.1.68.1

FOR MORE INFORMATION

- "Cisco Stadium Vision Director Server Support" section on page 8.
- "Upgrading the SV-4K and DMP-2K Firmware" module of the Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.1.

System Enhancements

The following system enhancements are introduced in Cisco Stadium Vision Director Release 4.1:

- Backup Task Behavior, page 36
- Media Player Storage, page 36

Backup Task Behavior

The backup task can now 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.

Although it is not expected that database maintenance should be needed on a regular basis, a possible symptom could be slow performance indicating a need to run database maintenance.



You can look at the backup log (/var/log/svd-config/backup-YYYMMddHHMMSSz.log) to see if the table updates are "OK" and up-to-date. If not, then use the TUI option to run database maintenance. For more information, see the "StadiumVision Server Administration Menu: Database Maintenance" section on page 37.

Media Player Storage

Cisco Stadium Vision Director Release 4.1 reduces the storage required for SV-4K and DMP-2K content on the Cisco Stadium Vision Director server.

No configuration is required for this enhancement.

Text Utility Interface

The following Text Utility Interface (TUI) changes are introduced:

- Services Control Menu: Network Time Sync, page 36
- Stadium Vision Server Administration Menu: Database Maintenance, page 37

Services Control Menu: Network Time Sync

The Services Control menu has been modified to add the "Network Time Sync" option.

WHAT IS IT

A new TUI option that allows you to independently start and stop the network time service (ntpd) in Cisco StadiumVision Director. You also can check status of the service.

WHY USE IT

If for some reason the ntpd service does not start after a server reboot or power failure, this provides a more convenient way to restart it. Prior to this option, you had to rely on editing the ntp.conf file to initiate a restart.

WHERE TO CONFIGURE IT

```
Please choose one of the following menu options:

a) Networking
b) Network Time Sync
c) MySQL
d) Web Server
e) Content Management System (cms)
f) Message Queue (hornetq)
g) Dynamic Menu Board / Portal (liferay)
h) Data Integration (broker)
i) StadiumVision Director Services
R or < or ,) Return to prior menu
```

```
Main Menu > Services Control > Network Time Sync

Please choose one of the following menu options:

a) Show Status
b) Start Service
c) Stop Service
R or < or ,) Return to prior menu
```

FOR MORE INFORMATION

See the "Cisco Stadium Vision Director Text Utility Interface" in the Cisco Stadium Vision Director Server Administration Guide, Release 4.1.

Stadium Vision Server Administration Menu: Database Maintenance

The Stadium Vision Server Administration menu has been modified to add the "Database Maintenance" option.

WHAT IS IT

A new TUI option that allows you to optimize and repair the Cisco StadiumVision Director database.

WHY USE IT

The database is no longer optimized or repaired during the backup process. You can look at the backup log (/var/log/svd-config/backup-*YYYMMddHHMMSSz*.log) to see if the table updates are "OK" and up-to-date. If not, then you can use this TUI option to run database maintenance.

WHERE TO CONFIGURE IT

```
Main Menu > StadiumVision Server Administration

Please choose one of the following menu options:

a) Display Software Version
b) Upgrade Server
c) Restart StadiumVision Director software
d) Shutdown StadiumVision Director software
e) Setup automatic backup and restore
f) Re-Run StadiumVision initial configuration
g) Retention Policy
h) Database Maintenance
i) Failover
j) Reboot
k) Power Off
R or < or ,) Return to prior menu
```

```
Database Maintenance.

This will repair and optimize the database. Ideally, StadiumVision Director should not be running to do this operation. Do you want to continue?

PRESS Y TO CONTINUE, PRESS N TO CANCEL
```

FOR MORE INFORMATION

- See the "Running Database Maintenance" topic in the Cisco Stadium Vision Director Operations
 Guide.
- See the "Cisco Stadium Vision Director Text Utility Interface" in the Cisco Stadium Vision Director Server Administration Guide, Release 4.1.

User Control API

See the "API Summary" section on page 18 for changes to the User Control API in Release 4.1.

User Interface Change Summary

This section provides an overview of the general areas of the Cisco StadiumVision Director user interface (UI) that have been changed in Cisco StadiumVision Director Release 4.1:

- Main Menu, page 39
- Control Panel Setup Channels—Basic Info, page 40
- Management Dashboard, page 41

Main Menu

- The Command Center Monitoring application has been added.
- The Logout button has been changed.

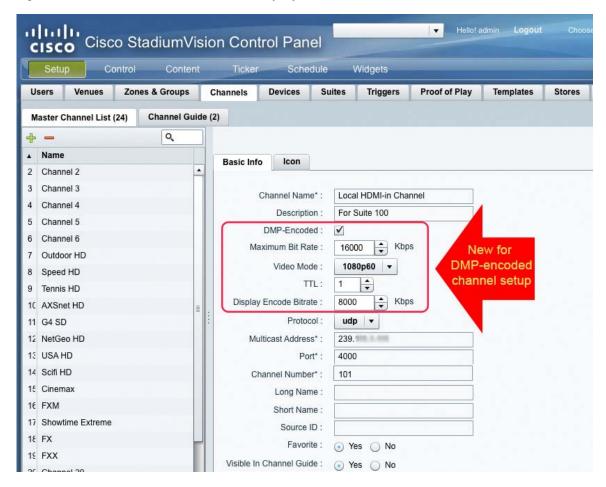
Figure 5 Main Menu in Cisco Stadium Vision Director Release 4.1



Control Panel Setup Channels—Basic Info

New options are added to support configuration of a DMP-encoded channel for use with the SV-4K and HDMI-In video streaming.

Figure 6 DMP-Encoded Channel Setup Options

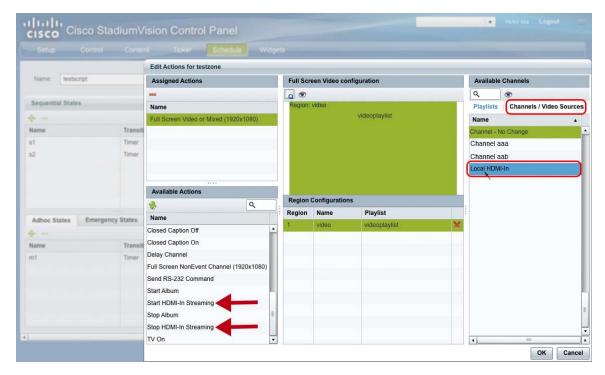


Control Panel Schedule—Edit Actions

Figure 7 highlights the following changes to the Edit Actions dialog box when you assign state actions for a script in the Control Panel Schedule screen:

- The Channels tab is renamed to Channels/Video Sources.
- Local HDMI-In is added to the Channels/Video Sources tab.
- **Start HDMI-In Streaming** and **Stop HDMI-In Streaming** are added to the Available Actions for a script.

Figure 7 Local HDMI-In Video Source Selection and Available Actions



Management Dashboard

This section describes the new and changed areas of the Management Dashboard in Release 4.1:

- Auto-Registration Settings, page 41
- Global DMP Settings, page 42
- Management Dashboard Commands, page 42
- Model Filtering, page 42
- Monitored Services, page 42

Auto-Registration Settings

New and re-qualified auto-registration settings have been added to support firmware provisioning for the SV-4K and DMP-2K media players.

• Firmware image to use (SV-4K, DMP-2K)

- init.version (SV-4K, DMP-2K)
- Base firmware image to use (SV-4K, DMP-2K)
- base.version (SV-4K, DMP-2K)

For more information, see the "Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player" section on page 33.

Global DMP Settings

A new section of common provisioning settings for the SV-4K and DMP-2K is introduced in the Management Dashboard toolbox under SV Director Configuration > System Configuration > Global DMP Settings > SV-DMP Common Settings.

The current sections include:

- Common
- 4310 v5.x.x Settings
- SV-DMP Common Settings (New)
 - Contains many of the settings originally found under SV-4K Settings in Release 4.0.
 - **PTP time-to-live** setting (New)
 - Start SNMP Agent Service (New)
- SV-4K Settings
- DMP-2K Settings (New)

Management Dashboard Commands

This section summarizes new and changed commands in the Management Dashboard.

DMP Commands

The following DMP commands are introduced to encode *any video content* for display *without audio* using the HDMI-Out port on the SV-4K media player:



These commands are intended for lab test purposes only. As a best practice, do not combine use of both HDMI-In and HDMI-Out port connections on the SV-4K media player.

- Start Streaming
- Stop Streaming

DMP Install

The "SV-4K Parameters" tab has been changed to "SV-DMP Parameters" under the **Firmware Upgrade** command.

Model Filtering

The addition of the DMP-2K to the Management Dashboard "Model" filter has been added.

Monitored Services

The Log Monitor service is removed.

Status Details

The Utilization fields are removed from the Status Details panel.

Installation Notes



Immediately after installing Cisco StadiumVision Director Release 4.1, you must configure the new auto-registration settings in the Management Dashboard to install the firmware on the DMPs. Failure to perform this new configuration can cause the media player to repeatedly boot. For more information, be sure to see the "Deployment Guidelines for the SV-4K and DMP-2K Media Players" section on page 46.

This section includes the following installation information:

- Installation Requirements for Licensing Compliance, page 43
- Installation Requirements on New Platform 3 Servers, page 43
- Cisco Stadium Vision Director Remote OVF Deployment, page 44
- Important Migration and Upgrade Notes, page 44
- Deployment Guidelines for the SV-4K and DMP-2K Media Players, page 46

Installation Requirements for Licensing Compliance

To maintain software licensing compliance, Cisco StadiumVision Director servers must be installed in the following manner:

- The Cisco Stadium Vision Director server is installed in a data center or in an enterprise data closet, or the Cisco Stadium Vision Director software is installed on the customer's choice of hardware that supports a VMware virtualized environment.
- The Cisco Stadium Vision Director Remote software is installed on the customer's choice of hardware that supports a VMware virtualized environment, or the remote server hardware is installed in a data center or in an enterprise data closet.

Installation Requirements on New Platform 3 Servers



New Platform 3 servers (SV-DIR-DIRECTOR-K9) come pre-installed with a preliminary image of Cisco StadiumVision Director that is not intended for production operation. You must install the Cisco StadiumVision Director Release 4.1 software from a full ISO image (not an upgrade) that you downloaded from Cisco.com to be sure that you are running the released production version of Cisco StadiumVision Director Release 4.1.

For information about installing a fresh ISO image on a Platform 3 server, see the *Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.0.*

Cisco StadiumVision Director Remote OVF Deployment

New installations of the Cisco Stadium Vision Director Remote Release 4.1.0-10 software are deployed using an Open Virtualization Format (OVF) template and installing a full ISO.

For more information about installation files and upgrade paths, see the "Important Migration and Upgrade Notes" section on page 44.

For more information about installing Cisco StadiumVision Director Remote, see the Cisco StadiumVision Director Remote Installation and Upgrade Guide, Release 4.1.

Important Migration and Upgrade Notes

In this document, the following terminology is used to qualify changes to your Cisco StadiumVision hardware and software environment:

- Migration—Migration means moving an *existing* Cisco StadiumVision Director platform to a new hardware platform in a virtual environment.
- Upgrade—Means changing your software version to a newer release on your existing platform.

Consider the following important changes that are implemented in Cisco StadiumVision Director Release 4.1 for upgrades to existing Cisco StadiumVision Director sites:

- Migration Restrictions, page 44
- Upgrade Paths, page 44
- Installation and Upgrade Files, page 45
- Upgrade Process, page 46

Migration Restrictions

For Release 4.1, migration means moving an *existing* Cisco StadiumVision Director Release 4.1 platform to a new hardware platform in a virtual environment. Brand new installations of Cisco StadiumVision Director Release 4.1 on new platforms in a virtual environment are not considered a migration and are supported.



Migration to a virtual environment on your existing Platform 2 or Platform 3 servers is not supported. For information about migrating from your Platform server to a virtual server environment, see the "Migrating From Platform 2 Servers to a Virtual Environment" module in the *Cisco StadiumVision Director Software Installation and Upgrade Guide, Release 4.1.*

Upgrade Paths



Localization support is introduced through the installation of language packs as they become available in Release 4.1.

Table 19 lists the latest upgrade paths for Cisco StadiumVision Director Release 4.1, with the supported prerequisite release listed in the "From" column. Software versions prior to Release 4.0 must be upgraded serially to the supported 4.0 version before upgrading to Release 4.1.

In general, the supported upgrade paths for Cisco StadiumVision Director follow a linear progression.

Release 4.0 Upgrade Sequence

Release 4.0.0-732 > Release 4.1.0-419

Table 19 Supported Upgrade Paths for Cisco Stadium Vision Director Release 4.1

From:	То:
Release 4.0.0-732 (SP3)	Release 4.1.0-419

Release 4.1 Upgrade Sequence

Release 4.1.0-327 > Release 4.1.0-419 > Release 4.1.0-508 (SP1)

Table 20 Supported Upgrade Paths for Cisco Stadium Vision Director Release 4.1

From:	То:
Release 4.1.0-327	Release 4.1.0-419
Release 4.1.0-419	Release 4.1.0-508 (SP1)

Installation and Upgrade Files

Cisco Stadium Vision Director Release 4.1 software is available in different types of files based on the installation or upgrade environment and product.

ISO Files

ISO files are packaged images that are available in two versions:

- An ISO *full* image—The full ISO file is to be installed only on brand new Cisco StadiumVision Director servers that have no prior Cisco StadiumVision Director software version installed.
- An ISO *upgrade* image—The upgrade ISO file is built for processing using the TUI upgrade utility or Software Manager.



ISO upgrade images are available for both Cisco StadiumVision Director and Cisco StadiumVision Director Remote software.

OVF Files

For new installations, the Cisco StadiumVision Director Remote software is delivered as a .zip file (SV-REMOTE_FULL_TEMPLATE_4.0.0-xx-Y.x86_64.zip) that contains an Open Virtualization Format (OVF) template and full ISO to be installed with a VMware virtual host.

The .zip file contains the following files:

- SV-REMOTE_FULL_TEMPLATE_4.1.0-xx-y.x86_64-disk1.vmdk—VM disk file (binary)
- SV-REMOTE_FULL_TEMPLATE_4.1.0-xx-y.x86_64-file1.iso—Full installation file (binary)

- SV-REMOTE FULL TEMPLATE 4.1.0-xx-y.x86 64.mf—Checksum (text)
- SV-REMOTE_FULL_TEMPLATE_4.1.0-xx-y.x86_64.ovf—XML VM descriptor file (text)

Software Download



You are eligible to obtain information about how to access the Cisco Stadium Vision Director full ISO file, language packs, or Cisco Stadium Vision Director Remote OVF zip file after you have purchased the proper licensing. Contact Cisco Technical Support for information about how to download these files.

If you have a Cisco CCO account and a contract for software download, you can download the Cisco Stadium Vision Director upgrade files on the Cisco.com software download site at:

http://www.cisco.com/cisco/software/navigator.html?mdfid=283479662&i=rm

Upgrade Process

Upgrades to Cisco StadiumVision Director and Cisco StadiumVision Director Remote software are made available using the Software Manager. For more details about upgrading the Cisco StadiumVision Director Remote software for your environment, see the Cisco Stadium Vision Director Remote Software Installation and Upgrade Guide, Release 4.1.

Deployment Guidelines for the SV-4K and DMP-2K Media Players

This section includes the following topics:

- Deployment Guidelines for the DMP-2K Media Player, page 46
- Deployment Guidelines for the SV-4K Media Player, page 47
- New Firmware Configuration for the SV-4K and DMP-2K Media Player, page 47
- Firmware Download for the SV-4K and DMP-2K Media Player, page 47

Deployment Guidelines for the DMP-2K Media Player

Before you deploy the DMP-2K media player, consider the following guidelines:

The DMP-2K has the same requirement as the SV-4K for PoE+ for 30W of port power on the Cisco Connected Stadium switch. Be sure that your switch can meet these and the other requirements for deployment of the device.



Caution

For initial deployment of a new DMP-2K, be sure that:

- —No other accessories are attached to the DMP-2K.
- —You are using standard Category 5e or 6 cabling up to 100 m in length.
- Be sure to configure your DHCP server with the corresponding Option 43 and Option 60 strings for the DMP-2K. Use "Cisco DMP-2K" for the Option 60 Vendor Class Identifier string for new DMPs shipped from the factory.



This Option 60 string is "Brightsign DMP-2K" for early prototypes.

Deployment Guidelines for the SV-4K Media Player



The SV-4K media player has different requirements than the Cisco DMP 4310G, including, but not limited to support of PoE+ for 30W of port power on the Cisco Connected Stadium switch. Be sure that your switch can meet these and the other requirements for deployment of the SV-4K.

For more information, see:

- Cisco StadiumVision SV-4K and DMP-2K Media Player Deployment Guide
- Cisco Connected Stadium Design Guide (available to qualified Cisco Stadium Vision partners in the Sports & Entertainment Partner Portal)

New Firmware Configuration for the SV-4K and DMP-2K Media Player



Immediately after installing Cisco StadiumVision Director Release 4.1, you must configure the new auto-registration settings in the Management Dashboard to install the firmware on the DMPs. Failure to perform this new configuration can cause the media player to repeatedly boot.

In Cisco StadiumVision Director Release 4.1, the SV-4K and DMP-2K media players require that a minimum—or *base*—firmware version is provisioned before they can be upgraded to the *production* firmware version supported in Cisco StadiumVision Director Release 4.1.

A new auto-registration configuration requirement and feature is introduced to ensure that this required firmware upgrade sequence is automatically preserved for affected media players in the system.

For more information, see the "Multi-Firmware Version Upgrade on the SV-4K and DMP-2K Media Player" section on page 33. This also is documented in the "Upgrading the SV-4K and DMP-2K Firmware" module of the *Cisco StadiumVision Director Software Installation and Upgrade Guide*, *Release 4.1*.

Firmware Download for the SV-4K and DMP-2K Media Player

The SV-4K and DMP-2K media player firmware image is not bundled with the Cisco StadiumVision Director software.



v Tip

Be sure to download the firmware to a device that you also can use to access the Cisco StadiumVision Director software.

Downloading the SV-4K and DMP-2K Production Firmware

To download the SV-4K and DMP-2K production firmware, go to:

https://www.brightsign.biz/downloads/dmp-firmware-download-6083-0516

Downloading the SV-4K and DMP-2K Base Firmware

If you do not already have one of the required base firmware versions uploaded to Cisco StadiumVision Director, you must download the firmware image separately from a password-protected site and then upload it to Cisco StadiumVision Director.

Contact your Cisco Systems representative for the "How to Download SV-4K Firmware" document, available to qualified Cisco StadiumVision partners.

Limitations and Restrictions

When using Cisco Stadium Vision Director Release 4.1, be aware of the following limitations and restrictions:



Proof of play raw data repository in /var/sv/pofp/raw directory is not part of the backup process. In normal operation, a completed script with a green dot already has a copy of the raw data and is part of the backup data. No further action is needed aside from generating the PoP report. For completed scripts that do *not* have a green dot, it is very important to investigate or call for support within 60 days of the event, after which time the PoP messages in the raw directory will be deleted.

- If you have previously accessed a different Cisco StadiumVision Director version on your computer, sometimes unexpected behavior or warnings arise, or you might access an older version of the interface. In this case, and especially after an upgrade, you must clear your browser cache.
- The first release of Cisco StadiumVision Director Release 4.1 implements the infrastructure only to support i18n and L10n to support the independent installation of other language packs with Cisco StadiumVision Director Release 4.1 as they become available.
- Cisco StadiumVision Director does not support internationalization for back-end messaging.
- Non-English characters are not supported as a Cisco StadiumVision Director login credential.
- Multi-user support in Cisco StadiumVision Director is limited to script editing only. No other
 Control Panel functions for templates, zones, groups, and playlists support a multi-user
 environment, and these areas can be deleted by other users. However, users are notified about
 potential impact due to currently locked scripts and are prompted for confirmation of deletion and
 given an option to use instant messaging to coordinate with the script owner.
- No more than 10 user sessions can be supported at any one time in the Management Dashboard and Control Panel areas. The system does not prevent more than 10 sessions to be opened, so you need to be careful that you do not exceed this limit.
- No more than 50 staging threads can be processing in Cisco Stadium Vision Director at any one time. The default maximum is 10. The maximum is configured using the "staging Thread Num" registry found under the **Tools** > **Advanced** > **Registry** section of the Management Dashboard.



If auto-registration is enabled and a new DMP is detected, then Cisco StadiumVision Director initiates staging and always uses 50 as the maximum value. In this case, the stagingThreadNum registry setting is ignored and remains unchanged.

Important Notes

This section includes other important information about the Cisco StadiumVision solution that you should know for optimal operation. It includes the following topics:

- Media Player Maintenance Recommendations, page 49
- System Utilization Values, page 49

• System Utilization Values, page 49

Media Player Maintenance Recommendations

To avoid unexpected behavior and maintain normal operation of your devices, it is highly recommended that you perform a soft reboot of all of the media players in your system:

- Cisco DMP 4310G—Weekly.
- SV-4K—Weekly.
- DMP-2K—Every 5 days.

You can reboot DMPs manually or configure a periodic task to run automatically. Remember that the automatic scheduled task applies globally to all media players in the system.



Before you perform a reboot, be sure that there are not any active scripts running.

For more information see the "How to Configure the Reboot DMP System Task From the Management Dashboard" task note.

System Utilization Values

Measurement units for storage in Cisco StadiumVision 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 StadiumVision Director.

Caveats

- Resolved Defects in Cisco Stadium Vision Director Release 4.1.0-419, page 50
- Open Defects in Cisco Stadium Vision Director Release 4.1.0-419, page 51
- Resolved Defects in Cisco Stadium Vision Director Release 4.1.0-327, page 53
- Open Defects in Cisco Stadium Vision Director Release 4.1.0-327, page 54

Resolved Defects in Cisco StadiumVision Director Release 4.1.0-508

Table 21 Resolved Defects in Cisco StadiumVision Director Release 4.1.0-508 (SP1)

Resolved Defect Number	Description of Original Defect
CSCva07956	If dmp.displaypwrQuery key is blank SV-4K periodically sends out null.
CSCva21756	Data preview is not coming for data source in Data Integration.
CSCva21984	Data source not getting un-deployed when CSCva21756 occurs.

Table 21 Resolved Defects in Cisco Stadium Vision Director Release 4.1.0-508 (SP1) (continued)

Resolved Defect Number	Description of Original Defect
CSCva30151	SV-4K list item duplicate when it is hidden from menu theme.
CSCuz89148 (partial)	The following subset of localization defects in this summary defect are resolved with the installation of the latest version of language packs:
	• CSCuz57059
	• CSCuz57057
	• CSCuz56998
	• CSCuz56997
	• CSCuz56995
	• CSCuz56993
	• CSCuz55017
	• CSCuz55013
	• CSCuz54990
	• CSCuz54972

Open Defects in Cisco StadiumVision Director Release 4.1.0-508

All defects that are open in prior Cisco StadiumVision Director Release 4.1.0 releases and not listed as resolved remain open in Cisco StadiumVision Director Release 4.1.0-508.

CSCvb18292—Localization defect summary for 4.1.0-SP1 release.

Resolved Defects in Cisco StadiumVision Director Release 4.1.0-419

Table 22 Resolved Defects in Cisco Stadium Vision Director Release 4.1.0-419

Resolved Defect Number	Description of Original Defect
CSCuy25798	BackupTask and manual backup removes DMPs from active script.
CSCuy28459	In Dashboard the "Export Device List" button is not working.
CSCuy41846	PofP duration expressed msecs for 4310s and secs for SV-4K/DMP-2K.
CSCuz04402	Data Integration Issue with https 2048 Cryptography certificate.
CSCuz04762	Dynamic content changes broken in SVD 4.1.
CSCuz19700	SV4K: After TV on/off from Dashboard RS-232 conn. status is disconnected.
CSCuz53841	Different DMP IP and MAC address are displayed in network information.

Open Defects in Cisco StadiumVision Director Release 4.1.0-419

This section lists the defects that are newly opened in build 419 of Cisco StadiumVision Director Release 4.1.0.



All defects that are open in prior Cisco StadiumVision Director Release 4.1 releases—and not listed as resolved for release 4.1.0-419—remain open in Cisco StadiumVision Director Release 4.1.0-419.

CSCuz89148—Localization defect summary for 4.1.0-GA release.

CSCuz65985—Editing single occurrence in a recurring event keeps earlier event intact.

Symptom Change of script while editing a single occurrence in a recurring event keeps the earlier event intact.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Create a recurring daily/weekly event.
- 2. Edit the single occurrence in the recurring event.
- 3. Change the script.

Workaround There is no workaround.

CSCuz53399—Unable to create daily/weekly event with end by date in Firefox browser.

Symptom Unable to create daily/weekly event with an "end by" date using the Mozilla Firefox browser.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Log into Cisco Stadium Vision Director.
- **2.** Go to the **Scheduler**.
- **3.** Create script and enter event Name.
- 4. Enter start & end date time of event.
- 5. Select the Option 'Repeat Event'
- 6. Select Daily/weekly and enter 'End by' date.
- 7. Select any Future date to multiple events and Save it

Workaround Use Google Chrome browser or select "Occurrences" instead of "End by" option when using Firefox to create multiple events.

CSCuy49935—Sometimes saving a change in the Management Dashboard does not propagate to the DMP.

Symptom Changes made in the Management Dashboard are not always sent to the DMP. If multiple changes made then the previous change appears to be the one that is saved.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Go to the Management Dashboard.
- 2. Go to SV Director Configuration > System Configuration > Global DMP Settings > SV-4K Settings.
- **3**. Change the Timezone to another value.
- 4. Reboot the DMP.
- **5.** If the behavior occurs where the change is not sent to the DMP:
 - **a.** Change the Timezone to a new value.
 - **b.** Reboot the DMP again.

Workaround Restart Stadium Vision Director Services.

CSCuz49064—Widgets fail to display data integration when a bound XML value is blank.

Symptom If an XML data source has a blank result such as <data></data>, then that field simply shows up blank in the widget designer. However, on the SV-4K it breaks multiple fields in the widget. The XML payload is randomized, so the order of transmission of elements is unknown. The actual behavior is that all fields after the null value are broken.

Workaround Use TextArea instead of T2S elements to avoid this defect.

CSCuz44956—Scoreboard controller / clock fails to process when mule is overwhelmed.

Symptom When Data Integration application (svd-broker) is overwhelmed by requests, the broker will not process game scores or game clocks, which need to be polled "reliably" every 1 second without conflicts.

Workaround Check affected widgets to be sure that they are not using the Data Pull component. Need to use multicast type payload for reliable scoreboard / clock operation. Otherwise, there is no workaround.

CSCuy88169—JSON format in broker does not support arrays at "root" level.

Symptom When Creating a generic data source in JSON format, if the JSON file starts with [, then SVD will give an "Invalid JSON provided as payload for upload. EB00011" error while trying to upload the sample JSON file in the field mapping tab.

Workaround Add {"Array": at the start of the JSON data before [and at the end add }.

CSCuy10156—Scheduler - Editing a running event causes multiple staging.

Symptom User is allowed to edit the event, change the details of the event even after the event fires off, and each time the edited event get saved, staging happens at the back end. The event is saved with the very last changes made from the scheduler side. Multiple concurrent events are created in the Control Panel because of the multiple edits in the Scheduler for the event. It was observed that only the last instance is in the "running" state, and other instances are being blocked.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Go to the **Scheduler**.
- 2. Schedule an event with heavy content (large video files).
- 3. Try to edit the event when the event starts within the first 60 seconds after the event kicks off.

Workaround There is no workaround.

Resolved Defects in Cisco StadiumVision Director Release 4.1.0-327

Table 23 lists the defects that are resolved in build 327 of Cisco Stadium Vision Director Release 4.1.

Table 23 Resolved Defects in Cisco StadiumVision Director Release 4.1.0-327

Resolved Defect Number	Description of Original Defect
CSCus98297	Scheduler allows more than 24 hours duration for daily recurring events.
CSCus94801	Scheduler - Unable to convert a recurring event to a single event.
CSCus78159	Users are allowed to create Display specs without specifying Make/Model #.
CSCus57333	Internal volume strategy not working on SV-4K.
CSCut19866	SV4K: Show Diag. with msg the msg string truncated after first space.
CSCut05896	Scheduler UI: Extra event name is displayed for weekly events.
CSCuu24698	Integration Service (svd-broker) dies when sql data source is unavailable.
CSCuu17398	Configuring VideoControl service in CUCM causes file not found page.
CSCuu03150	SV4K: Widget disappears on screen if certain conditions are met.
CSCuu01207	IP Phone service does not work due to wrong DB value.
CSCuu33997	Certain feeds unable to render preview on non-latin character set.
CSCuv75470	Evaluation error is displayed when concat is used for DataIntegration.
CSCuw01901	SV-4K DMPs are included in Flash related statistics in Dashboard.
CSCuw20220	"Map to location during GetStatus" turned on some Locations link to wrong DMP.
CSCuw20976	"Check for location mismatch" in Dashboard is not working for the SV-4K DMP.
CSCuw20220	"Map to location during GetStatus" turned on some Locations link to wrong DMP.
CSCuw65219	Scheduler-Day & Week view- current time(30 min zone) is not highlighted.
CSCuw71682	Scheduler should display appropriate message or progress bar.
CSCuw78902	Dashboard incorrectly flagging dmps with X in status.

Table 23 Resolved Defects in Cisco StadiumVision Director Release 4.1.0-327

Resolved Defect Number	Description of Original Defect
CSCuw92947	Widget text(DMB) get cut off in DMP4K but overflow cell border in 4310.
CSCux15974	Restore of an Internal Database PoS data source may not work.
CSCux31780	All the DMPs are displayed in CCM while login as venue operator role.
CSCux37803	Script validation sync manager message needs to be updated.
CSCux41617	SV4K: After runtime restart observed IR input randomly stops working.
CSCux41711	SV4K: After runtime restart sometimes RS-232 status becomes incorrect.
CSCux44425	Data not shown on TV screen when Data Pull component is used in widget.
CSCux50714	Scheduler lost the ability to edit single occurrence of an event series.
CSCux51577	Validation msg isnt displayed for recurring event when enddate <startdate.< td=""></startdate.<>
CSCux68017	Trimming of string is not working in expression editor.
CSCux75127	Scheduler-Single Event-unable to edit the event with a different script.
CSCux77188	In 4.0 PofP reports, it takes 1 additional second/content than configured.
CSCux82725	SV4K: IP Phone Home page UnMute button does not unmute.
CSCux86129	Changing svr IP and restarting services doesn't update IP in autorun.brs
CSCux94562	List component will self adjust to text size coming from DMB on SV-4K.
CSCuy09141	Daily events can be edited as weekly for more than a year duration.
CSCuy39197	DMP firmware 6.0.x doesn't negotiate 30W of power from switch port.

Open Defects in Cisco StadiumVision Director Release 4.1.0-327

This section lists the defects that are open in build 327 of Cisco Stadium Vision Director Release 4.1.0.

CSCuy41846—Proof of Play duration expressed in msecs for 4310s and secs for SV-4K/DMP-2K.

Symptom Duration is reported in different units of measurement for the Cisco DMP 4310G (milliseconds) and the SV-4K/DMP-2K (seconds).

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Create a new playlist.
- 2. Create a script that contains both 4310 and SV-4K/DMP-2K devices.
- 3. Save script and run it, enable proof of play.
- 4. Allow script to run for a few minutes.
- 5. Stop script.
- **6.** Generate Proof of Play report.

Workaround There is no workaround.

CSCuy14487—Recurring events-boundary value is not consistent for "after" option.

Symptom Recurring events-boundary value for 'after' should change according to the options user selects for weekly and daily events but it does not always update correctly.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Open the scheduler and click on any date to schedule an event.
- 2. Click **Repeat Event** to open the repeat event section.
- **3.** Select the daily event option and try the following steps:
 - **a.** Set the 'repeat every' value to 1.

The maximum occurrences that can be scheduled is 365 since any scheduled event cannot span for more than year as per design.

b. Set the 'repeat every' value to 2.

In this case, the maximum value should be changed to half of 365, but it stays at 365. The scheduled events spans for two years which is not allowed as per design.

- **4.** Select the weekly event option and try the following steps:
 - **a.** Set the 'repeat every' value to 1.
 - **b.** Select one day of the week.

The boundary value for 'after' for this combination is 52 (the maximum occurrences that can be scheduled is 52 since any scheduled event cannot span for more than 365 days as per design).

c. Keep the value 1 for 'repeat every' and choose more than one day of the week. The maximum occurrence scheduled should be double, but scheduler wont allow more than 52.

Workaround When scheduling weekly events for more than a year, use the 'End By' option instead of the 'after' option.

CSCuy25570—Mute/Volume 0 on Internal volume strategy is set to 13.

Symptom When using internal volume strategy and setting 0 volume level (either by IR or IP Phone) the volume will go to level 13 instead of 0. The volume does not get muted; instead, it drops to a still-audible level. The same occurs if the volume is currently at 5 and you press volume down, it jumps to 13.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Create a display specification where the volume strategy is set to "Internal."
- 2. Assign one or more SV-4K or DMP-2K devices to that display spec.
- **3**. Restart the runtime on the assigned DMPs.
- **4.** Go to the TVs connected to those DMPs, and using the TV manufacturer's IR controller, set the volume to 100%.
- **5.** Using the DMP IR controller, raise the volume to a high level (anywhere from 50% to 100%), you can check the volume level by running a **Get Status** command in the Management Dashboard and looking at the display data.
- 6. Press Mute.

Workaround There is no workaround.

CSCuy25798—BackupTask and manual backup removes DMPs from active script.

Symptom Sometimes the scheduled BackupTask or manual backup removes DMPs from an active script.

Workaround Stop any running scripts before running the backup task and start the scripts only after the backup task is run.

CSCuw54955—Backup restore sometimes fail to copy saved firmware to SVD server location.

Symptom After performing a backup restore process, all of the firmware files present on the backup are not restored in the dashboard. This occurs intermittently.

Workaround User will need to upload the firmware files again in order to use them.

CSCux47258—SV-4K: When Insignia TV is powered on it may cause DMP to reboot.

Symptom SV-4K: When the Insignia TV is powered on, it may cause the DMP to reboot. This behavior only occurs if resolution is set to auto-detect. This is a firmware issue.

Workaround In the display specification, set the resolution to "1920x1080x60p" instead of using auto-detect.

CSCux41638—SV-4K: The ptp.html page only shows neighbors with PTP TTL=1.

Symptom SV-4K: The ptp.html page only shows neighbors with PTP TTL=1.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. In the Management Dashboard, the "PTP time-to-live" setting is > 1.
- 2. Launch the page at "http://x.x.x.x/ptp.html where x.x.x.x is the IP address of the DMP.

 Notice that this page only shows DMPs that are within 1 hop (TTL = 1). DMPs that are > 1 hop (TTL > 1) is not shown. This is a firmware limitation.

Workaround Choose a DMP in each hop and bring up the ptp.html page to view PTP status of DMPs within that hop.

CSCux38701—SV-4K: Status - CPU usage - should display accurate information.

Symptom Only integer values are shown on the Dashboard for CPU usage. CPU usage always shows zero on the Dashboard when the usage is below 1. It does not show the decimal part even when the usage is greater than 1.

Conditions The following steps recreate the conditions when this defect occurs:

1. Install the SV-4K DMP.

- 2. Check the status by going to the Management Dashboard > DMP and TV Controls > Monitoring > Get Status.
- 3. Look at the status details under the status tab. Notice that decimal values are not displayed for CPU usage.

Workaround There is no workaround.

CSCux36786—Restart D.I.B server error display if DB datasource name contains "_".

Symptom Restarting Data Integration (broker) displays an error if DB datasource name contains "_".

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Log into Cisco Stadium Vision Director.
- 2. Go to Control Panel > Data Integration.
- **3.** Create any Generic data Source with database.
- **4.** Enter the name of the data source to contain "_".
- 5. Deploy the data source.
- **6.** Restart the Data Integration Broker server.

Workaround

- 1. Log into the TUI > Troubleshooting > Undeploy all data source in Data Integration, then restart the integration server.
- **2.** Create a new data source without "_" in the name.
- 3. Restart Data Integration Broker in Dashboard.

CSCux33272—Audio is missing while streaming with DVD Player using HDMI splitter.

Symptom Audio is missing while streaming with DVD Player using HDMI splitter.

Conditions The following steps recreate the conditions when this defect occurs:

- 1. Login to Cisco Stadium Vision Director.
- 2. Ensure that a source SV-4K DMP is added to **devices > group1 > zone1**, then add another target SV-4K DMP to **devices > group2 > zone2**.
- **3.** Ensure that the HDMI out of the DVD player is plugged in to the HDMI-Input of the splitter and that the HDMI-Out of the splitter to HDMI-In of same source DMP.
- 4. Navigate to the Management Dashboard.
- 5. Select the source SV-4K and start streaming by providing the multicast IP address and src type =hdmi.
- 6. Select Start Streaming.
- 7. Select target/Encoder SV4K.
- **8.** Set the video channel to the same multicast IP where streaming occurs.

Expected Result:

Video should be streamed along with audio.

Actual Result:

The audio stream is missing, while the video is being streamed to the target DMP.

Workaround This is no workaround.

CSCux31767—CCM: Group info disappears while performing individual refresh of DMP.

Symptom It is observed that while performing a DMP individual refresh, group information disappears from the DMP details screen, even the latest screen updated in the CCM screen.

Workaround Group information is appearing again when the next auto refresh or global request response reaches the CCM screen.

Related Documentation and Resources

This section includes the following topics:

- Cisco Stadium Vision Documentation Go URL, page 58
- Release-Specific Documents, page 58
- Cisco Stadium Vision Documentation Notifications, page 59
- Cisco Stadium Vision Documentation Team Email Contact Information, page 60
- Obtaining Cisco Product Documentation, page 60



For a video introduction to finding Cisco StadiumVision documentation information online, see the "Finding Cisco StadiumVision Documentation" video.

Cisco StadiumVision Documentation Go URL

For more information about Cisco StadiumVision hardware and software installation, configuration, and operation, see the Cisco StadiumVision documentation available on Cisco.com at:

www.cisco.com/go/stadiumvisiondocs

Release-Specific Documents

The following Cisco StadiumVision documents are new or modified in Cisco StadiumVision Director Release 4.1:

Release Notes

Cisco StadiumVision Release Notes for Release 4.1

Install and Upgrade Guides

Cisco Stadium Vision Director Software Installation and Upgrade Guide, Release 4.1

Cisco StadiumVision Director Remote Software Installation and Upgrade Guide, Release 4.1

Design and Deployment

Cisco Stadium Vision SV-4K and DMP-2K Media Player Deployment Guide

Cisco Connected Stadium Design Guide (authorized partners only)

Cisco Stadium Vision Video Headend Design and Implementation Guide (authorized partners only)

Localization

Cisco Stadium Vision Director Localization Guide

Server Administration

Cisco Stadium Vision Director Server Administration Guide

Content Management

Cisco Stadium Vision Content Creation Design and Specifications Guide

Cisco Stadium Vision Director External Content Integration Guide

Event Operations

Cisco StadiumVision Director Operations Guide

Task Notes

DMPs: Configure Reboot DMP System Task

DMPs: Enable Touch Screen Control

DMPs: Find the Serial Number for a DMP From the Management Dashboard

DMPs: UI: Access Cisco StadiumVision Director

End User Guides

Using a Cisco Unified IP Phone with Cisco Stadium Vision: HDMI-In Broadcast

Licensing Information

Open Source Used In Cisco StadiumVision Director Release 4.1

Open Source Used In Cisco Stadium Vision Director Remote Release 4.1

Translated End-User Guides

http://www.cisco.com/c/en/us/support/video/stadiumvision/tsd-products-support-translated-end-user-g uides-list.html

Using the Cisco Unified IP Phone with Cisco Stadium Vision: HDMI-In Broadcast

Cisco Stadium Vision Documentation Notifications

You can receive periodic emails that summarize new and changed information in Cisco StadiumVision documentation by subscribing to the sv-doc-notify@external.cisco.com email alias.

Contact us at stadiumvisiondocs@external.cisco.com to request this notification service.

Cisco Stadium Vision Documentation Team Email Contact Information

You can submit questions, suggestions, or other feedback to us at stadiumvisiondocs@external.cisco.com.

Obtaining Cisco Product Documentation

For information on obtaining other Cisco Product documentation, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

Service and Support for Cisco StadiumVision

Cisco Solution Support is the required technical support service for the Cisco StadiumVision solution.

Cisco Solution Support for Stadium Vision combines Cisco product support—Cisco Smart Net Total Care Service or software services—with solution-level support into one service. By taking a solution-level approach, Cisco is responsible for managing product support teams to resolve any issue, no matter where it resides.

For this service, simply purchase Cisco Solution Support for each Cisco hardware or software product in Cisco Stadium Vision.



Cisco Solution Support is required for Cisco software in the Cisco StadiumVision solution. Although it is optional for Cisco hardware in this solution, each Cisco component must be covered to take advantage of Cisco Solution Support. Product support for solution partner products within Cisco StadiumVision is also required. Contact these vendors for details and requirements.

Solution Support References

- For a high-level introduction to this service for Cisco Stadium Vision, see the Cisco Solution Support for Stadium Vision At-A-Glance document.
- For technical details and product coverage, including the support workflow, see the "Cisco Solution Support for Stadium Vision Service Definition."

Find more details about Cisco Solution Support on cisco.com or contact your Cisco sales representative.

RMA Process for the SV-4K and DMP-2K Media Player

The Return Materials Authorization (RMA) process for the SV-4K and DMP-2K media player is covered by the Solution Support Service for Cisco Stadium Vision.

Before you place a service call, see the troubleshooting information in the *Cisco StadiumVision SV-4K* and *DMP-2K Media Player Deployment Guide*. 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.

This document is to be used in conjunction with the documents listed in the "Related Documentation and Resources" section.

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Service and Support for Cisco StadiumVision