



Release Notes for Cisco StadiumVision Mobile Release 2.1

First Published: May 26, 2015

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Cisco StadiumVision Mobile Release 2.1.1

Cisco StadiumVision Mobile Release 2.1.1 includes software updates for the:

- Cisco StadiumVision Mobile Streamer (required)
- Cisco StadiumVision Mobile SDK for Android (recommended)
- Cisco StadiumVision Mobile SDK for iOS (recommended)
- Cisco StadiumVision Mobile SDK for Windows Phone (required)

[Table 1](#) lists the Cisco StadiumVision Mobile components supported for Cisco StadiumVision Mobile Release 2.1.1 and the corresponding software build information. Refer to [Table 2](#) for Cisco StadiumVision Mobile Release 2.1.0 information.

Table 1 *Cisco StadiumVision Mobile Software Release 2.1.1 and Build Information*

Component	Release	Build
Cisco StadiumVision Mobile Reporter	2.0.1	1 Note Cisco StadiumVision Reporter 2.0.1-1 is the only build that is supported with Cisco StadiumVision Mobile Release 2.1. If you are using Reporter build 2.0.0-365, you must upgrade to 2.0.1-1.
Cisco StadiumVision Mobile Streamer	2.1.1	18
Cisco StadiumVision Mobile SDK for iOS and Android	2.1.1	3978
Cisco StadiumVision Mobile SDK for Windows Phone	2.1.1	3981

Cisco StadiumVision Mobile Release 2.1.0 included software updates for the:

- Cisco StadiumVision Mobile Streamer
- Cisco StadiumVision Mobile SDK for Windows Phone



Note

Cisco StadiumVision Mobile Release 2.1.0 includes software updates for the Cisco StadiumVision Mobile Streamer and Cisco StadiumVision Mobile SDK only.

Table 2 *Cisco StadiumVision Mobile Software Release 2.1.0 and Build Information*

Component	Release	Build
Cisco StadiumVision Mobile Reporter	2.0.1	1
		Note Cisco StadiumVision Reporter 2.0.1-1 is the only build that is supported with Cisco StadiumVision Mobile Release 2.1. If you are using Reporter build 2.0.0-365, you must upgrade to 2.0.1-1.
Cisco StadiumVision Mobile Streamer	2.1.0	1077
Cisco StadiumVision Mobile SDK	2.1.0	3813
Cisco StadiumVision Mobile SDK for Windows Phone	2.1.0	3835

Table 3 *Document Revision History*

Date	Description
February 1, 2016	<ul style="list-style-type: none">• Beginning with Release 2.1.1, the Cisco AnyRes Live 9400 video encoder has been qualified for and is the recommended encoder for Cisco StadiumVision Mobile.• Added a new section for the “Cisco AnyRes Live Encoder” section on page 6 and updated Table 4.
December 23, 2015	<ul style="list-style-type: none">• Added Table 2 and specific Release 2.1.0 details.

Table 3 Document Revision History (continued)

Date	Description
November 9, 2015	<ul style="list-style-type: none"> • Updated the Cisco StadiumVision Mobile SDK and Streamer Build Numbers in Table 1. • Added the results for Cisco Prime Infrastructure releases tested with Cisco StadiumVision Mobile Reporter in Table 10. • Updated “Flash Support” section on page 8 adding requirements. • Updated Table 11 on page 9 by adding 8.0.120.0 to the Wireless LAN Controllers Tested with Cisco StadiumVision Mobile. • Included a new column for Release 2.1.1 testing results in the “Devices Tested with Cisco StadiumVision Mobile” section on page 11. In addition, removed Samsung Galaxy S2 from the list of devices tested. • Added “New and Changed Information in Cisco StadiumVision Mobile Release 2.1.1” section on page 13. • Revised the “Upgrade Paths” section on page 16 to include the 2.1.1 release. • Updated Table 17 to include the SDK Release 2.1.1. • Added a reminder to restart the Cisco StadiumVision Mobile Streamer or Streamer Service in the “Installation Notes” section on page 16. • Added information to the “Open Defects in Cisco StadiumVision Mobile Release 2.1.1” section on page 20 and “Resolved Defects in Cisco StadiumVision Mobile Release 2.1.1” section on page 21. • Revised and enhanced the “Related Documentation” section on page 23. Section includes information about the new Go URL, documentation notifications, documentation team email contact, link to video about finding Cisco StadiumVision documentation, and updates to the release-specific documentation.
June 17, 2015	<ul style="list-style-type: none"> • Included a change to SDK API Enhancements, page 15 for Apple iOS indicating that Release 2.1 does not include two files ("libvoCTS.a" and "voVidDec.dat") that were included in previous releases.
June 10, 2015	<ul style="list-style-type: none"> • Updated the overall test results in Devices Tested with Cisco StadiumVision Mobile, page 11 adding results for Google Nexus 4, Google Nexus 5, HTC Evo Design, and Samsung Galaxy S2. In addition changed “Inconclusive” results to “Passed”. • Added NTP Server Configuration, page 18 that details how to remove the undisciplined local clock from Cisco StadiumVision Mobile Streamer and Reporter when operating as a leaf node in a NTP network.
June 4, 2015	<ul style="list-style-type: none"> • Changed the Cisco StadiumVision Mobile SDK for Windows build number from 3817 to 3835 in Table 1. • Updated the WLC Release 8.0.115.0 status to “Passed”for Cisco StadiumVision Mobile Release 2.1 in Table 11.

Table 3 Document Revision History (continued)

Date	Description
June 1, 2015	<ul style="list-style-type: none"> • Added CSCuu60477—Reporter-video viewers chart should only display video session info. and CSCuu56333—Reporter does not work with PI-2.2.1. to the Open Defects in Cisco StadiumVision Mobile Release 2.1.0, page 21. • Updated the overall test results in Devices Tested with Cisco StadiumVision Mobile, page 11. • Added guidelines for when using Cisco StadiumVision Mobile API to pass content from the command line under Limitations and Restrictions, page 19.
May 26, 2015	Initial release of Cisco StadiumVision Mobile Release 2.1.

Contents

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Introduction

This document provides information about Cisco StadiumVision Mobile Release 2.1. It includes hardware and software requirements, new and changed features, installation and upgrade information, known issues, and defects.

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

System Requirements for Cisco StadiumVision Mobile Release 2.1

This section describes the hardware and software supported by the Cisco StadiumVision solution for Cisco StadiumVision Mobile Release 2.1. It includes the following topics:

- [Cisco StadiumVision Mobile Components, page 5](#)
- [Cisco Connected Stadium Configuration Requirements, page 6](#)
- [Cisco Connected Stadium Wi-Fi Requirements, page 6](#)
- [Cisco StadiumVision Mobile Video Encoder Support, page 6](#)
- [Cisco StadiumVision Mobile Audio Encoder Support, page 7](#)
- [Browser and Flash Player Support for Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer, page 8](#)
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- [Wireless LAN Controllers Tested with Cisco StadiumVision Mobile, page 9](#)
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Cisco StadiumVision Mobile Components

[Table 4](#) lists the components of the Cisco StadiumVision Mobile solution.

Table 4 *Cisco StadiumVision Mobile Components*

Component	Function
Cisco Connected Stadium Wi-Fi	Provides scalable, high density Wi-Fi coverage within a venue.
Cisco StadiumVision Mobile Streamer	Responsible for aggregating and protecting video and data streams for reliable delivery over the Wi-Fi network.
Cisco StadiumVision Mobile Reporter	Collects mobile device statistics covering network performance, Quality of Experience (QoE), and session information.
Client Software Developer Kit (SDK)	Abstracts complexity of discovering, recovering and playing streaming video. Includes a rich set of tools to enable third party developers to quickly create and test applications.
Cisco StadiumVision Mobile Video Encoder (Cisco AnyRes Live)	Provides encoding of in-house and commercial broadcast video feeds for streaming to mobile devices. Feeds can be HD-SDI or with an IP multicast combination.
Cisco StadiumVision Mobile Video Encoder (Elemental)	Provides encoding of in-house and commercial broadcast feeds for streaming to mobile devices. Feeds can be HD-SDI or IP multicast.
Cisco StadiumVision Mobile Audio Encoder (Telos ProStream)	Provides encoding of an in-house audio feed for streaming to mobile devices.

Cisco Connected Stadium Configuration Requirements

The Cisco Connected Stadium solution must be configured to support Cisco StadiumVision Mobile, including:

- Routing to explicitly permit Cisco StadiumVision Mobile announcements over multicast, Cisco StadiumVision Mobile video sessions and Cisco StadiumVision Mobile data sessions.
- Rendezvous Points (RPs) to enable the delivery of Cisco StadiumVision Mobile multicast streams to Wi-Fi endpoints.
- Access Control Lists (ACLs) to limit the propagation of unwanted (e.g., IPv6) and client-generated multicast streams.

Cisco Connected Stadium Wi-Fi Requirements

Cisco StadiumVision Mobile requires a Connected Stadium Wi-Fi network for transport. Please visit www.cisco.com/go/sports for additional information. Cisco AS personnel and qualified partners can also find information on ciscoet.com.

Cisco StadiumVision Mobile Video Encoder Support

Cisco AnyRes Live Encoder

Table 5 shows the Cisco AnyRes Live encoder releases that correspond to specific hardware and qualified firmware versions.



Note

Beginning with Cisco StadiumVision Mobile Release 2.1.1, the Cisco AnyRes Live 9400 is the recommended video encoder for Cisco StadiumVision Mobile.

Table 5 *Cisco AnyRes Live Firmware Versions Qualified for Cisco StadiumVision Mobile Release 2.1.1*

Encoder Model	Qualified Cisco StadiumVision Mobile Release 2.1.1 encoder firmware Version
Cisco AnyRes Live 9400	<ul style="list-style-type: none"> • Cisco AnyRes Live firmware Version 9.5.1.51509

Refer to the *Cisco StadiumVision Mobile Design and Implementation Guide* (contact your Cisco representative) for details on upgrading the Cisco AnyRes Live encoder firmware.

Cisco AnyRes Live Encoder Setup

For the initial setup, the Cisco AnyRes Live encoder will need to have the IP address set as well as have the firewall disabled. The encoder does not ship with Cisco StadiumVision Mobile presets. To set the presets, you need to obtain a StadiumVision Mobile configuration file from your Cisco Systems sales representative. Refer to the *Cisco AnyRes Live User Guide* that ships with the encoder for installation and configuration procedures. Also see the *Cisco StadiumVision Mobile Design and Implementation Guide* that is available through your Cisco Systems sales representative.

Elemental Encoder

[Table 6](#) shows the Elemental encoder releases that correspond to specific hardware and qualified firmware versions.

Table 6 Elemental Firmware Versions Qualified for Cisco StadiumVision Mobile Release 2.1

Encoder Model	Qualified Cisco StadiumVision Mobile Release 2.1 encoder firmware Version
L174AE-C (latest model)	<ul style="list-style-type: none"> Elemental Live firmware Version 2.5.3.26866 Elemental Live firmware Version 2.1.1.153
L152AE-C (previous model)	<ul style="list-style-type: none"> Elemental Live firmware Version 2.5.3.26866 Elemental Live firmware Version 2.1.1.153

Refer to the *Cisco StadiumVision Mobile Design and Implementation Guide* (contact your Cisco representative) for details on upgrading the Elemental encoder firmware.



Note

Cisco StadiumVision Mobile uses a special Elemental software release. Do not upgrade the software with every new Elemental release. The Cisco StadiumVision Mobile release has a low latency feature (relative to the standard Elemental release) and Cisco StadiumVision Mobile presets.

Elemental Encoder Setup

The Elemental Technologies encoder ships with Cisco StadiumVision Mobile presets. For the initial setup, the Elemental encoder will need to have the IP address set as well as have the firewall disabled. Refer to the *Elemental Live User Guide* that ships with the encoder for installation and configuration procedures. Also see the *Cisco StadiumVision Mobile Design and Implementation Guide* that is available through your Cisco Systems sales representative.

Cisco StadiumVision Mobile Audio Encoder Support

[Table 7](#) shows the Telos ProStream audio encoder releases that correspond to specific hardware and qualified firmware versions.

Table 7 Telos Firmware Versions Qualified for Cisco StadiumVision Mobile Release 2.1

Encoder Model	Qualified Cisco StadiumVision Mobile Release 2.1 encoder firmware version
ProStream	Telos Systems firmware Version 2.6.4 beta (build: 2014-10-03)

Telos ProStream Encoder Setup

The Telos ProStream encoder ships with Cisco StadiumVision Mobile presets. Refer to the *Telos ProStream Audio Encoder User Manual* that ships with the encoder for installation and configuration procedures.

Browser and Flash Player Support for Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer

You can use an Apple Mac, Microsoft Windows PC, or an Apple iPad to access the Cisco StadiumVision Mobile Streamer configuration and Cisco StadiumVision Mobile Reporter marketing and support data. The StadiumVision Reporter configuration Text User Interface (TUI) can be accessed by any SSH client, or by physical console access. [Table 8](#) describes the method of access.

Table 8 *Cisco StadiumVision Mobile Component Access Methods*

Cisco StadiumVision Mobile Component	Access method	Type of data
Cisco StadiumVision Mobile Reporter	TUI - console access, SSH client	Configuration
Cisco StadiumVision Mobile Reporter	GUI - browser	Marketing and support
Cisco StadiumVision Mobile Streamer	GUI - browser	Configuration
Cisco StadiumVision Mobile Streamer	TUI - console access, SSH client	Configuration

Browser Support

[Table 9](#) describes the browser software versions that have been tested with Cisco StadiumVision Mobile Release 2.1.



Note

Unless specifically identified as unsupported, other browser versions might work, but their compatibility with Cisco StadiumVision Mobile cannot be assured.

Table 9 *Tested Browser Software*

PC or Laptop OS	Browser Version ¹
Apple Mac OS X	<ul style="list-style-type: none"> Google Chrome Version 45.0.2454.101 (Official Build) (64-bit) Mozilla FireFox Version 41.0.1
Microsoft Windows (Windows 7)	<ul style="list-style-type: none"> Google Chrome Version 45.0.2454.101 (Official Build) m (32-bit) Mozilla FireFox Version 41.0.1

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.

Flash Support

To remotely access the Cisco Integrated Management Controller (CIMC) on a Cisco UCS C220 server for the software installation, your computer must meet the minimum requirements:

- Java 1.6 or later
- HTTP and HTTPS enabled
- Adobe Flash Player 10 or later

**Note**

For additional information, refer to the *Cisco UCS C-Series GUI Configuration Guide* for specific release information available at:

<http://www.cisco.com/c/en/us/support/servers-unified-computing/ucs-c-series-integrated-management-controller/products-installation-and-configuration-guides-list.html>

Prime Infrastructure Tested with Cisco StadiumVision Mobile

Table 10 describes the Cisco Prime Infrastructure (PI) releases that have been tested with Cisco StadiumVision Mobile Reporter.

Table 10 *Tested PI Releases with Cisco StadiumVision Mobile Reporter*

PI Release	Cisco StadiumVision Reporter Release 1.3	Cisco StadiumVision Reporter Release 2.0
1.3	Passed	Not tested
1.4	Not tested	Not tested
2.0	Not tested	Passed
2.1	Not tested	Not tested
2.2.1	Not tested	Failed
3.0	Not tested	Not tested

**Note**

Unless specifically identified as unsupported, other releases might work, but their compatibility with Cisco StadiumVision Mobile Reporter cannot be assured.

Wireless LAN Controllers Tested with Cisco StadiumVision Mobile

Table 11 describes the Wireless LAN Controller (WLC) releases that have been tested with Cisco StadiumVision Mobile.

Table 11 *Tested WLC Releases with Cisco StadiumVision Mobile*

WLC Release	Cisco StadiumVision Mobile Release 1.3	Cisco StadiumVision Mobile Release 2.0	Cisco StadiumVision Mobile Release 2.1.0	Cisco StadiumVision Mobile Release 2.1.1
7.2.110.104	Passed	Passed	Not tested	Not tested
7.6.101.215	Not tested	Passed	Not tested	Not tested
8.0.110.5	Not tested	Passed	Passed	Not tested
8.0.115.0	Not tested	Not tested	Passed	Not tested
8.0.120.0	Not tested	Not tested	Not tested	Passed

**Note**

Unless specifically identified as unsupported, other releases might work, but their compatibility with Cisco StadiumVision Mobile cannot be assured.

Cisco StadiumVision Mobile Server Support

Table 12 describes the Cisco StadiumVision Mobile server hardware and software supported in Cisco StadiumVision Mobile Release 2.1.

Table 12 Supported Cisco StadiumVision Mobile Hardware and Software

Description	Hardware Product ID	Software Version	Tested CIMC/BIOS Firmware
Cisco StadiumVision Mobile Streamer (Cisco UCS C220)	SV-M-STREAMER-K9	Cisco StadiumVision Mobile Streamer Release 2.1	Cisco CIMC firmware 1.5(1) ¹
Cisco StadiumVision Mobile Reporter (Cisco UCS C220)	SV-M-REPORTER-K9	Cisco StadiumVision Mobile Reporter Release 2.0	Cisco CIMC firmware 1.5(1) ¹

1. This is the minimum tested CIMC firmware version for Cisco StadiumVision Mobile Streamer Release 2.1 and Cisco StadiumVision Mobile Reporter Release 2.0, however, previously tested firmware versions continue to be supported.

**Note**

For more information about verifying and upgrading the Cisco UCS Server firmware, see the [Confirming the CIMC Firmware Version, page 18](#).

VMware vSphere ESX Tested Versions for Cisco StadiumVision Mobile

Cisco StadiumVision Mobile Release 2.1 has been tested with vSphere Client version 5.1.0, build 786111 and VMWare vCenter Server version 5.1.0, build 947673. Cisco StadiumVision Mobile is supported on all versions of vSphere 5.1 and 5.5.

**Note**

Any VMware license that does not allow your virtual machine to be set to the minimum requirements described in Table 1 and Table 2 of the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide* is not supported, read more at:

http://www.cisco.com/c/en/us/td/docs/Sports_Entertainment/StadiumVision/Mobile/software/installation/guide/2_1/stadiumvision_mobile_installation_guide.html

New Product IDs in Cisco StadiumVision Mobile Release 2.1 and Later

Beginning with Cisco StadiumVision Mobile Release 2.1 the Cisco StadiumVision Mobile software and hardware licenses are unbundled. This allows you to purchase hardware separately for the Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer and install Cisco StadiumVision Mobile software in a virtual environment. Table 13 lists the new product IDs.

Table 13 *New Cisco StadiumVision Mobile Product IDs—Release 2.1 and Later*

Product ID	Replaces	Description
R-SV-M-RPRTR-SW-K9	N/A	Cisco StadiumVision Mobile Reporter software only license
R-SV-M-STRMR-SW-K9	N/A	Cisco StadiumVision Mobile Streamer software only license
L-SV-M-AGENT-1K	SV-M-AGENTS-10= SV-M-AGENTS-1= SV-M-AGENTS-10 SV-M-AGENTS-1	Client license
SPN-9400-K9	Elemental encoder	Qualified with Cisco StadiumVision Mobile Release 2.1.1, the Cisco AnyRes Live 9400 encoder replaces the Elemental encoder.

Devices Tested with Cisco StadiumVision Mobile

Table 14 lists the devices that have been tested with Cisco StadiumVision Mobile Release 2.1.0 and 2.1.1. It also provides the device model number, operating system (OS) version, and overall test result.

Table 14 *Mobile Devices Tested with Cisco StadiumVision Mobile*

Make	Model Number	OS Version	Overall 2.1.0 Test Result	OS Version	Overall 2.1.1 Test Result
Apple iPad Air - 1st gen (64-bit)	P105AP	8.2	Passed	9.0.2	Passed
Apple iPad mini - 1st gen	P105AP	7.1.1	Passed	9.0.2	Passed
Apple iPad Air - 1st gen	A1475	7.1.1	Passed	9.0.2	Passed
Apple iPad - 2nd gen	K93AP	6.1.3	Passed	9.0.2	Passed
Apple iPad Retina - 4th gen	P101AP	6.1	Passed	9.0.2	Passed
Apple iPhone 4 - CDMA	N92AP	6.1.3	Passed	7.1.2	Passed
Apple iPhone 5s - GSM	N51AP	7.0.2	Passed	9.0.2	Passed
Apple iPhone 6	A1549	8.2	Passed	9.0.2	Passed
Apple iPhone 6 Plus	A1552	8.2	Passed	9.0.2	Passed
Apple iPhone 6s	MKR12LL	—	Not Tested	9.0.2	Passed
Apple iPhone 6s Plus	MKUP2LLA/A	—	Not Tested	9.1	Passed
Apple iPod touch 5th gen	N81AP	8.2	Passed	9.0.2	Passed
Apple iPod touch 6th gen	MKH8LL	8.2	Not Tested	9.0.2	Passed
Google Nexus 4	Nexus 4	4.3	Failed (No IGMP)	4.3	Failed (No IGMP)
Google Nexus 4	Nexus 4	4.4	Failed (No IGMP)	4.4	Failed (No IGMP)
Google Nexus 5	Nexus 5	4.4	Failed (No IGMP)	4.4	Failed (No IGMP)
Google Nexus 5X	Nexus 5X	—	Not Tested	6.0	Failed (No IGMP)
Google Nexus 6	Nexus 6	—	Not Tested	6.0	Passed

Table 14 Mobile Devices Tested with Cisco StadiumVision Mobile (continued)

Make	Model Number	OS Version	Overall 2.1.0 Test Result	OS Version	Overall 2.1.1 Test Result
Google Nexus 6P	Nexus 6P	—	Not Tested	6.0	Failed (No IGMP)
Google Nexus 7, 2nd gen	Nexus 7	4.4.4	Passed	6.0	Passed
HTC One M8	HTC One_M8	4.4.3	Passed	4.4.3	Passed
HTC One M9	HTC One_M9	4.4.3	Passed	4.4.3	Passed
HTC One M8 - Windows Phone	OP6B180	8.1	Passed	8.1	Passed
HTC Evo Design	PH44100	4.0.3	Failed (No IGMP)	4.0.3	Failed (No IGMP)
LG G2	LG-F400S	4.4.2	Passed	4.4.2	Passed
LG G3	LG-F400S	4.4.2	Passed	4.4.2	Passed
LG G4	LG-H815	5.1	Passed	5.1	Passed
Motorola	Moto G	4.3	Passed	4.3	Passed
Nokia Lumia 625	Nokia Lumia 625	8.1	Passed	8.1	Passed
Nokia Lumia 635	Nokia Lumia 635	8.1	Passed	8.1	Passed
Nokia Lumia - Windows Phone	Nokia Lumia 1520	8.1	Passed	8.1	Passed
Samsung Galaxy S3	GT-I9300	4.1.2	Passed	4.1.2	Passed
Samsung Galaxy S4	GT-I9500	4.2.2	Passed	4.2.2	Passed
Samsung Galaxy S5	SM-G900H	4.4.2	Passed	4.4.2	Passed
Samsung Galaxy S6	SM-G920F	5.0.2	Passed	5.0.2	Passed
Samsung Galaxy Note 3	SM-N9005	4.3	Passed	4.3	Passed
Sony Xperia Z1	C6902	4.2.2	Passed	4.2.2	Passed

Security Information and Advisories for Cisco StadiumVision Mobile



Note

These release notes do not qualify any specific details about possible security issues for your Cisco StadiumVision Mobile 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>

New and Changed Information in Cisco StadiumVision Mobile Release 2.1.1

This section describes new features, enhancements, and changes in support or behavior in Cisco StadiumVision Mobile Release 2.1.1. It includes the following sections:

- [Cisco StadiumVision Mobile SDK, page 13](#)
- [Cisco StadiumVision Mobile Streamer, page 15](#)

Cisco StadiumVision Mobile SDK

This section summarizes the new feature, changes, and enhancements in Cisco StadiumVision Mobile SDK Release 2.1.1.

Mobile Operating System Support

[Table 15](#) describes the mobile operating system versions supported by the Cisco StadiumVision Mobile SDK.

Table 15 *Mobile OS Support*

OS	Apple iOS					Google Android										Windows Phone	
	5.x	6.x	7.x	8.x	9.x	2.3	4.0	4.1	4.2	4.3	4.4	5.0	5.1	6.0	8.0	8.1	
Cisco StadiumVision Mobile SDK Release 2.1.1	No	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Cisco StadiumVision Mobile SDK Release 2.1.0	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	
Cisco StadiumVision Mobile SDK Release 2.0	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	
Cisco StadiumVision Mobile SDK Release 1.3	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	



Note

The Cisco StadiumVision Mobile SDK is made available by special agreement. Contact your Cisco Systems representative for more information.

SDK Enhancements and Changes

- The readme text files contained in the SDK downloads have been updated.
- Conditional playback is a feature that detects video quality and determines whether or not to stream video to mobile devices. While conditional playback is an available feature, we recommend contacting your Cisco representative for more information prior to using it.
- The *Cisco StadiumVision Mobile SDK Programmer's Guide* has moved to Cisco DevNet. The content from the guide is divided into separate guides, one for each operating system (Android, iOS, and Windows).

- [Cisco StadiumVision Mobile Android Guide](#)
- [Cisco StadiumVision Mobile iOS Guide](#)
- [Cisco StadiumVision Mobile Windows Guide](#)

For additional information or to visit the Cisco DevNet site, go to:

<https://developer.cisco.com/site/svm/>

- Visit the Cisco StadiumVision Mobile Community to start a discussion or ask a SDK question. Log in to follow, share, and participate in this community at:

<https://communities.cisco.com/community/developer/stadiumvision-mobile>

Apple iOS

- Removes the previous requirement to change the Position Independent Executable (PIE) setting to Yes. As of Release 2.1.1, changing the PIE setting is no longer required.
- Fully qualified to work with Apple iOS8 and iOS9.
- Adds support for Xcode 7x and later. Other Xcode versions might work, but their compatibility with Cisco StadiumVision Mobile cannot be assured.
- Enables bitcode in Xcode 7 by default. In order for the Sample app to compile correctly the default bitcode setting must be changed to **No**. For additional information, go to:

https://developer.cisco.com/site/svm/documents/ios-guide/svm_ios_docs/

Google Android

- Adds the "isSVMSupported()" api method to the Android SDK. This method returns FALSE when a device is not supported by SVM.
- Fully qualified to work with Google Android 6.0.

Windows Phone

- Adds enhanced Forward Error Correction (FEC) capability for Windows Phone.
- Provides the ability to debug the Windows Demo app by using an internally generated log file (logfile.txt) that is copied to the Video folder on the mobile device when the app shuts down. The log file can be accessed after exiting the app by attaching the Windows Phone to your computer using a USB cable. For additional information, go to:

<https://developer.cisco.com/site/svm/documents/svm-windows-guide/>

Cisco StadiumVision Mobile Streamer

Cisco StadiumVision Mobile Release 2.1.1 introduces the following new features and enhancements on the Cisco StadiumVision Mobile Streamer:

- In the TUI, **Server Administration > Set Up Automatic Data Archive** option has been removed.
- In the TUI, the EVS C-Cast text has been updated to specify support for version 2.x.
- The stream timeout value increased to twice the protection period if a value is not specified in the session. This change replaces the 1.5 second default value.

New and Changed Information in Cisco StadiumVision Mobile Release 2.1.0

This section describes new features, enhancements and changes in support or behavior in Cisco StadiumVision Mobile Release 2.1.0. It includes the following sections:

- [Cisco StadiumVision Mobile SDK, page 15](#)
- [Cisco StadiumVision Mobile Streamer, page 15](#)

Cisco StadiumVision Mobile SDK

This section summarizes the new features in Cisco StadiumVision Mobile SDK Release 2.1.0.

SDK API Enhancements

- Support for configurable multicast groups for service announcements (default is 239.100.255.255).
- Improved error handling/notification for large files that cannot be sent or received.
- Modified IGMP handling of IGMP Membership Report Group (MRG) and IGMP Leave Group (LG) messages for Apple iOS and Google Android for improved performance.
- Support for Google Android 5.0 and 5.1.
- Support for Windows Phone 8.1.
- Bundling of Doxygen API reference documentation with the SDK.
- Support added for iOS 64bit.

SDK for Apple iOS

- The Cisco StadiumVision Mobile SDK for Apple iOS does not include two files ("libvoCTS.a" and "voVidDec.dat") that were included in previous releases. The two files are no longer required in Release 2.1.

Cisco StadiumVision Mobile Streamer

Cisco StadiumVision Mobile Release 2.1.0 introduces the following new features and enhancements on the Cisco StadiumVision Mobile Streamer:

- Improved Forward Error Correction (FEC) capability.
- Improved loss protection for small (1- to 10,000-byte) data objects.
- Support for unicast IP addressing for Source IP address on audio channel sessions.
- Support for the following service announcement enhancements:

- Compressed service announcements

Compression is enabled by default in new installations of Cisco StadiumVision Mobile Streamer Release 2.1.0, and for upgrades it leaves the current setting unchanged.

- Configurable multicast groups for service announcements (default is 239.100.255.255)



Note Re-configuration of multicast groups requires SNE TAC account access. Contact Cisco Technical Support for more information.

- Improved handling of service announcements to decrease drops

User Interface Changes

The following UI changes were made in Cisco StadiumVision Mobile Release 2.1.0:

- Default Configuration Panel
 - Removed the following statistics options from the Statistics Upload section:
 - Client Stats Sample Interval(s)
 - Client Stats Upload Interval(s)
 - Streamer Stats Upload Interval(s)
 - Added Protection options for Audio and File sessions.
 - Changed range values for Protection Window (ms) for all session types: Video, Data, Audio, and File.
 - Changed range values for Protection Amount (%) from 10-1000% to 10-100% for Data and File session types.
 - Added support for the enhanced Protection Algorithm option (basic and enhanced options available).
- Session Edit Screen
 - Removed the **Go back** button.
 - Renamed the **Update** button to **Apply** for saving changes.
 - Added support for the enhanced Protection Algorithm option (basic and enhanced options available).
- Streaming Sessions Panel
 - Renamed the “Number” label to “Id.”

Installation Notes

This section includes the following installation information:

- [Upgrade Paths, page 16](#)
- [SDK Compatibility with Streamer and Reporter, page 17](#)
- [Installation and Upgrade Files, page 18](#)
- [Confirming the CIMC Firmware Version, page 18](#)
- [Installation Requirements for Licensing Compliance, page 18](#)

Upgrade Paths

[Table 16](#) shows the supported upgrade paths for Cisco StadiumVision Mobile Streamer. Be sure to refer to [Table 17](#) for SDK Compatibility with Streamer and Reporter.

Table 16 Cisco StadiumVision Mobile Streamer Upgrade Paths

Cisco StadiumVision Mobile Streamer From:	Cisco StadiumVision Mobile Streamer To:
Release 1.3.0-241	Release 2.0.0-550
Release 2.0.0-550	Release 2.0.1-1
Release 2.0.1-1	Release 2.1.0-1077
Release 2.1.0-1077	Release 2.1.1-18

**Note**

Cisco StadiumVision Mobile Reporter build 2.0.1-1 is the only supported build for Cisco StadiumVision Mobile Release 2.1. If you are using Reporter build 2.0.0-365, you must upgrade to 2.0.1-1.

SDK Compatibility with Streamer and Reporter

Table 17 describes the supported SVM Streamer and Reporter versions supported by the Cisco StadiumVision Mobile SDK. Cisco StadiumVision Mobile SDK 2.1.1 requires the in-venue SVM Streamer to also be running 2.1.1. The Cisco StadiumVision Mobile SDK Release 2.1.0 is **not** compatible with Cisco StadiumVision Streamer 2.0.

**Note**

It is important that the release of any mobile app that is using SDK 2.1 be aligned with the server upgrade schedule at its targeted venue. Careful upgrade planning is required because customer apps running SDK 1.3 are not supported on Cisco SVM Streamer 2.1.

Consider the following best practice to account for any application that may be based on SVM SDK 1.3. Please keep in mind that apps based on SVM SDK 1.3 are not supported on Cisco SVM Streamer 2.1.

1. Create a unique triplet in Streamer so that the 1.3 clients do not receive the Cisco StadiumVision Mobile service. By changing the triplet, a triplet mismatch is forced and as a result the service to 1.3 clients is blocked.
2. Coordinate the rebuild of the SVM-based app using the new triplet and app store posting of the app with the SVM Streamer upgrade.

Apps developed with SDK 2.0 are compatible with SVM Streamer 2.1, however these apps are unable to decode streams which are configured with the enhanced FEC option. This FEC option should be used only where the SDK 2.1 has been deployed.

Table 17 Cisco StadiumVision Mobile SDK Compatibility

Cisco StadiumVision Mobile Streamer and Reporter Release	SDK Release 1.3	SDK Release 2.0	SDK Release 2.1.0	SDK Release 2.1.1
Cisco StadiumVision Mobile Streamer 2.1.1 with Reporter 2.0	No	No	No	Yes
Cisco StadiumVision Mobile Streamer 2.1.0 with Reporter 2.0	No	Yes	Yes	No
Cisco StadiumVision Mobile Streamer 2.0 with Reporter 2.0	Yes	Yes	No	No

Installation and Upgrade Files

Cisco StadiumVision Mobile software is provided in the form of 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 Mobile servers that have no prior Cisco StadiumVision Mobile software version installed.
- An ISO upgrade image—The upgrade ISO file is built for processing using the Software Manager.



Note

After performing a fresh installation, be sure to reboot the Streamer or restart the Streamer service.

For upgrade instructions using the web browser UI, see the “[Using the Software Manager to Upgrade Cisco StadiumVision Reporter Software](#)” module in the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide* available at:

http://www.cisco.com/c/en/us/td/docs/Sports_Entertainment/StadiumVision/Mobile/software/installation/guide/2_1/stadiumvision_mobile_installation_guide/manage_software_upgrade_svm.html

NTP Server Configuration

If you are running Cisco StadiumVision Mobile Streamer or Reporter as a leaf node in a NTP network (as most are) then you should remove the undisciplined local clock to avoid having two clock sources. To remove the undisciplined local clock, change `/etc/ntp.conf` using the TUI (**Main Menu > System Settings > Date and Time Settings > Modify NTP configuration file**).

Delete the following section to remove the undisciplined clock:

```
# Undisciplined Local Clock. This is a fake driver intended for backup
# and when no outside source of synchronized time is available.
server 127.127.1.0      # local clock
fudge 127.127.1.0 stratum 10
```



Note

Remove the undisciplined local clock on any new installation or upgrade that sets an NTP server.

Confirming the CIMC Firmware Version

When installing Cisco StadiumVision Mobile on a Cisco UCS C220 server, refer to “[Appendix A: CIMC Configuration and Firmware Upgrade Guidelines on the Cisco UCS C220 Server](#)” in the *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide* to verify the CIMC firmware version prior to installation.

Installation Requirements for Licensing Compliance

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

- The Cisco StadiumVision Mobile Reporter or Cisco StadiumVision Mobile Streamer server is installed in a data center or in an enterprise data closet.

Limitations and Restrictions

Be aware of the following limitations and restrictions in Cisco StadiumVision Mobile Release 2.1:

Cisco StadiumVision Mobile Reporter

- When entering event names into the event spreadsheet on the Cisco StadiumVision Mobile Reporter, if special characters (\ , \$, %) are used in the event names, the menu item representing the event being viewed is NOT highlighted.
- The Cisco StadiumVision Mobile Reporter supports a single season only.
- The Cisco StadiumVision Mobile Reporter redundancy can be provided via a warm standby secondary server only. There is no automated failover or redundancy. Also, no automatic data replication occurs between the primary and secondary reporters.
- If the Prime Infrastructure (PI) configuration is removed, the **svmreporter** service must be restarted. See the “Services Control” section in the *Cisco StadiumVision Mobile Reporter Administration Guide* for details available at:
http://www.cisco.com/c/en/us/td/docs/Sports_Entertainment/StadiumVision/Mobile/admin/guides/server/2-0/reporter/sv-mobile-reporter-admin/svm-reporter-tui.html
- When Prime Infrastructure (PI) is not configured, the following reports are affected:
 - SVM Wi-Fi Client will show zero (0) for all the values.
 - The Uptake Scorecard will not display anything.
- The event name, start and end date should **not** be changed once an event has started. For future events, it is acceptable to change the event name, start and end date.

Cisco StadiumVision Mobile Streamer

- Audio and video channels can be set for up to 1000% repair for testing purposes only. Allocating this much protection on any one channel will consume all of the available bandwidth, leaving no room for other channels.
- The Cisco StadiumVision Mobile Streamer supports content access control for multiple owners. However, the Cisco StadiumVision Mobile Reporter does not provide reporting on a per content owner basis.
- The Cisco StadiumVision Mobile Streamer redundancy can be provided via a warm standby secondary server only. There is no automated failover or redundancy.

Cisco StadiumVision Mobile SDK

- The Cisco StadiumVision Mobile SDK supports audio channels on Google Android only. Audio channels are not supported by the iOS or Windows Phone SDKs.
- Cisco StadiumVision Mobile SDK Release 2.1 supports iOS 64-bit, however the SVM SDK for iOS only includes support for the 32-bit simulator and does not provide 64-bit simulator support.
- The Windows Demo app does not support EVS C-Cast.
- The Windows Phone SDK does not include x86 support, and therefore will not run in the emulator.
- When using the Cisco StadiumVision Mobile API to pass content from the command line, consider the following:
 - All URLs need to encode reserved characters. For example, a “ ” (space) becomes “%20” and a “+” becomes “%2B”.

- Expect the “+” at the Cisco StadiumVision Mobile Streamer to change to a “ ” (space) on the client SDK.

Caveats

For information about open and resolved defects, go to the following links:

- [Open Defects in Cisco StadiumVision Mobile Release 2.1.1, page 20](#)
- [Resolved Defects in Cisco StadiumVision Mobile Release 2.1.1, page 21](#)
- [Open Defects in Cisco StadiumVision Mobile Release 2.1.0, page 21](#)
- [Related Documentation, page 23](#)

Open Defects in Cisco StadiumVision Mobile Release 2.1.1

This section lists the open defects for the Cisco StadiumVision Mobile Release 2.1.1. All defects that are open in prior Cisco StadiumVisionMobile releases and not listed as resolved remain open in Cisco StadiumVision Mobile Release 2.1.1.

Cisco StadiumVision Mobile SDK

CSCuv74647—Android SDK does not report when an invalid or missing VisualOn license file is included in the project.

Symptom Applications built using the Cisco StadiumVision Mobile SDK for Android fail to play video when a channel is selected.

Workaround Include the VisualOn license file (voVidDec.dat) from the current SVM SDK in the project assets directory.

Cisco StadiumVision Mobile Streamer

CSCuw98141—Streamer crashes when audio channels are misconfigured.

Symptom The Streamer crashes when two audio channels use the same source input.

Workaround If a crash occurs, stop the offending channels and then restart the Streamer.

Resolved Defects in Cisco StadiumVision Mobile Release 2.1.1

Table 18 lists the defects that are resolved in Cisco StadiumVision Mobile Release 2.1.1.

Table 18 Resolved Defects in Cisco StadiumVision Mobile Release 2.1.1

Resolved Defect Number	Description of Original Defect
CSCuu45287	Window Demo App: Going back and forth causes the default triplet be loaded.
CSCuu45147	Customer App: Sometimes when viewing a video, the screen goes black.
CSCuu45081	Windows Demo App: When the device goes out of network range the Windows demo app exits.
CSCuu45063	Windows Demo App: Video clip stutters.
CSCuv33520	Android SDK: If the app is placed in the background and bright back screen is not right.

Open Defects in Cisco StadiumVision Mobile Release 2.1.0

This section lists the open defects for the Cisco StadiumVision Mobile Release 2.1.0. All defects that are open in prior Cisco StadiumVisionMobile releases and not listed as resolved remain open in Cisco StadiumVision Mobile Release 2.1.0.

Cisco StadiumVision Mobile Reporter



Note

Please refer to the *Cisco StadiumVision Mobile Release Notes for Release 2.0* for additional defects documented as open available at:

http://www.cisco.com/c/en/us/td/docs/Sports_Entertainment/StadiumVision/Mobile/release/notes/2_0/SV_Mobile_ReNotes_2_0.html

CSCuu60477—Reporter-video viewers chart should only display video session info.

Symptom Reporter-video viewers chart should only display video session information.

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

1. Install reporter 2.0-365.
2. Upload event schedule and run the event.
3. Tune one client to data channel.
4. Tune one client to file channel.
5. Tune one client to audio channel.
6. Tune one client to video channel.
7. Log into marketing chart.
8. Navigate to Live Report "unique Video Viewers".

9. Check channels represented in the bar graph.

Expected Result

Only the video channel is expected to display on the charts.

Actual Result

Data, audio, and file channels show up in bar graph in addition to video.

CSCuu56333—Reporter does not work with PI-2.2.1.

Symptom Reporter does not work with 2.2.1 PI as expected.

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

1. Install Cisco StadiumVision Mobile Reporter Release 2.0.0-365.
2. Configure PI from the TUI as explained in the user documentation.
3. Upload the event schedule on the reporter and run the events.
4. Log into the Reporter as a marketing user.
5. Check if the "Concurrent wifi Clients" chart displays data.

Expected Result

Concurrent wifi chart should display the clients connected to the Wi-Fi.

Actual Result

The chart display zero clients.

Cisco StadiumVision Mobile SDK

CSCuu45287—Window demo app: Going back and forth causes the default triplet be loaded.

Symptom When going back and forth in the Windows app, the default triplet is loaded.

Workaround Upgrade the Window demo app to v2.1.0-3817.

CSCuu45147—Customer App: Sometimes when viewing a video, the screen goes black.

Symptom When viewing a video using the customer application, the screen goes black sometimes.

Workaround Restart the app.

CSCuu45081—When the device goes out of network range the Windows demo app exits.

Symptom When the mobile device goes out of network range, the Windows demo app exits.

Workaround Stay within the wireless range.

CSCuu45063—Windows demo app: Video clip stutters.

Symptom The video clip stutters in the Windows demo app.

Workaround Exit the Windows demo app and start over.

Cisco StadiumVision Mobile Streamer**CSCuu35782—Wrong data when multiple sessions for the same file initiated.**

Symptom Clients report wrong data when multiple sessions for the same file is initiated.

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

1. Upload event schedule on the reporter and run the events on iOS and Android clients.
2. Upload the AP Names csv file with the AP info to the reporter.
3. Make sure there are clients connected to the Wi-Fi.
4. On the client, try to initiate multiple sessions by clicking on the same file channel.
5. Download the "Client sessions" report and check if multiple sessions are initiated every time and the session time.

Expected Result

iOS and Android clients should report the sessions separately with correct time for each session. It should close one session and reopen another one when user initiates the session for a second time for the same file channel.

Actual Result

At times, iOS and Android clients report the session time incorrectly.

Workaround There is no workaround.

Related Documentation

This section includes the following topics:

- [Cisco StadiumVision Documentation Go URL, page 23](#)
- [Release-Specific Documents, page 24](#)
- [Cisco StadiumVision Documentation Notifications, page 24](#)
- [Cisco StadiumVision Documentation Team Email Contact Information, page 24](#)

**Note**

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

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

http://www.cisco.com/en/US/products/ps11274/tsd_products_support_series_home.html

Cisco StadiumVision Mobile Documents

The following documents are available at:

http://www.cisco.com/en/US/products/ps11274/tsd_products_support_series_home.html

- *Cisco StadiumVision Mobile Reporter and Cisco StadiumVision Mobile Streamer Installation and Upgrade Guide*
- *Cisco StadiumVision Mobile Reporter Administration Guide*
- *Cisco StadiumVision Mobile Streamer Administration Guide*

Beginning with Release 2.1.1, the following documents are available on the Cisco StadiumVision Mobile (SVM) SDK DevNet site at:

<https://developer.cisco.com/site/svm/>

- *Cisco StadiumVision Mobile SDK Guides*—These guides describe how to use the library elements provided in the SDK (Software Development Kit) to create a venue application for mobile devices that accesses the Cisco StadiumVision Mobile feeds.
 - *Cisco StadiumVision Mobile Android Guide*
 - *Cisco StadiumVision Mobile iOS Guide*
 - *Cisco StadiumVision Mobile Windows Guide*

For information about the specific configuration requirements, see the *Cisco StadiumVision Mobile Design and Implementation Guide* that is available through your Cisco Systems sales representative.

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

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