



Release Notes for Cisco Video Surveillance Manager 4.1.1/6.1.1

April, 2009

These release notes provide important information for the following Cisco Video Surveillance Manager (Cisco VSM) products:

- Cisco Video Surveillance Media Server Release 6.1.1.
- Cisco Video Surveillance Operations Manager Release 4.1.1.
- Cisco Video Surveillance Virtual Matrix Release 6.1.1.

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Introduction

The Cisco Video Surveillance Manager consists of the following products:

- Cisco Video Surveillance Media Server—The core component of the Cisco Video Surveillance Software Suite, the Media Server enables the collection and routing of video from a wide range of cameras; event-tagging, record-on-motion, and recording of video for review and archive; secure local, remote, and redundant video archive capabilities; and bandwidth management for both live distribution and historical recording.
- Cisco Video Surveillance Operations Manager—Allows organizations to quickly and effectively configure and manage video throughout the enterprise. Provides a secure web portal to configure, manage, display, and control video throughout an IP network, and the ability to manage a large number of security assets and users, including Media Server instances, cameras, encoders, DVRs, and event sources, and digital monitors powered by Virtual Matrix.
- Cisco Video Surveillance Virtual Matrix—Enables flexible delivery of live and recorded video to command centers and provides high-availability access to network video for continuous monitoring applications. Virtual Matrix capabilities include aggregation and display of video from the Media Server platform on almost any number of digital monitors distributed across the IP network. Authorized users and integrated applications control the video that is displayed on any number of digital monitors.

Obtaining Documentation, Software, and Related Information

To obtain documentation and important information about Cisco VSM and about system requirements, go to the following URL, click the **Products** link, then click the **Cisco Network-Centric Video Surveillance products** link:

<http://www.cisco.com/go/physicalsecurity>

To access the self-service portal and obtain software, documents, and tools, log in to the Cisco Support Center at <http://www.cisco.com/support/>. You must be a registered user of Cisco.com to access this page. You must have a current Cisco support contract that is linked to your Cisco.com account to download software and obtain help from the Cisco Technical Assistance Center.

VSM Security Best Practices

The following new document available with the VSM 4.1/6.1 release: *Securing Cisco Video Surveillance Manager 4.1/6.1: Best Practices and Recommendations*. This document provides best practices and recommendations for helping to ensure the security of VSOM, VSMS, video devices, and client PCs in a Cisco VSM 4.1/6.1 environment. To access this document, go to the following URL, click the **Products** link, then click the **Cisco Network-Centric Video Surveillance products** link:

<http://www.cisco.com/go/physicalsecurity>

New and Changed Information

The following sections describe new and changed information in this release:

- [Cisco Video Surveillance Media Server 6.1.1 New and Changed Information, page 3](#)
- [Cisco Video Surveillance Operations Manager 4.1.1 New and Changed Information, page 4](#)
- [Cisco Video Surveillance Virtual Matrix 6.1 New and Changed Information, page 5](#)

Cisco Video Surveillance Media Server 6.1.1 New and Changed Information

Enhancements and changes in Cisco Video Surveillance Media Server 6.1.1 include the following:

- Cisco Video Surveillance high definition IP camera—New high definition IP camera supported with full frame rate at 1080p resolution. Dual streaming support for H.264 and Motion JPEG-Dual H.264 and Motion JPEG streams are now supported from the high definition IP camera. Separate proxies are created for each feed.

New and Changed Information Carried forward from Cisco Video Surveillance Media Server 6.1

Enhancements and changes in Cisco Video Surveillance Media Server 6.1 include the following:

- Dual streaming support for MPEG-4 and H.264—Dual MPEG-4 and H.264 streams are now supported from a single Stream Manager encoder port. Separate proxies are created for each feed.
- Cisco Video Surveillance Encoder features—Variable bit rate and video loss are now supported features for the Cisco Video Surveillance Encoder (source type is exacq). SNMP traps are sent when the encoder detects loss of analog video input.
- Restrict API access—It is now possible to restrict administration API access to a single administrative IP address.
- Support for Stream Manager H.264 events and serial pass-through—The Stream Manager encoder now supports all H.264 resolutions and serial-pass-through of PTZ and camera control commands. The encoder also can receive and process events. Support is included for the new x-code value h264.ciscosm_x.
- Improved motion configuration—The AXClient supports the detection of motion from different segments (windows) of a single feed. During motion configuration setup, a VSOM user provides specific names for each of these segments/windows, although the segment/window name is not displayed in the Motion Configuration panel.
- Multiple stream export and support in ReView Player—VSOM now supports multi-stream exports from the Operator page. When you choose this option, the system prompts for the export start and end time (default values are the earliest start time and the latest end time). VSOM then creates the export CVA file. The resulting video clip contains a multi-pane window player with all playable video clips and can be viewed in the ReView player.
- Sony PAL for Generation 3 cameras—Support is now provided for the Sony PAL Generation 3 camera models CS50, DF50, DF80, RZ50, RX530, RX550, and RX570.
- Clipping from Pelco DVRs—It is now possible to create server-side and client-side clips from the Pelco Endura DVR by using the standard VSMS interfaces.
- AXClient installer enhancement—A more efficient installer is now provided for the AXClient.

Important Notes about Changes Carried forward from Cisco Video Surveillance Media Server 6.0

- New archive format and Storage Manager—The minimum looping archive duration is 1 hour, which can be increased in 1-hour increments. When you upgrade to Media Server 6.0, you must reclaim the disk space that is used by the existing archives. For additional information, see the [“Important Upgrade Notes” section on page 5](#).
- Change in suspended proxy behavior—To enable fast MPEG-4 start up times and reliable event communication, direct proxies do not suspend for devices from these vendors: Cisco, AXIS, IQEye, Panasonic, and Sony. To allow these devices to suspend and disable fast MPEG-4 start up times and reliable event communication, contact the Cisco Technical Assistance Center.

Cisco Video Surveillance Operations Manager 4.1.1 New and Changed Information

Enhancements and changes in Cisco Video Surveillance Operations Manager 4.1.1 include the following:

- Cisco Video Surveillance high definition IP camera—New high definition IP camera supported with full frame rate at 1080p resolution. Dual streaming support for H.264 and Motion JPEG-Dual H.264 and Motion JPEG streams are now supported from the Cisco high definition IP camera. Separate camera feeds are created for each stream.

New and Changed Information Carried forward from Cisco Video Operations Manager 4.1

Enhancements and changes in Cisco Video Surveillance Operations Manager 4.1 include the following:

- Dual streaming support for MPEG-4 and H.264—Dual MPEG-4 and H.264 streams are now supported from a single encoder port. Separate proxies are created for each feed.
- Improved motion configuration—The AxClient supports the detection of motion from different segments (windows) of a single feed. During motion configuration setup, a VSOM user provides specific names for each of these segments/windows, although the segment/window name is not displayed in the Motion Configuration panel.
- Multiple stream export and support in ReView Player—VSOM now supports multi-stream exports from the Operator page. When you choose this option, the system prompts for the export start and end time (default values are the earliest start time and the latest end time). VSOM then creates the export CVA file. The resulting video clip will contain a multi-pane window player with all playable video clips and can be viewed in the ReView player.
- Support for Stream Manager H.264 events, and serial pass-through—The Stream Manager encoder now supports all H.264 resolutions and serial-pass-through of PTZ and camera control commands. The encoder can also receive and process events. Support is also included for the new x-code value h264.ciscosm_x.
- Clipping from Pelco DVRs—It is now possible to create server-side and client-side clips from the Pelco Endura DVR using the standard VSMS interfaces.
- Batch administration—Users can add cameras and change multiple camera parameters at one time from a single page.
- Database backups—Support is provided to back up the VSOM database.

- Custom fields—Users can create custom field labels in VSOM to add additional information on users or cameras.
- System Overview—The System Overview panel in the VSOM Administration pages displays information disk space usage for the media servers managed by VSOM and user login sessions.
- Event pagination—Pagination controls are provided for the Events Inbox in the VSOM Operator page.

**Note**

Cisco Video Surveillance Operations Manager 4.0 is backward compatible only with Cisco Video Surveillance Media Server 5.x. In addition, Cisco Video Surveillance Operations Manager 4.1 is backward compatible Cisco Video Surveillance Media Server 5.x with the following exceptions:

- Batch Administration uses new APIs that are available only in VSMS 6.1 to update existing settings.
- Batch Administration requires new Encoding Server updates to bulk add new cameras.

Cisco Video Surveillance Virtual Matrix 6.1 New and Changed Information

New features in Cisco Video Surveillance Virtual Matrix 6.1 include a variety of client performance enhancements and internal upgrades to make it compatible with the Cisco Media Server client:

- VSVM installer enhancement—A new and more efficient installer is now provided for VSVM.
- VSVM configuration utility enhancement—The new configuration utility allows for multiple configurations in a single installation of VSVM. This arrangement simplifies the use of multiple installations of VSVM.

Important Upgrade Notes

Beginning with Cisco VSM 4.0/6.0, VSM includes a new data format and a new Storage Manager that controls the data repository and available storage. The 4.0/6.0 upgrade process requires that you delete stored video data, but it maintains Cisco VSM configuration information.

Before you upgrade, make sure to back up any stored video data that you want to keep.

Detailed upgrade instructions are available with your upgrade package. You can also obtain an advanced service to assist with the upgrade and data retention. For more information, contact your Cisco sales representative or partner.

Using Cisco VSM with the Cisco Video Surveillance Standard Definition IP Camera

You can use the Cisco Video Surveillance standard definition IP camera model CIVS-IPC-2500 (wired model) and CIVS-IPC-2500W (wireless model) with VSM 3.1.1/5.1.1 and above, but be aware that the IP camera includes features that are not currently integrated with VSM.

The following sections provide information about using VSM with these standard definition IP camera models:

- [Standard Definition IP Camera Features that VSM Does Not Support, page 6](#)

- [Obtaining a Required Driver Pack](#), page 6
- [Guidelines for Using the Standard Definition IP Camera with VSM](#), page 6
- [Troubleshooting the Standard Definition IP Camera when used with VSM](#), page 7

Standard Definition IP Camera Features that VSM Does Not Support

Table 1 lists the standard definition IP camera features that are not compatible with VSM.

Table 1 Standard Definition IP Camera Features not Currently Compatible with VSM

Feature	Standard Definition IP Camera Implementation
Alarm events outputs	2 out / FTP clip / e-mail
Alarm inputs	2 in
Audio	Simplex / half duplex / full duplex
Cisco Discovery Protocol (CDP)	Sends CDP discovery messages
Event scheduling	You can schedule event notification from the IP camera web interface
Event notification	E-mail or FTP alerts if an event occurs
IP Filter window	Provides options for controlling access to the IP camera by IP address
Motion detection	Detects motion in up to 3 configured areas in the video field
Multicasting	Sends video and audio data as multicast streams
PTZ (RS-485) window	Provides options for pan, tilt, zoom (PTZ) functions
QoS	Quality of Service (QoS) for audio streams, video streams, or both
SNMP window	Provides options for configuring SNMP settings

Obtaining a Required Driver Pack

If you update the standard definition IP camera firmware, you may need to download and install a driver pack so that the standard definition IP camera works with VSM. Only users of VSM 3.1/5.1 are affected currently, although future camera and VSM versions may also require a driver pack update. To obtain documentation and important information about Cisco VSM and system requirements, go to the following URL, click the **Products** link, then click the **Cisco Network-Centric Video Surveillance products** link. See the Download Software section for information about obtaining driver packs.

<http://www.cisco.com/go/physicalsecurity>

Guidelines for Using the Standard Definition IP Camera with VSM

The following guidelines apply when you use the standard definition IP camera with VSM:

- The IP camera must be installed and configured as described in *Cisco Video Surveillance IP Camera User Guide* for the standard definition IP camera.

- You must create a separate user account with administrator privileges for each Media Server. Configuration connections for a Media Server are limited just as they are for user sessions. Viewing and managing video streams from VSM requires administrator-level privileges.
- A user with administrator privileges cannot be logged in to the standard definition IP camera and use VSM at the same time

Troubleshooting the Standard Definition IP Camera when used with VSM

If you experience difficulty when using the standard definition IP camera with VSM, refer to these troubleshooting guidelines:

- If you are using the Cisco Video Surveillance Operations Manager, it may take a few attempts to bring up video the first time that a standard definition IP camera is selected
- Verify that VSM is installed properly
- Verify that the VSM driver pack, dp Cisco, for the standard definition IP camera is installed properly
- Verify there are no firewalls enabled on VSM servers
- Verify that the default gateway is configured for the standard definition IP camera
- Verify that your web browser supports ActiveX controls
- Verify that the user name and password are configured identically for the camera and the VSOM standard definition IP camera settings
- Verify that the appropriate graphics card is installed in the system on which you are displaying video
- Verify that VSM configures the camera using the default port address of 80

Using Cisco VSM with the Cisco Video Surveillance High Definition IP Camera

You can use the Cisco Video Surveillance high definition IP camera model CIVS-IPC-4500 and CIVS-IPC-4300 with VSM 4.1.1/6.1.1, but be aware that the high definition camera includes features that are not currently integrated with VSM.

The following sections provide information about using VSM with these high definition IP camera models:

- [High Definition IP Camera Features that VSM Does Not Support](#)
- [Obtaining a Required Driver Pack](#)
- [Guidelines for Using the High Definition IP Camera with VSM](#)
- [Troubleshooting the high definition IP Camera when used with VSM](#)

High Definition IP Camera Features that VSM Does Not Support

[Table 2](#) lists the high definition IP camera features that are not compatible with VSM.

Table 2 High Definition IP Camera Features not Currently Compatible with VSM

Feature	Implementation Notes
720p at 60 fps	VSM supports up to 30 fps for 720p resolution.
Audio	Simplex / half duplex / full duplex.
Cisco Discovery Protocol (CDP)	Sends CDP discovery messages.
Event scheduling	You can schedule event notification from the high definition IP camera web interface.
IP Filter window	Provides options for controlling access to the high definition IP camera by IP address.
QoS	Quality of Service (QoS) for audio streams, video streams, or both.
SNMP window	Provides options for configuring SNMP settings.
USB memory card	Optional onboard memory USB 4GB (CIVS-IPC-USB-4G).
Unicast/multicast (TCP/UDP)	VSM supports UDP unicast and multicast, no TCP.
Digital event outputs	Two outputs, logic level programmable in the high definition IP camera.
Constant Bit Rate (CBR), Variable Bit Rate (VBR), and VBR with a Cap	The high definition IP supports CBR or VBR (constant quality), and VBR with ceiling (bandwidth management by reducing frame rate rather than quality). VSM supports CBR only.

Obtaining a Required Driver Pack

If you update the high definition IP camera firmware, you may need to download and install a driver pack so that the high definition IP camera works with VSM. To obtain documentation and important information about Cisco VSM and system requirements, go to the following URL, click the Products link, then click the Cisco Network-Centric Video Surveillance products link. See the Download Software section for information about obtaining driver packs.

<http://www.cisco.com/go/physicalsecurity>

Guidelines for Using the High Definition IP Camera with VSM

The following guidelines apply when you use the high definition IP camera with VSM:

- The high definition IP camera must be installed and configured as described in *Cisco Video Surveillance IP Camera User Guide* for the high definition IP camera.
- You must create a separate user account with administrator privileges for each Media Server. Configuration connections for a Media Server are limited just as they are for user sessions. Viewing and managing video streams from VSM requires administrator-level privileges.
- A user with administrator privileges cannot be logged in to the high definition IP camera and use VSM at the same time

Troubleshooting the high definition IP Camera when used with VSM

If you experience difficulty when using the high definition IP camera with VSM, refer to these troubleshooting guidelines:

- Verify that VSM is installed properly
- Verify that the VSM driver pack, dp_cisco, for the high definition IP camera is installed properly
- Verify there are no firewalls enabled on VSM servers
- Verify that the default gateway is configured for the high definition IP camera
- Verify that your web browser supports ActiveX controls
- Verify that the user name and password are configured identically for the camera and the VSOM high definition IP camera settings
- Verify that the appropriate graphics card is installed in the system on which you are displaying video
- Verify that VSM configures the high definition IP camera using the default port address of 80

Orderability Matrix

Table 3 shows the orderability matrix for versions of SuSE Linux Enterprise Server (SLES) and various Cisco Video Surveillance hardware platforms and Cisco VSM releases.

Table 3 SLES and Cisco Video Surveillance Hardware/Software Orderability Matrix

Hardware	Cisco VSM Release	SLES Version
Multiservices Platform	3.1.1/5.1.1	SLES 10, SP 1
	4.0/6.0	SLES 10, SP 1
	4.1.1/6.1.1	SLES 10, SP 1
Legacy Cisco Video Surveillance servers	3.1.1/5.1.1 ¹	SLES 9, SP 3
Legacy Cisco Video Surveillance international servers (CIVS-MSA1R-250)	3.1.1/5.1.1	SLES 9, SP 3
	4.0/6.0	SLES 10, SP 1
	4.1.1/6.1.1	SLES 10, SP 1

1. You can upgrade to Cisco VSM 4.1.1/6.1.1 on legacy Cisco Video Surveillance servers.

Known Issues

Table 4 describes known issues in Cisco VSM 4.1.1/6.1.1.

Table 4 **Known Issues**

KNOWN ISSUES	CUSTOMER IMPACT	NOTES
Performance tests show a latency of 1,000 milliseconds.	A latency of at least 1 second under best network conditions. This issues is most noticeable when using pan-tilt mounts.	Seen with H.264 streams up to 30 fps.
Reverse play on H.264, MPEG-4 and JPEG archives does not work consistently. In addition to not working smoothly, a browser can hang in some cases.	While using reverse play by itself or with a combination of other trick play buttons on the VSOM Operator page, the browser can hang. In this case, you must exit the browser and log back in to VSOM.	1 out of 4 clicks hangs; bit rate does not matter; the video may repeat for 2 to 3 seconds.
Short or partial frames from the high definition IP camera are dropped by VSM to address the stuttering issue.	Pixilation or macro-blocking artifacts are seen when archives are initially loaded and when seeking.	Seen using any supported resolution/bit rate on H.264 streams.
Seek does not work consistently with H.264 archives.	Seeking on H.264 archives or seeking from the Event Inbox does not succeed every time. Occurs more frequently with higher resolutions especially 1080p and 720p.	Seeking fails using scrollbar approximately 10% of the time; using Event Inbox within 3 clicks at 1080p, within 10 clicks at 720p.
Stand-alone clips in .AVI and .WMV formats play back at incorrect speed.	Playback of .AVI and .WMV clips is too slow or too fast.	Affects all resolutions on high definition camera running H.264. This issue occurs due to limitations of the VSM API and because these clip container formats use only a single frame rate.
High definition IP streams can take from 6 to 13 seconds to render.	For high definition IP camera streams, many operations take 6 to 13 seconds (variable GoP affects timing), including seeking, switching play directions, start up, resume after pausing.	To work around this issue, select a feed a second time.
Fast-forward and fast-rewind (greater than ++ speeds) causes player and video to freeze.	Video freezes. You must reselect an archive to start playing it again.	Main Concept Codec does not support variable GoP structures, which causes video to freeze.
Archive appears jerky and “falling behind” message appears in the debug view tool, dbgview.exe.	Archive playback is not smooth.	The “falling behind” message does not appear as a VSOM error message.

Table 4 **Known Issues (continued)**

KNOWN ISSUES	CUSTOMER IMPACT	NOTES
While using reverse play with any resolution with the high definition IP camera, 1 GB memory is used.	Limits the amount of high definition video that can be played backward.	For example, you may only be able to rewind 3 out of 4 panes in a 2x2 layout.
High bit rate feeds, for example 1080p 15 Mbps, cause most clients to have issues.	CPU and memory used by AXClient video player may affect overall performance of playback.	Only a 1x1 layout can be saved with CVA clip. Seeking CVA clip hangs ReView Player with other layouts.
Using motion detection on dual streams causes issues. Motion detection should be set up on only one of the dual streams.	Configuring two motion detection windows for a single camera causes motion detection notifications to behave unexpectedly.	To work around this issue, delete and then reconfigure the camera in VSOM. Motion events may be used on for both archives.

Caveats

Use the Bug Toolkit to find information about the caveats (bugs) for the current release of Cisco VSM, including a description of the problems and available workarounds. The Bug Toolkit lists both open and resolved caveats.

To access Bug Toolkit, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

To use the Software Bug Toolkit, follow these steps:

Procedure

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- Step 1** To access the Bug Toolkit, go to <http://tools.cisco.com/Support/BugToolKit/>.
- Step 2** Log in with your Cisco.com user ID and password.
- Step 3** To look for information about a specific problem, enter the bug ID number in the **Search for bug ID** field, then click **Go**.
- Step 4** To look for information if you do not know the bug ID number:
- a. Choose **Physical Security** from the Select Product Category menu.
 - b. Choose the desired product from the Select Product menu.
 - c. Choose the version number from the Software Version menu.
 - d. Under Advanced Options, choose **Use default settings** or **Use custom settings**. The default settings search for severity 1, 2, and 3 bugs, open and fixed bugs, and only bugs containing bug details. Use the custom settings to change the severity and status parameters, or to search for keywords within the bug headline and description.
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