

Cisco Business Video Remote Management Services Monitoring Details

Cisco® Business Video Remote Management Services (RMS) provide comprehensive availability and performance monitoring and remote, proactive management of the Cisco Business Video solution.

Cisco Business Video RMS features a single point of contact to facilitate all Cisco Business Video Service questions, collaborate with clients to address their productivity goals, and coordinate responses to complex technical issues by our expert in-house engineers. Our remote, high-visibility, co-managed approach gives you simple ownership and control of your converged network and peace of mind knowing that Cisco expertise, proven management processes, and advanced management tools are working with you to maximize the value of your Cisco Business Video Service experience.

Services, resources, and applications that are monitored are subject to change without notice.

Note: *Event* indicates an issue with system performance or health. *Fault* signifies an issue with the system; an incident ticket is generated. *Performance* refers to system functioning and responsiveness.

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[Cisco Unified Communications Manager](#)

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Business Video

Table 1. Cisco TelePresence System 500, 1100, 1300, 1300-65-ACR, 3000, 3200, TX9000, TX 9200, and TX1310

Attribute	Description	Event	
		Fault	Performance
Codec (primary, secondary, and presentation)	System availability, Ethernet, and HDMI status	✓	
Camera (primary and secondary)	Ethernet, HDMI, and power status detection	✓	
Room phone	Ethernet and power status detection	✓	
Microphone (CTS units containing AEB)	Microphone status	✓	
Display	HDMI and power status detection; displays attached to an HDMI splitter cannot currently be monitored; non-Cisco manufactured displays cannot currently be monitored	✓	
Auxiliary control unit (ACU)	Ethernet, serial, and power status detection	✓	
Interfaces	Interface errors, discards(for selected endpoints)	✓	✓
Call Protocol	SIP registration faults	✓	
DSP failures	Hardware problems with DSP	✓	
Abnormal call termination	Bandwidth, congestion, DSP, software, MUX, configuration	✓	
Call Control	Call signaling failed, call control agent (CCA) process timeout, Call Control Service failed to connect to the media service, No Media Ports Available,	✓	

	Phone UI Issue		
Call Quality	Jitter, latency, packet loss	✓ ¹	
Supported Plasma Display Monitors	Temperature Thresholds	✓	

Table 2. Cisco TelePresence System T1, T3, C Series, Profile Series, EX Series, SX Series, E20, MXP Series, MX Series, Edge Series

Attribute	Description	Event	
		Fault	Performance
Call protocol	H.323 or SIP registration	✓	
Codec	System availability	✓	
Call control	Lack of registration with the gatekeeper	✓	
Camera Status	Camera availability	✓	

Table 3. Cisco TelePresence Exchange System (CTX)

Attribute	Description	Event	
		Fault	Performance
System Errors	Admin server error, database server error, call engine server error, resource error, system backup error, system config error	✓	
Call Setup Failure	A call setup or routing failure between the CTX System and a resource	✓	
Call Abnormal Disconnect	Abnormal call disconnect	✓	
Resource Allocation Failure	Unable to allocate a resource for call signaling, media services, scheduling,	✓	
Resource Down	Network connectivity or probe monitor failure to the resource from the admin server	✓	
Cluster Node Down	Network connectivity or probe monitor failure to the cluster node from the admin server	✓	
User Authentication Failure	User authentication failure	✓	
License Failure	CTX license violation failures	✓	
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Total CPU usage	Measured CPU utilization at timestamp for all CPUs		✓
Total disk space usage	Measured disk utilization at timestamp		✓
Total memory usage	Measured memory utilization at timestamp		✓
Fan and power supply status (on HP or IBM)	Detection of failed powers supplies or fans	✓	
Temperature critical alerts (on HP or IBM)	Detection of critical temperature alerts	✓	
RAID controller status alerts (on HP or IBM)	Detection of abnormal RAID controller status	✓	
Disk drive status alerts (on HP or IBM)	Detection of failed disk drives	✓	

Table 4. Cisco TelePresence Manager (CTS-Man)

Attribute	Description	Event	
		Fault	Performance
System Errors	Internal server error, unsupported OS, unable to restart host, unable to initialize system, application error	✓	
Resource availability	Insufficient video conferencing resources to setup interop conference	✓	
Data Validation	Two CTS devices have same email address configured in Cisco Unified CM	✓	
Database errors	Unable to write to database	✓	

Attribute	Description	Event	
LDAP Errors	Unable to connect to LDAP Server	✓	
Cisco Unified Communication Server problems	CTM can't connect to CUCM, CTM can't authenticate to CUCM, CTM can't send AXL to CUCM	✓	
License Errors	CTM license invalid	✓	
MCU Communication Errors	CTM to MCU connection issue, CTM can't authenticate to MCU, CMT can't push meeting to MCU	✓	
Scheduling problems	CTM to Exchange connection issue, Mailbox quote exceeded, CTM to Domino Connection Issue, CTM can't open Domino DB, CTM to WebEx connection issue, CTM can't register to WebEx	✓	
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Total CPU usage	Measured CPU utilization at timestamp for all CPUs		✓
Total disk space usage	Measured disk utilization at timestamp		✓
Total memory usage	Measured memory utilization at timestamp		✓
Fan and power supply status (on HP or IBM)	Detection of failed powers supplies or fans	✓	
Temperature critical alerts (on HP or IBM)	Detection of critical temperature alerts	✓	
RAID controller status alerts (on HP or IBM)	Detection of abnormal RAID controller status	✓	
Disk drive status alerts (on HP or IBM)	Detection of failed disk drives	✓	

Table 5. Cisco TelePresence Management Suite

Attribute	Description	Event	
		Fault	Performance
Critical Windows services	Critical Windows services such as TMSAgentService, TMSSchedularService, and TMSServerDiagnosticsService TMS Exchange Extension TMS Provisioning Extension	✓	
File system usage	File system usage exceeds set threshold		✓
Device IP statistics	IP fragment failures, reassembly failures		✓
Interface statistics	Errors, discards, and bandwidth usage		✓
Interface utilization	Usage exceeds set thresholds		✓

Table 6. Cisco TelePresence Multipoint Switch (CTMS)

Attribute	Description	Event	
		Fault	Performance
Call Control Errors	Call Control aborted, Call Control has error, CTMS to CUCM connection failed, Call control listen port failed, CTMS open port failure, CTMS DTLS timeout, CTMS SPIMAP timeout	✓	
Security and Certification	CTMS TLS error	✓	
System Errors	CTMS out of memory, CTMS failed to create msg queue, CTMS failed to get msg queue, CTMS failed to send msg	✓	
Conference Manager problems	CTMS confmgmt application aborted, CTMS call not initialized	✓	
External Connection Status	External connection failure	✓	
Execution Manager	CTMS Execution Manager aborted, CTMS Execution Manager shutting down processes, CTMS Execution Manager detected a dead process, CTMS Execution Manager detected process exit	✓	

Attribute	Description	Event	
Media Processor application	CTMS Media Processor Application aborted	✓	
Switching application errors	CTMS switching app aborted, CTMS Switching app error	✓	
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Total CPU usage	Measured CPU utilization at timestamp for all CPUs		✓
Total disk space usage	Measured disk utilization at timestamp		✓
Total memory usage	Measured memory utilization at timestamp		✓
Fan and power supply status (on HP or IBM)	Detection of failed powers supplies or fans	✓	
Temperature critical alerts (on HP or IBM)	Detection of critical temperature alerts	✓	
RAID controller status alerts (on HP or IBM)	Detection of abnormal RAID controller status	✓	
Disk drive status alerts (on HP or IBM)	Detection of failed disk drives	✓	

Table 7. Cisco TelePresence Recording Service (CTRS)

Attribute	Description	Event	
		Fault	Performance
Server Disk Errors	CTRS no export space, CTRS no space, CTRS Disk info not available, CTRS disk at critical threshold	✓	
LDAP Errors	CTRS cannot connect to LDAP, CTRS can't obtain LDAP manager, CTRS can't obtain LDAP authenticator	✓	
Recording Session Errors	CTRS recording unrecoverable due to packet loss, Recording Session error while in progress, Recording Session error while in teardown, Recording Session error while in finishing, HD and SD are both disabled. Recording aborted. Stopped Playback Session. Problem starting playback. Aborted Recording Session. Error starting recording. Aborted Recording Session. No Disk Available. Aborted Recording Session. No Ports Available	✓	
Recording File Errors	File initializing issue, file close issue, file optimization issue, file failed to open	✓	
Recording Quality problems	Received too many frames in jitter buffer, unable to recover, Lost too many frames, unable to recover, failed to spawn media process, SSRC collision. More than one media source had the same source identifier., No media received for session calling number, Failed to create frame for session	✓	
Process Monitoring	Exec manager restarting processes, exec manager detected dead process, exec manager detected abort process, exec manager aborted, Show and Share API error, Show and Share upload failed	✓	
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Total CPU usage	Measured CPU utilization at timestamp for all CPUs		✓
Total disk space usage	Measured disk utilization at timestamp		✓
Total memory usage	Measured memory utilization at timestamp		✓
Fan and power supply status (on HP or IBM)	Detection of failed powers supplies or fans	✓	
Temperature critical alerts (on HP or IBM)	Detection of critical temperature alerts	✓	
RAID controller status alerts (on HP or IBM)	Detection of abnormal RAID controller status	✓	
Disk drive status alerts (on HP or IBM)	Detection of failed disk drives	✓	

Table 8. Cisco TelePresence Video Communication Service (VCS)

Attribute	Description	Event	
		Fault	Performance

Attribute	Description	Event	
Protocol not registered	H.323 protocol is not registered	✓	
NTP connection status	NTP server connection failed	✓	
Device Status	Device unavailable, link status down, operational status down	✓	
LDAP connection status	LDAP server is not accessible	✓	
External connection failure	External manager is down or not configured, or configured incorrectly	✓	
Fan Status	Fan status critical	✓	
Temp and Voltage Status	Temperature or voltage critical	✓	
CPU usage	CPU usage exceeds set threshold		✓
File system usage	File system usage exceeds set threshold		✓
Memory usage	Memory usage exceeds set threshold		✓
Interface statistics	Errors, discards, and bandwidth usage		✓
Interface utilization	Usage exceeds set thresholds		✓

Table 9. Cisco TelePresence Content Service (TCS)

Attribute	Description	Event	
		Fault	Performance
Protocol not registered	Call protocol is not registered, both H.323 and SIP	✓	
Total disk space usage	Disk drive utilization exceeds threshold value		✓
Total memory usage	Memory usage exceeds threshold value		✓
Server engine	Content Server engine is down	✓	
Server library	Content Server library is down	✓	
Server database	Content Server database is down	✓	
Device IP statistics	IP fragment failures, reassembly failures		✓
Interface statistics	Errors, discards, and bandwidth usage		✓
Interface utilization	Usage exceeds set thresholds		✓

Cisco Unified Communications Manager (CUCM) versions 6.x—8.x

Cisco Business Video RMS includes monitoring for Cisco Unified Communications Manager. This offers the full benefits of your converged network by identifying and resolving problems more quickly, more accurately, and with more visibility. Cisco Unified Communications Remote Management Service is a comprehensive solution that provides monitoring, issue resolution, and around the clock management of the converged network infrastructure and Cisco voice applications.

Table 10. CUCM versions 6.x–8.x¹¹

Attribute	Description	Event	
		Fault	Performance
Application availability			
Code red state entered	No calls are taking place	✓	
Code yellow state entered	Call throttling is enabled	✓	
Cisco disaster recovery failure	Cisco DRF	✓	
Resource availability			
Media list exhausted	An active link between CTI Manager and Cisco Unified Communications Manager is down	✓	
Service and process availability			

Critical subsystem failure	Critical subsystem failure	✓	
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Monitoring Details for Cisco Session Border Controller (SBC)

Cisco Business Video Service customers with SBCs can benefit from additional monitoring. SBCs relay media and signaling and can be used between Cisco Unified Communications Manager servers in different environments to provide topology and security in a business-to-business Cisco TelePresence environment. The following section outlines SBC-specific monitoring. Monitoring of the platform router (for example, an ASR) is offered separately and is inherent within our foundation monitoring.

Table 11. Cisco Session Border Controller (SBC)

Attribute	Description	Event	
		Fault	Performance
Source alert event	An alert is generated when media are received from an unexpected source	✓	
Dynamic blacklist event	An alert is generated when a source is added to or removed from the blacklist table. Blacklisting is the process of matching inbound packets based on parameters, such as source IP addresses, and preventing the packets that match those parameters from being processed	✓	
Adjacency status	An alert is generated if an adjacency becomes detached. An adjacency represents a signaling relationship with a remote call agent. If an adjacency becomes detached, the SBC cannot connect the call	✓	
Service state event	An alert is generated if the state of the SBC service card changes	✓	
System congestion alarm event	An alert is generated because of either high CPU usage or high memory usage	✓	
SLA violation	An alert is generated when there is a violation of the product service level agreement as described in the policy tables. An SBC policy is a set of rules that define how the SBC treats different kinds of VoIP events. There are two types of policies: number analysis and routing call admission control	✓	
Radius connection status	An alert is generated when the connection status between the SBC and a RADIUS server changes	✓	

Monitoring Details for Cisco Unified Video Conferencing (CUVC)

Cisco Business Video Service customers with Cisco Unified Videoconferencing Managers can benefit from additional monitoring. Cisco Unified Videoconferencing Manager is a single-installation product that contains the following components:

- Resource Manager: provides resource management of network devices for video and audio meetings as well as scheduling, call-routing, and conference control functionalities.
- Network Manager: provides a central management interface, enabling network administrators to easily and intuitively control, configure, and maintain collaborative communication networks and equipment based on Cisco.

Table 12. Cisco Unified Video Conferencing (CUVC)

Attribute	Description	Event	
		Fault	Performance
CUVC-M			
Interface errors	Inbound errors, inbound utilization, inbound broadcast, IP fragmentation, IP no route errors, IP reassembly failures		✓
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Critical service down	An alert is generated If critical services have been shut down or failed		✓

Performance	Memory utilization, CPU utilization, disk space utilization		✓
CUVC MCU 3500, 5000, and 5100			
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
MCU restarted or shutting down	The MCU has been restarted or is in the process of shutting down	✓	
MCU unregistered from gatekeeper	An alert is generated if the MCU unregisters from the gatekeeper. This alarm is cleared once if the MCU registers with the gatekeeper.	✓	
Abnormal call disconnect	MCU experienced an abnormal disconnect from endpoint	✓	
MCU MP lost	MCU reported lost media processor	✓	
Gatekeeper Errors	Interop calls not connecting through gatekeeper, MCU has detected an error with the gatekeeper license, problems with gatekeeper registration, gatekeeper has reached registration capacity	✓	
Security Errors	Gatekeeper reports rogue call attempt or multiple login attempts have been denied, MCU authentication failure	✓	
Performance	MCU is running at high CPU/high memory, MCU is overheating, MCU general alarm, MCU Fan/Power Supply has failed, MCU experienced network problem, MCU experienced loss of ISDN	✓	

Monitoring Details for Cisco Media Experience Engine (MXE)

Cisco media processing provides media conversion, real-time post-production editing, formatting, and network distribution capabilities in a single networked solution.

This family of products includes the Cisco Media Experience Engine, MXE 3000, MXE 3500, and MXE 5600, all of which provide the ability to transcode a single source of content so that you may play it back on any device.

Cisco MXE Series Media Experience Engines also offer:

- Real-time postproduction and media processing capabilities
- Features such as watermarking, voice and video editing, text and image overlays, and noise reduction
- An easy way to create broadcast-quality video experiences

Table 13. Cisco Media Experience Engine (MXE) 3000, 3500, and 5600

Attribute	Description	Event	
		Fault	Performance
Interface errors (all)	Inbound errors, inbound utilization, inbound broadcast, IP fragmentation, IP no route errors, IP reassembly failures		✓
Device unavailable (all)	An alert is generated if the device does not respond to SNMP requests	✓	
Critical service down (3000 and 3500 only)	An alert is generated If critical services have been shut down or failed		✓
Performance (3000 and 3500 only)	Memory utilization, CPU utilization, disk space utilization		✓
Environment (5600 only)	Power status, fan tray status, module status, power supply output	✓	

Monitoring Details for Cisco Media Service Engine (MSE) 8000 and Equivalent Stand-alone ISDN Gateway, IP Gateway, IP VCR, TelePresence Server and MCUs

Cisco Business Video Service customers with the Cisco MSE 8000 can benefit from additional monitoring capabilities. The Cisco MSE 8000 is a highly scalable and flexible chassis-based platform for high-definition conferencing and voice communications. The Cisco MSE 8000 can provide an all-in-one MCU, ISDN Gateway, IPVCR, and IP Gateway solution when coupled with the appropriate line cards. The following section describes the monitoring capabilities for the Cisco MSE 8000 chassis and line cards as well as their stand-alone equivalents.

Table 14. Cisco MSE 8000, ISDN Gateway, IP Gateway, IP VCR, TelePresence Server, and MCUs

Attribute	Description	Event	
		Fault	Performance
MSE 8000 Chassis, monitored through the MSE 8050 (supervisor card)			
Chassis alarm	An alert is generated when chassis is in alarm or muted state	✓	
Chassis Health	An alert is generated when problems are detected with the fan tray	✓	
Supervisor alarm	Chassis based alarm, alerts when the reported alarm is in alarm or muted state	✓	
Fan tray problem	Chassis fan tray alarm, alerts when status of the fan tray is failing	✓	
Power shelf lost contact	Chassis power shelf alarm, lost contact with power shelf	✓	
Power shelf fault	Chassis power shelf alarm, power shelf reporting fault	✓	
Power shelf alarm	Chassis power shelf alarm, insufficient current capacity; chassis has too many blades to be supported by power shelf configuration	✓	
Power supply alarm	Chassis power supply alarm supply not monitored; communication cable between chassis and power shelf not connected or bad	✓	
Power supply voltage high	Chassis power supply alarm, out of range high; power supply voltage is above normal range but not yet critical	✓	
Power supply voltage low	Chassis power supply alarm, out of range low; power supply voltage is below normal range but not yet critical	✓	
Supply voltage too high	Chassis power supply voltage too high	✓	
Supply voltage too low	Chassis power supply voltage too low	✓	
MSE 8300 series line cards and equivalent stand-alone 3200 series ISDN gateways/3500 series IP gateways			
Interface statistics	Bytes sent and received, collisions, queue drops, transmit and receive errors, interface speed		✓
Device unavailable	An alert is generated if the device does not respond to SNMP requests	✓	
Link Status	An alert is generated upon link failure	✓	
Environmental	An alert is generated for troubles with fan status, RTC battery, voltage, temperature		✓
CPU	CPU Utilization		✓
Media	Media Utilization		✓
MSE 8200 series line cards and equivalent stand-alone 2200 series IP VCR			
Interface statistics	Bytes sent and received, collisions, queue drops, transmit and receive errors, interface speed		✓
Device unavailable	An alert is generated if the device does not respond to requests	✓	
Link Status	An alert is generated upon link failure	✓	
Environmental	An alert is generated for troubles with fan status, RTC battery, voltage, temperature		✓
CPU	CPU utilization		✓
Media	Media utilization		✓
MSE 8710 line cards and equivalent stand-alone 7010 TelePresence server			
Gatekeeper Registration Status	Gatekeeper and SIP registration not enabled	✓	
Gatekeeper Registration Failure	Gatekeeper registration failed	✓	
Device unavailable	An alert is generated if the device does not respond to requests	✓	
MSE 8500 and 8400 series line cards and equivalent stand-alone 4200 and 4500 series MCUs			
Interface statistics	Bytes sent and received, collisions, queue drops, transmit and receive errors, interface speed		✓
Link Status	An alert is generated upon link failure	✓	
H.323 Gatekeeper	H.323 gatekeeper registration failed	✓	

Registration Failure			
Environmental	An alert is generated for troubles with fan status, RTC battery, voltage, temperature		✓
DNS Status Failed	An alert is generated when DNS look up on gatekeeper IP address failed	✓	

¹ If a call is dropped due to an issue with call quality, an alarm is generated.

¹¹ CUCM 8.6x is also supported on UCS.



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