



Release Notes for *Cisco Remote Silent Monitoring Release 10.0(1)*

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Contents

- [Introduction, page 2](#)
- [System Requirements, page 3](#)
- [Related Documentation, page 3](#)
- [New and Changed Information, page 4](#)
- [Limitations and Restrictions, page 5](#)
- [Installation Notes, page 8](#)
- [Caveats, page 9](#)
- [Troubleshooting, page 11](#)
- [Obtaining Documentation, Obtaining Support, and Security Guidelines, page 11](#)
- [Field Alerts and Field Notices, page 11](#)



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

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Introduction

This document discusses the features and caveats for Cisco Remote Silent Monitoring (RSM) Release 10.0(1). RSM allows for real-time, phone-based monitoring of agents in Cisco's Unified Contact Center Enterprise (Unified CCE) environment. The RSM platform is installed on a Windows operating system as a single server instance, and a separate call flow script is hosted on an IP IVR or CVP (VRU) platform.

Information on which software releases are supported by Remote Silent Monitoring Release 10.0(1) is available in the Cisco Unified Contact Center Enterprise (Unified CCE) Software Compatibility Guide, accessible from

http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/compatibility_matrix/ipcccompat.pdf

Remote Silent Monitoring Release 10.0(1) supports Microsoft Windows 2003 Server R2 or SP2 Standard Edition, or Windows 2008 R2 Standard Edition.

About Release 10.0(1)

Cisco Remote Silent Monitoring Release 10.0(1) is a major release, delivered in an installer. The installer supports both a full installation of RSM 10.0(1) as well as support for upgrading all previously released base versions of RSM, as described below. The installer is available from www.cisco.com.

Supported Base Install Versions

This release has been tested to be compatible with the following base releases: Cisco RSM 1.0(1), 1.0(2), 1.0(2) ES1, 1.0(2) ES2, 1.0(2) ES3, 1.0(2) ES4, 1.0(2) ES5, 8.0(1), 8.5(1), 8.5(2), 9.0(1), and 9.1(1).



Caution

If you are updating from a previous version of RSM, the VLEngine and PhoneSim services are stopped during installation and then re-started once installation is complete. Thus, all monitoring sessions in progress will be terminated, and no new sessions can be initiated until installation is complete.

The release can be uninstalled via Control Panel > Add or Remove Programs.



Note

The most up-to-date version of these release notes is available on the Web at http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_release_notes_list.html



Caution

This release includes an updated CVP callflow script/application. Unless this updated script is deployed on the VXML server, some of the defects mentioned in this release will not be resolved. Note that any previous RSM CVP callflow script changes will be lost and will have to be added to the new script.

System Requirements

For Unified CM and Unified CCE specifications required for this release, refer to the *Hardware and System Software Specification (Bill of Materials): Cisco ICM/IPCC Enterprise & Hosted Editions*, which is accessible from

http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_technical_reference_list.html

See the *Cisco Remote Silent Monitoring Installation and Administration Guide* for detailed information on RSM hardware requirements, which are based on anticipated monitoring sessions and agent usage.

Anti-Virus Software Requirements

RSM requires the use of one of the following Cisco approved anti-virus software:

- Trend Micro ServerProtect 5.7
- McAfee VirusScan Enterprise 8.7i
- Symantec Endpoint Protection 11.0

Refer to Chapter 2, Cisco Hardware and Software Requirements, of the *Cisco Remote Silent Monitoring Installation and Administration Guide* for BOM information.

Related Documentation

Documentation for Cisco Unified Contact Center Enterprise and Hosted Editions, as well as most related documentation, is accessible from

<http://www.cisco.com>

- Related documentation includes the documentation sets for Cisco CTI Object Server (CTI OS), Cisco Agent Desktop (CAD), Cisco Agent Desktop - Browser Edition (CAD-BE), Cisco Unified Contact Center Management Portal, Cisco E-Mail Manager Option, Cisco Web Collaboration Option (including Cisco Collaboration Server, Cisco Dynamic Content Adapter, Cisco Media Blender), Cisco Unified Customer Voice Portal (CVP), Cisco IP IVR, Cisco Support Tools, and Cisco Unified Communications Manager.
- Technical Support documentation and tools can be accessed from <http://www.cisco.com/en/US/support/index.html>
- The Product Alert tool can be accessed through <http://www.cisco.com/cgi-bin/Support/FieldNoticeTool/field-notice>

New and Changed Information

The following changes have been introduced for Cisco Remote Silent Monitoring Release 10.0(1)

CTI (GED-188) Integration with UCCE

RSM now supports both CTI and CTI OS integrations with UCCE. CTI configuration should be considered in the following scenarios:

- Pure Finesse installations without any CTI OS servers;
- To handle 2,000 active agents and 12,000 configured agents per PG pair, RSM should be configured with CTI integration. With CTI OS (using Java CIL), RSM can support 2000 active agents but only up to 8,000 configured agents;
- If the number of CTI OS monitor mode connections exceeds the maximum allowed value of two, then CTI integration can be used to overcome this limitation.

120 Simultaneous Monitoring Sessions

RSM now supports 120 concurrent monitoring sessions per RSM server (with 7845 or equivalent UCS VMware) when using either CVP or UCCX/IPIVR VRU call flow. Each RSM server can be configured to connect up to six UCCE clusters (each cluster is one PG pair and corresponding UCM subscribers).

Active and configured agent support is as follows:

- Each UCCE cluster PG pair supports up to 2,000 active agents and up to 12,000 configured agents.
- The maximum total agents supported is 12,000 active agents and 72,000 configured agents across all six configured UCCE PG clusters.

Serviceability and monitoring of RSM components

RSM 10.0(1) supports monitoring RSM configuration, processes, and performance counters using UCCE System CLI tool or SNMP based NMS systems.

RSM SimPhones Configuration

RSM SimPhone configuration now allows four to fifteen digit DN dialplans.

Configuration Changes

Two changes have been made to the RSM registry to support UCCE CTI integration:

- New cluster level registry key `ClusterN_VLEngine_UCCE_Integration` has been added to indicate whether CTI or CTI OS integration should be used.
- The following new cluster level registry keys have been added to specify primary and secondary CTI servers and their ports:

- `ClusterN_VLEngine_CTI1_HostName`—IP address or hostname of primary CTI server for the cluster.
- `ClusterN_VLEngine_CTI1_Port`—Connection port for the cluster's primary CTI server.
- `ClusterN_VLEngine_CTI2_HostName`—IP address or hostname of secondary CTI server for the cluster.
- `ClusterN_VLEngine_CTI2_Port`—Connection port for the cluster's secondary CTI server.

Limitations and Restrictions

The following notes describe the known limitations of Cisco Remote Silent Monitoring Release 10.0(1) in a Cisco environment, as well as information about other important system integration issues.

RSM CVP Comprehensive Call Flow Script Support

RSM 9.1(1) and above uses RTSP in CVP Callflow script. This RSM CVP Script using RTSP can be setup in either Standalone or Comprehensive mode. For Comprehensive Call Flow setup using UCCE/ICM, an IOS patch/version that resolves a media loop issue in VXML Gateway is required. (Refer to related defect CSCul89581.)

Maximum Number of Configured Agents with CTI OS Integration

RSM can support Java CIL-based, UCCE CTI OS integration up to 8,000 configured agents per PG. If the number of configured agents in a PG exceeds 8,000, the RSM VLEngine service fails to stay connected with the UCCE CTI OS Server. To overcome this CTI OS limitation, UCCE CTI integration can be used in RSM 10.0(1).

3 to 4 Second Monitoring Delay with HTTP Prompt Streaming in IP IVR

A delay of three to four second monitoring delay still exists in the IP IVR call flow script, due to HTTP-based prompt streaming in IP IVR.

Cannot Monitor Agent Greeting or Whisper Announcement

RSM does not support monitoring the Agent Greeting or Whisper announcement portion of a call. RSM can establish a monitoring (BiB) call only after receiving a `Call Established` event, which comes after the initial Agent Greeting and Whisper announcements.

Monitoring of Simphones via Supervisor Desktop

Currently, you cannot monitor RSM simulated supervisor phones (i.e, simphones) via Cisco Supervisor Desktop (CSD), as the simphones are purposefully added to the Communications Manager platform with their BiB (built-in-bridge) disabled.

Failover Redundancy and Load Balancing with CVP

Currently, RSM does not support load balancing and clustering if CVP is used as a VRU. (Load balancing support is defined as the association of multiple RSM servers so that the incoming request load is distributed among them. Failover redundancy is defined as the association of RSM servers so that if one fails, the others will act in its place.)

Mobile Agent Support

RSM uses the Unified Communications Manager (Unified CM) monitoring mechanism, which currently does not support Cisco Mobile Agent monitoring. Subsequently, RSM does not support monitoring Mobile Agents.

IP IVR HTTP Security

Currently, IP IVR supports only HTTP communication with the RSM server. TLS HTTPS is not supported.

Multiple Clusters and JTAPI Libraries

If a single RSM server is configured to use Unified CM multiple clusters, each cluster's constituent servers must be running the same build of Unified CM. Attaching to multiple clusters running different versions of Unified CM is not supported, as there may be JTAPI library incompatibilities between versions.

Unified CCE Supported IP Phones

Agents must use a third-generation or later Unified CCE supported IP phone with RSM (note that Personal Communicator is not supported by Unified CCE). Phones supported include:

- 7906G, 7911G, 7921G (Aug 08 upd), 7925G, 7931G, 7941G/GE, 7942G, 7945G, 7961G/GE, 7962G, 7965G, 7970G, 7971G-GE, 7975G, 6900, and IP Communicator 7.0(1) and higher.

Phones not supported include:

- 7910, 7912, 7940, 7960

All new phones will be supported. For phone support information, refer to the *Cisco Unified Contact Center Enterprise (Unified CCE) Software Compatibility Guide*, accessible from

http://www.cisco.com/en/US/products/sw/custcosw/ps1844/products_device_support_tables_list.html

Encrypted Call Monitoring

RSM does not allow for the monitoring of encrypted calls.

Transfers and Alternate Call Monitoring

Transfers and alternate calls require manual intervention to continue monitoring. RSM does not do this automatically. So, when an agent starts a consult call, RSM stops monitoring the customer call, which is now on hold, and starts monitoring the consult call, if desired. When the agent transfers the call to another agent, the RSM monitoring session is terminated.

Agent Monitoring When Not Talking or on Hold

An agent can be monitored with RSM only when they are talking on a call. They cannot be monitored while on hold or not on a call. Calls on hold before the supervisor initiates a monitoring session will not be picked up for monitoring. The VLEngine will filter these calls from being monitored by any of the IVR options (e.g., agentid, skill group, newest call, random call or list of talking agents).

However, if the agent puts the caller on hold while being monitored by a supervisor, then the monitoring session is kept alive for the duration of the hold period. If the supervisor exits out of the monitoring session by pressing * or 1 for information or instructions, then they will not be able to resume monitoring. This is due to BiB functionality, where a monitoring call can be established only if the agent is in a talking state.

Monitoring Sessions Per Agent

Unified CM provides for one active monitoring session per agent, as the agent's phone can handle only one active monitoring session and one active recording session at any given time. If a third-party recorder is recording the agent's conversations, the agent can still be monitored by a supervisor using the supervisor desktop or RSM; however, if a RSM-based supervisor and a supervisor desktop-based supervisor both try to monitor the agent simultaneously, the request will fail.

RSM will set up only one monitoring session through Unified CM for a single monitored agent, even if two or more RSM users are requesting to monitor the agent's call at the same time. In this case, RSM forks the stream to cover all RSM users, so that more than two RSM-based supervisors can monitor the same agent. However, if there are multiple RSM servers in the environment that monitor the same agent, they each make a separate monitoring call to that agent.

If the monitoring call limit has been reached for a specific agent, and a dialed-in supervisor then attempts to monitor this same agent, the request will be denied via an audio prompt feedback from the system, stating that the agent cannot be monitored.

Bandwidth

There must be sufficient bandwidth available from the agent IP phone to the RSM server to support the monitoring voice stream, in addition to the regular voice streams for the call. This is important for employees who work remotely, at home, and small branches on limited bandwidth. Regular Call Admission Control (CAC) and bandwidth calculations are applicable for monitoring calls.

Since G.711 a-law, G.711 u-law, and G.729 are the codecs supported for monitoring calls between agent IP phone and RSM server (phonesim), use the Cisco TAC Voice Bandwidth Codec Calculator for additional bandwidth capacity planning, at

http://tools.cisco.com/Support/VBC/jsp/Codec_Calc1.jsp

VLEngine and Email Alerts

Currently, the VLEngine service does not support the sending of email alerts in error situations.

IP IVR Execution Steps

IP IVR can execute up to 25,000 steps per script session. The Max Number of Executed Steps parameter is used to configure this setting, and has a default setting of 1,000 steps.

RSM can reliably monitor up to 10 agents consecutively before the 1,000 steps limit is reached, at which point a system error message is displayed and IP IVR abruptly closes. To enable the monitoring of multiple agents in one session, modify the Max Number of Executed Steps configuration parameter in IP IVR to its upper limit of 25,000. (This value has been successfully tested to monitor at least 40 agents consecutively, with calls up to 600 seconds in duration, and at least one hold event per call.)

For information on modifying the Max Number of Executed Steps parameter, refer to the *Cisco IP IVR/CRS 5.0/7.0/8.0 Administration Guide*, accessible from <http://www.cisco.com/>

Same RSM Server Cannot Support Both CVP and IP IVR

RSM 9.1 release and above will not be able to support both CVP and IP IVR accessing the same RSM server. This is due to IP IVR supporting http prompt streaming only and CVP call flow script supporting RTSP streaming.

Support for Calls Established Before VLEngine Services Start

RSM does not support monitoring calls that have been established before the RSM VLEngine service starts. Only calls that start after the VLEngine starts up can be monitored.

Installation Notes

See the *Cisco Remote Silent Monitoring Installation and Administration Guide Release 10.0(1)* for specific instructions on how to plan, deploy, and integrate RSM into your Cisco environment. This guide also provides important pre-installation tasks that must be considered, including:

- Provisioning the base operating system
- Enabling Unified CM services
- Configuring simulated phones
- Associating simphones with the system puser
- Adding an RSM application user
- Creating a supervisor login account
- Installing the JTAPI client libraries required to run RSM



Note

You will need administration access for both Unified CM and Administration and Data Server (ADS) to perform many of the pre-installation and installation tasks described in the RSM documentation.

**Caution**

This release includes an updated CVP callflow script/application. Unless this updated script is deployed on the VXML server, some of the defects mentioned in this release will not be resolved. Note that any previous RSM CVP callflow script changes will be lost and will have to be added to the new script.

Caveats

Using Bug Toolkit

Known problems (bugs) are graded according to severity level. These release notes contain descriptions of the following:

- All severity level 1, 2, and 3 bugs.
- Significant severity level 4 bugs.

You can search for problems by using the Cisco Software Bug Toolkit.

Before You Begin

To access Bug Toolkit, you need the following items:

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

Procedure

-
- Step 1** To access the Bug Toolkit, go to <http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs>.
- 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**.

For information about how to search for bugs, create saved searches, and create bug groups, click **Help** in the Bug Toolkit page.

Open Caveats

The caveats in Table 1 describe possible unexpected behavior in the latest Cisco Remote Silent Monitoring release. These caveats may also be open in previous releases. Bugs are listed in order of severity and then in alphanumeric order by bug identifier.

**Tip**

If you have an account with Cisco.com, you can use the Bug Toolkit to find caveats of any severity for any release. Bug Toolkit may also provide a more current listing than is reflected in this document. To access the Bug Toolkit, log onto http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl

Table 1 *Open Caveats for Cisco Remote Silent Monitoring Release 10.0(1)*

| Identifier | Severity | Component | Headline |
|----------------------------|----------|-----------|--|
| CSCuh38718 | Moderate | VLEngine | Playing a prompt to supervisor when the monitoring call gets ended |
| CSCum39876 | Moderate | VLEngine | One misconfigured cluster makes the entire vlenigne service stop |

Resolved Caveats

This section lists caveats that are resolved but that may have been open in previous releases.

Bugs are listed in order of severity and then in alphanumeric order by bug identifier. Because defect status continually changes, be aware that this document reflects a snapshot of the defects that were resolved at the time this report was compiled. For an updated view of resolved defects, access the Bug Toolkit (see the “Using Bug Toolkit” section on page 9.)

The following table lists caveats that are resolved in Cisco Remote Silent Monitoring but that may have been open in previous releases:

Release 9.1(1)

Table 2 lists the caveats that were resolved in Release 10.0(1).

Table 2 *Resolved in Release 10.0(1)*

| Identifier | Severity | Component | Headline |
|----------------------------|----------|-----------|--|
| CSCuf21548 | Moderate | VLEngine | Supervisor not able to monitor first call on the skillgroup |
| CSCuf21578 | Moderate | VLEngine | Can Monitor Agent API should return the call start time and request time |
| CSCuf26819 | Moderate | VLEngine | No prompt option for No match in RSM element application |
| CSCug62081 | Moderate | Installer | RSM Configuration Manager Install Wizard not populating correctly |
| CSCuj09113 | Moderate | VLEngine | Vlenigne unable to re-connect to CTIOS after doing an exit_opc or cycling the CG / CTIOS servers on the PG |
| CSCuh38728 | Moderate | VLEngine | Modification needed in script after pressing * during the monitoring |
| CSCuj63245 | Moderate | VLEngine | RSM VLEngine unable to authenticate new supervisors |
| CSCul89581 | Moderate | Gateway | Supervisor not able to monitor Agent conversation Remotely where CCE-CVP at higher version and RSM at 9.1(1) |
| CSCum95797 | Moderate | VLEngine | Cant Monitor by agent after service observed Monitor by other CTI Client |



Note

This release includes an updated CVP callflow script/application. Unless this updated RSM CVP script is deployed on VXML server, RTSP streaming, G.729 codec, shared gateway, and other CVP-related changes will not be supported.

Troubleshooting

See the *Cisco Remote Silent Monitoring Installation and Administration Guide 10.0(1)* for detailed information on RSM troubleshooting information, including case scenarios and specific fixes, located at

http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_installation_guides_list.html

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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

Field Alerts and Field Notices

Note that Cisco products may be modified or key processes may be determined important. These are announced through use of the Cisco Field Alert and Cisco Field Notice mechanisms. You can register to receive Field Alerts and Field Notices through the Product Alert Tool on Cisco.com. This tool enables you to create a profile to receive announcements by selecting all products of interest.

Log into www.cisco.com; then access the tool at:

<http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

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