Release Notes for
Cisco Remote Silent Monitoring Release 9.1(1)
March 18, 2013

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Introduction

This document discusses the features and caveats for Cisco Remote Silent Monitoring (RSM) Release 9.1(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 9.1(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


About Release 9.1(1)

Cisco Remote Silent Monitoring Release 9.1(1) is a major release, delivered in an installer. The installer supports both a full installation of RSM 9.1(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), and 9.0(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


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.


- 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 9.1(1)

G.729 Codec Between RSM and Phone BiB Monitoring Call Leg

RSM now supports G.729 codec between UCM configured, RSM server hosted Supervisor SimPhones and Agent Phones. The monitoring call established between RSM SimPhone and Agent Phone's BiB can now use any of the supported codecs (G.729, G.711 a-law, and G.711 u-law).

Additionally, the RSM SimPhone region in UCM can now be configured for Max Audio Bit Rate of 8Kbps (G.729) to force the G.729 codec from the phone.

Support for G.729 also addresses the following scenarios where G.711 is not an option:

- RSM deployed in a central data center with agent phones located at home or remote sites and branches with limited bandwidth, or at locations with WAN connectivity;
- In IP Communicator soft phone, configuring the Optimize for low bandwidth option always forces a G.729 BiB stream, irrespective of the UCM Region settings.

G.729 Codec Between VRU (CVP) and RSM Call Leg

In CVP-based RSM deployments, the new RTSP prompt streaming allows G.729 codec support between the VRU (CVP Gateway) and RSM call leg, allowing for end-to-end G.729 CVP deployments.

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**Note**

G.729 support is applicable only for CVP; G.711 u-law is the only codec supported for the IP IVR leg.

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**Note**

If RSM is configured using a comprehensive call flow, either G.711 a-law or G.711 u-law can be configured for the RSM to CVP call leg. This is due to dependencies related to Agent Greeting, and other ICM functionality, that makes it incompatible with G.729. To use G.729 for the CVP call leg, RSM must be configured in a standalone call flow.

G.711 a-law Codec Between VRU (CVP) and RSM Call Leg

CVP based RSM deployments now support the G.711 a-law codec (in addition to G.711 u-law) between the VRU and RSM call leg, allowing for end-to-end G.711 a-law deployments.

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**Note**

For CVP, if the Phone BiB call leg is G.729, then RSM performs the necessary transcoding to G.711 a-law and u-law.
Shared VXML Gateway with CVP Using RTSP Prompt Streaming

RSM now supports RTSP streaming, and no longer requires a dedicated VXML Gateway for CVP installations (i.e., you do not need to configure the ivr prompt streamed option in VXML Gateway, which conflicts with CVP IOS requirements).

Improved RSM Scalability and Monitoring Session Duration with CVP RTSP Streaming

RSM scalability on CVP has been improved to support 80 concurrent sessions on any CVP-supported VXML Voice Gateway model and IOS version. RTSP streaming support for CVP eliminates the previous high gateway memory requirement, as well as the CVP monitoring call duration limit default (maximum twenty minutes). Now, monitoring calls for any duration length is supported without any configuration, by default.

No Monitoring Delay with RTSP Prompt Streaming in CVP

RTSP streaming support for RSM CVP call flow script eliminates the three to four second delay between the supervisor monitoring the call and the actual agent/customer live call audio.

VLEngine API Changes Support Filtering Calls by DNIS, Dialed Number and Call Direction

The GetCallToMonitor.jsp VLEngine HTTP API now supports the following additional parameter options to filter calls by DNIS and Dialed Number:

**Parameters**

**selectionType**: Either skillgroup (if ID is a skillgroup ID); dnis (if ID is a numeric DNIS); dialednum (if ID is a numeric DialedNumber); or calltype (if ID is a call type ID--inbound vs. outbound).

**selectionID**: Either ID of skillgroup; numeric DNIS value; numeric Dialed Number; or calltype (inbound or outbound) to monitor. For calltype, specify 1 for inbound and 2 for outbound. Can be set to 0 to not limit by a particular skillgroup, dnis, dialednum or call type.

Callflow Script Support for Continuous Monitoring of an Agent

There are two callflow scripts that can be used to continually monitor agent’s calls—CVP and IP IVR. With release 9.1(1), CVP is changed to RTSP streaming.

**Note** Monitoring a new call from the beginning is implemented by a polling mechanism in both CVP and IP IVR. RSM establishes a monitoring (BiB) call with the agent phone only after a call is established. Depending on the polling frequency configuration and other network latency factors, a portion of the beginning of the call may be clipped, from 0.25 seconds up to two (2) seconds.
CVP Callflow

The CVP script uses RTSP streaming (with the MonitorAgent_MM and MonitorAgent_MS custom script elements) and, by default, camps on an agent’s call and continues monitoring the session even after the call ends or is put on hold. (A 500ms polling on the server side ensures no overhead is incurred in CVP VXML session memory.) The CVP script breaks out of the camped monitoring session only when the supervisor presses a DTMF key option (e.g., the # key to return to main menu, 2 to monitor next call, etc.), irrespective of the option selected to land on the call.

Continuous monitoring is possible only after the supervisor starts monitoring an agent, and only if the agent is in a talking state and not on hold. The same holds true if the supervisor breaks out of a monitoring session by pressing a DTMF key option (e.g., the * for instructions, 1 for call information, etc.). Once a supervisor breaks out of a monitoring session, they can resume monitoring that agent only if the agent is in a talking state.

IP IVR Callflow

RTSP streaming is not supported in the IP IVR callflow script. Instead, the sample IP IVR callflow script template supports continuous monitoring (i.e., camping) of a specific agent’s calls via menu option 1 (one).

Note

In IP IVR, continuous monitoring consumes IVR execution steps as it polls to detect the start of a new call. Depending on how the polling frequency is configured, the IP IVR script may reach the maximum allowed execution steps and terminate the session.

New PhoneSim TCP Listen Port for RTSP Streaming

PhoneSim now requires a new TCP port (listening) for RTSP protocol support. This port is defaulted to 29554 and can be configured to a different value, via the RSM configuration manager and registry.

Configuration Changes

Two changes have been made to the RSM registry:

• New Registry key PhoneSim_RTSPListenPort has been added, for configuring the PhoneSim's RTSP listen port
• New and updated options for the PhoneSim_AudioEncoding registry configuration have been added, as follows:
  – wav-ulaw (for IP IVR HTTP G.711 u-law streaming)
  – wav-alaw (currently not supported)
  – wav-g729 (currently not supported)
  – rtsp-ulaw (for CVP RTSP G.711 u-law streaming)
  – rtsp-alaw (for CVP RTSP G.711 a-law streaming)
  – rtsp-g729 (for CVP RTSP G.729 streaming)
  – wav-pcm (deprecated, no longer supported)
  – au-ulaw (deprecated, no longer supported)
Limitations and Restrictions

The following notes describe the known limitations of Cisco Remote Silent Monitoring Release 9.1(1) in a Cisco environment, as well as information about other important system integration issues.

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.

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.

Support for Finesse-based UCCE Deployments

RSM supports a Finesse-based deployment only via a CTIOS server. RSM does not support connecting to either the Finesse server or CTI server for monitoring the agents, skills, and call state.

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.)
Limitations and Restrictions

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:


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

Support for 6900, 8900 and 9900 Phones

6900, 8900 and 9900 phone models have Join, Join Across Lines (JAL), Direct Transfer, and Direct Transfer Across Lines (DTAL) features, which RSM does not support. 6900 phones allow disabling of these features, and so RSM can support monitoring these phones if these features are disabled; but 8900 and 9900 phones do not allow for disabling of these features, and so RSM does not support monitoring of these phones.

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
VLEEngine 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 9.1(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 pguser
- 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.
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 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
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 8.) The following table lists caveats that are resolved in Cisco Remote Silent Monitoring but that may have been open in previous releases:

Release 9.0(1)

Table 2 lists the caveats that were resolved in Release 9.1(1).

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Severity</th>
<th>Component</th>
<th>Headline</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCud90451</td>
<td>Severe</td>
<td>VLEngine</td>
<td>RSM slow CTIOS client</td>
</tr>
<tr>
<td>CSCtz64640</td>
<td>Moderate</td>
<td>cvp-callflow</td>
<td>End of call event in VLEngine RSM takes 15 seconds after the actual end</td>
</tr>
<tr>
<td>CSCuc57716</td>
<td>Moderate</td>
<td>cvp-callflow</td>
<td>3 to 4 second delay in Supervisor monitoring session (live audio) between agents</td>
</tr>
<tr>
<td>CSCuc60439</td>
<td>Moderate</td>
<td>Other</td>
<td>Simphone BAT file is not compatible with UCM 9.0</td>
</tr>
<tr>
<td>CSCud43464</td>
<td>Minor</td>
<td>VLEngine</td>
<td>Outbound call does not have dialed number</td>
</tr>
</tbody>
</table>

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

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:


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:

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