Cisco Media Blender Administration Guide for Cisco Unified Contact Center Enterprise & Hosted Editions

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About This Guide

Overview

Welcome to the *Cisco Media Blender Administration Guide for Cisco Unified Contact Center Enterprise & Hosted Editions*. This guide provides information to help you configure, maintain, and troubleshoot the Cisco Media Blender (CMB) Version 7.1 software.

Audience

This guide is written for system administrators of the CMB Version 7.1 software. It assumes proper configuration of other products with which it functions.

Organization

This guide is organized as follows:

Introduction	Provides an overview of the CMB 7.1 configurations and lists the supported Automatic Call Distributors (ACDs).
Cisco Media Blender in the Unified CCE Integration	Describes the functionality involved when CMB is integrated with the Cisco Unified Contact Center Enterprise (UCCE) software, the Cisco Unified Web Interaction Manager (WIM) software, and an ACD or the Cisco Internet Protocol Contact Center (IPCC). Configuration tasks are included to help you get CMB up and running.
Cisco Media Blender Administration User Interface	Describes the CMB Administration user interface pages and how to access them.
Property File Reference	Describes all CMB property files and their properties.
Troubleshooting Cisco Media Blender	Helps you understand the CMB logs and alerts. It also explains what you need to do before you call the Cisco Technical Assistance Center (TAC) for help.

Related Documentation

You need the following documentation, which is on the Cisco Unified Interaction Manager product CD:

- *Cisco Media Blender Installation Guide for Cisco Unified Contact Center Enterprise & Hosted Editions*
- Cisco Media Blender Administration online help

You also need the Cisco Unified CCE Software documentation and Unified WIM documentation. See the documentation that shipped with those products.

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CHAPTER 1

Introduction

Cisco Media Blender (CMB) Version 7.1 works with Unified Web Interaction Manager (Unified WIM) to provide web callback and blended collaboration. You can integrate CMB with an Automatic Call Distributor (ACD) or with Cisco Internet Protocol Contact Center (IPCC), depending on the driver and the configuration.

This chapter contains the following sections:

- Cisco Media Blender with Unified CCE Configuration
- ACD and IPCC Support

Cisco Media Blender with Unified CCE Configuration

As part of the Unified CCE 7.0 multichannel software, CMB works with Unified WIM to provide web callback, delayed callback, blended collaboration, and blended text chat. CMB supports the Cisco IPCC and legacy ACDs using the Cisco Computer Telephony Integration (CTI) driver.

ACD and IPCC Support

The following table shows the supported ACDs for CMB in the Unified CCE configuration. The supported operating systems, drivers, and CTI strategies are also displayed in the table:

Table 1-1 ACD Support for CMB

ACD	CMB with Unified CCE (Windows 2003)	CTI Strategy
Cisco Unified Call Manager/SoftACD	Cisco CTI Driver	AgentReserved
Avaya Definity ECS G3	Cisco CTI Driver	Phantom and Predictive

CHAPTER 2

Cisco Media Blender in the Unified CCE Integration

As part of the Unified CCE 7.0 multichannel software, CMB provides support for IPCC and legacy ACDs using the Cisco CTI driver.

A GUI-Based Approach to Configuring CMB

In releases earlier than CMB 7.1(3), CMB administrators can only monitor the system; they cannot make dynamic configuration changes. If a configuration change is required, the administrator must edit or change the properties manually in the properties files and restart CMB for the changes to take effect. A restart of the CMB is required because all the properties must be reloaded again from the configuration files. Restarting CMB service for minor configuration changes is not advisable for production systems that run 24/7 and manually changing the properties can often result in errors or incorrect modification to the properties.

To overcome this limitation, CMB 7.1(3) introduces a GUI based configuration. With a GUI-based approach, CMB administrators can make configuration changes dynamically through a graphical user interface without restarting CMB (a restart is not required except for a few critical properties such as Peripheral Type and Thread Count). GUI-based configuration provides the following benefits:

- Eliminates misconfiguration introduced by human error. A validation at the client side (IE) prevents all errors from being propagated to the CMB server.
- Eliminates the need to restart CMB service (except a few critical properties) because the configuration changes are dynamically updated in the in-memory data structures as well as saved permanently.

- Supports editing/modifying properties once without editing multiple properties files.

Before you configure CMB to work in the Cisco Unified Contact Center Enterprise (Unified CCE) Integration, you should have a good understanding of the following:

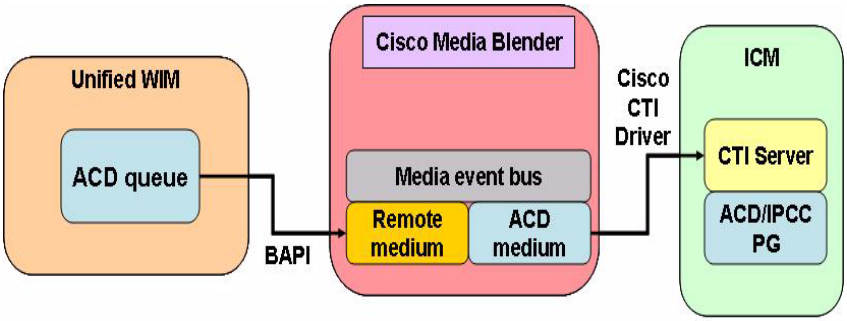
- Components in the Unified CCE Integration
- Web and Delayed Callback in the Unified CCE Integration
- ECC Variables
- Blended Collaboration and Text Chat
- CTI Strategies for Call Classes
- Phantom Pools
- IPCC Support
- Legacy ACD Support
- Long Distance Calls
- Email Notification
- Integration of CMB with Cisco Interaction Manager
- Multiple CMB instances connecting to same peripheral
- Agent PG/CG failover
- CMB Support for Join Across Lines/Direct Transfer Across Line features with Round Table and Round Table Lite phones

Components in the Unified CCE Integration

CMB in the Unified CCE integration works with Unified WIM to provide web callback and blended collaboration. CMB works as a media event bus with two participating media, one for the Unified WIM and another for an ACD or the Cisco IPCC, which is sometimes called a virtual ACD.

Figure 2-1 shows the CMB components in the Unified CCE integration.

Figure 2-1 CMB Components



Note In Figure 2-1, the ACD queue is used only with a legacy ACD. This queue is not used with IPCC.

Unified CCE Software Media Routing and Agent Reporting and Management Interfaces

The Media Routing peripheral gateway (MR PG) provides queuing and routing services. The Agent Reporting and Management (ARM) services allow an application to report agent and task state information that provides unified reporting and information for routing. These services are accessed through the MR PG and CTI Server respectively.

Unified WIM Components

The Unified WIM Unified CCE queue routes requests through MR-PIM on the MR PG. The Unified WIM ACD queue communicates with the CMB event bus and is used when a legacy ACD is used. Unified WIM uses ARM services for reporting.

Media Event Bus

CMB acts as an event bus, sharing software events between Unified WIM and the Cisco IPCC or a legacy ACD. When a medium identifies that an event has taken place, such as when an ACD medium receives CTI notification of a queued call, it packages this event into a unified format and forwards the event to CMB, which then shares the event with other media.

Application Medium

The Application Medium (Application refers to Unified WIM), which is called the remote-WIM medium on the Administration UI, enables CMB to communicate with Unified WIM. When you configure this medium using the CMB > Server > Properties > collaboration tab (in CMB) and `CMBIP_PORT.properties` file (Unified WIM), you set up the connection to CMB.

Refer to the Integration of CMB with Cisco Interaction Manager section.

ACD Medium

The ACD medium enables CMB to communicate with the Cisco IPCC or a legacy ACD. The same ACD medium uses the Cisco CTI driver for each telephony implementation. You use the Media Blender > Server > Properties > CTI tab to configure the legacy ACDs and the IPCC. See the Cisco CTI Medium section for instructions. In addition to IPCC, the Avaya Definity ECS G3 ACD is supported.

Web and Delayed Callback in the Unified CCE Integration

CMB in the Unified CCE integration supports both web callback and delayed callback solutions. These solutions are for simple calls that do not initiate blended collaboration sessions.

What is Web Callback?

The web callback solution is sometimes referred to as “callback only” because it does not include web collaboration. In the Unified CCE integration, the Unified WIM sends a message to the Unified CCE software requesting that Unified CCE

route the request to an agent. Unified CCE then sends a message to Unified WIM with a message for CMB. Web callback is supported by having the CallRouter send notification to the ACD peripheral interface manager (PIM), and CMB listens to the message.

What is Delayed Callback?

Delayed callback in the Unified CCE integration is similar to web callback, but when the Unified WIM receives the request, it puts the request in its Delayed Callback table. Unified WIM then sends an HTML page to the caller indicating that the caller will receive a callback within the time specified. When the specified time arrives, Unified WIM moves the request to its Unified CCE queue for routing to the Unified CCE software. The process is then the same as for web callback.

ECC Variables

For web callback and delayed callback to work properly, you must define an Expanded Call Context (ECC) variable (also known as a named variable). The Cisco CTI driver supports the use of ECC variables in addition to the standard call variables associated with a call. Before you can use an ECC variable, it must be previously defined in the Unified CCE Expanded Call Variable database table. The ECC variables that need to be defined are user.cisco.cmb and user.cisco.cmb.callclass.

Refer to the Unified CCE Configuration Manager online help for the description of creating expanded call variables.

Refer to the Unified CCE Schema online help for a description of the database.

Refer to the *Cisco Unified CCE Software Configuration Guide* for information on how to enable variables using the System Information tool.

On CMB, two properties in the Media Blender > Server > Properties > CTI tab provide support for variables:

- Peripheral NamedVars

  Cisco CTI driver can register ECC variables upon startup. The Peripheral NamedVars property registers the `user.cisco.cmb` variable so that any web callback requests in an Unified CCE routing integration work. Because of the broadcast behavior of precall messages, it is important that only one CMB is connected to a peripheral on the Unified CCE side to prevent multiple

callbacks. The other default variable for Peripheral NamedVars is `user.cisco.cmb.callclass`, which uses a precall message to send the call class from Unified WIM to CMB.

- Session MatchKey

  Cisco CTI driver can propagate Unified CCE script variables to the CTI server MakeCall for application screen pops. Normally the session match key is set to the task ID that is returned by the Media Routing PG, which is passed from the Unified WIM to CMB in the caller session. The Session MatchKey property is used only for the legacy ACDs and not for IPCC. For IPCC, the screen pop application can listen for agent precall events on the agent instrument, but for legacy ACDs, the ACD queues into the agent group. CMB needs to listen to the begin call and call data update sequence that contains some marker, which you set in the Unified CCE routing script in call variable 1 through 10, or by using a named variable with the Peripheral NamedVars property. See the *Cisco Unified CCE Software Script Editor Guide* for help in creating Unified CCE scripts.

Note You must also configure the Unified WIM to handle web callback and delayed callback requests. See the *Cisco Unified WIM Administration Guide* and the online help for details.

Blended Collaboration and Text Chat

The blended web collaboration solution provides synchronized collaboration with web callback. Blended web collaboration sets up a phone call and a web collaboration session between a caller and a contact center agent. CMB supports text chat with collaboration when a telephone call is not desired or not possible.

CTI Strategies for Call Classes

You can configure CMB to support different call classes, such as voice and text chat. CMB can then use a number of different outbound dialing strategies, or CTI strategies, to determine how the ACD places the outbound call to the caller. Based on a call class, the CTI strategy tells CMB how to place the outbound call to the caller.

The call class table in the Media Blender > Server > Properties > callclass tab maps call class codes to CTI strategies. Each line of the call class table maps web-based textual call class codes sent by the Unified WIM to CTI strategies.You set the call class codes in the entry points for web callback and blended collaboration in Unified WIM.

Predictive CTI Strategy

The Predictive CTI strategy places the call to the customer initially and then places the caller in an inbound ACD queue. This strategy assumes that the ACD can recognize how an outgoing call is answered. This strategy requires a predictive dialer, which can detect a busy signal when the call is answered. The Predictive strategy also assumes that the ACD can place an outgoing call into an inbound ACD queue.

Note Only theAvaya (Lucent) Definity G3 ACDs support the Predictive strategy.

Phantom Line CTI Strategies

CMB uses a pool of phantom lines, which are telephone lines on the ACD. For each request, CMB generates a call to the ACD from one of the phantom lines in the pool. Phantom lines are used to place calls that wait in queue on behalf of the caller.

A phantom CTI strategy may require that you set aside a number of physical phones to act as phantom callers on behalf of the actual web requesters. When a request arrives, CMB uses one of these phantoms to dial into the ACD and sit in queue on behalf of the caller. When an agent is assigned, the phantom is released, and CMB causes the agent phone to dial back to the caller.

There are several variations of phantom line strategies, which accommodate different types of calls:

- PhantomWaitRelease
- PhantomWaitNoRelease
- PhantomNoCallRelease
- PhantomNoCallNoRelease
- PhantomNoCallNoHold

Voice and Chat CTI Strategies

The available CTI strategies are designed to provide appropriate callback in different configurations and for different call strategies.

Voice Call Strategies

You can use the following CTI strategies with voice calls:

- Predictive—The ACD places an outbound call to the web caller. If an agent is available, the call is assigned as soon as the caller answers; if not, the call is held in an ACD queue.
- PhantomWaitRelease—CMB dials into a queue using one of the phantom lines. When the agent answers, the phantom line is placed on hold while CMB places an outbound call to the caller using the agent second line. When the caller answers the phone, the phantom line is released.
- PhantomWaitNoRelease—This strategy is similar to PhantomWaitRelease except the phantom line stays connected to the agent for the length of the call. This provides more detailed agent handle time reporting from the ACD, but it requires a larger pool of phantom lines.

Chat Session Strategies

You can use the following CTI strategies for chat sessions:

- PhantomNoCallRelease—Use this strategy if you want to provide chat sessions and if your ACD is configured to place agents in a busy state as soon as their phones disconnect. This strategy connects to an agent but releases the phantom line immediately. Configure your ACD to place the agent in a busy or wrap-up state to allow the agent and caller to engage in a text chat session uninterrupted.
- PhantomNoCallNoRelease—Use this strategy if you want to provide chat sessions and if your ACD does not support the automatic busying out of agents. CMB uses the phantom line to select the agent; however, the phantom does not release the agent phone until the session is complete. This provides more accurate reporting, but requires a larger pool of phantom lines.

- PhantomNoCallNoHold—This strategy is similar to the PhantomNoCallNoRelease strategy except the call from the phantom line to the agent is not placed in the hold state. Instead, it remains in the talking state. For reporting purposes, this strategy has the ACD report that the agent is talking while using chat.

See the Call Class Table section for information on mapping call classes to CTI strategies and the Phantom Pools section for information on setting up a pool of phantom lines.

When IPCC (Cisco Unified Call Manager) is used, the Unified CCE software assigns an agent to request web collaboration (or text chat). When a legacy ACD is used, the ACD assigns an agent for such requests. The type of call (and resulting CTI strategy) that the caller selects on the call form determines whether the call is for blended web collaboration or blended text chat.

Blended collaboration skill groups have their own media routing domain, and the Unified CCE software assigns the agents to the skill groups. Blended collaboration skill groups for legacy ACDs are handled by the voice media routing domain, and they are defined only on the ACD.

See the Cisco Unified Web Interaction Manager documentation and the Cisco Unified CCE documentation for more information.

Phantom Pools

Before you can use any of the phantom line CTI strategies, your switch administrator must set up a pool of phantom lines. Phantom lines are used to place calls waiting in the queue on behalf of the caller. See the CTI Strategies for Call Classes section for more information about phantom line CTI strategies.

Note For the Avaya (Lucent) Definity G3 switch, phantoms can be either physical or virtual phones. On all other systems, the phantom line must be for a physical telephone. Refer to the *Media Blender Switch Administration Guide* for more information.

When setting up this phantom pool, you must provide the following information to the switch administrator, who in turn must provide information to you.

- Determine how many phantom lines are needed at your site. (See the Formula for Determining Phantom Line Requirements section.) After you determine how many lines you need, provide this information to the switch administrator and obtain the phantom line IDs from the switch administrator.
- Identify the phantom lines. (See the Phantom Pool Properties section.)

Formula for Determining Phantom Line Requirements

Use this formula to determine how many phantom lines are needed on your system:

Number of phantom lines needed = c * s/3600, where

- "c" represents the number of peak incoming blended call requests per hour.
- "s" represents the seconds per phantom usage. When you use the PhantomWaitRelease strategy, this is the average queue time. When you use the PhantomWaitNoRelease strategy, this is the average queue time plus average talk time. You should use times that reflect peak volumes.

Example:

This example uses the PhantomWaitRelease CTI strategy. There are 3600 calls per hour and the queue time per call is equal to 10 seconds.

Number of phantom lines needed = 3600*10/3600

Number of phantom lines needed = 10 lines

Identifying Phantom Lines

To identify each phantom line used at your site, you must edit the phantom webpage and create an entry for each phantom line.

IPCC Support

The Cisco IPCC system functions as a virtual ACD. Some of the capabilities of IPCC include:

- Intelligent multichannel contact routing
- ACD functionality, network-to-desktop CTI

- Interactive voice response (IVR) integration
- Call queuing
- Consolidated reporting

Cisco combines three major components to form the IPCC system:

- Unified CCE software
- Cisco CallManager (CCM)
- Interactive Voice Response

CMB supports IPCC through the Cisco CTI driver. This includes a peripheral-specific implementation of the Cisco CTI driver and the CTI strategy called AgentReserved for reserved agents.

With the AgentReserved strategy, the agent is selected and reserved by Unified CCE software. When CMB is notified by Unified WIM (for blended collaboration) or CTI Server (for callback), it places a call from the agent phone to the caller.

Note The phantom and predictive strategies are not supported for use with IPCC, because CMB does not perform agent reservation.

You must activate the following two properties in the CTI page for IPCC support:

- Peripheral Type = IPCC
- CTI Strategy = AgentReserved

For more information about IPCC, refer to the *Cisco Unified CCE Software Administration Guide*.

Legacy ACD Support

Traditional ACD functions include routing, queuing, and agent state management. A typical caller request is sent to the Unified WIM Unified CCE queue, which then sends the request to CMB. Unified CCE software sends a precall message to the ACD PG, then the Unified CCE CTI Server sends the precall message to CMB, and CMB runs a CTI strategy.

In addition to the information provided here about legacy ACDs, note that before CMB can function with your ACD, you must complete the steps described in the Configure CMB with the Unified CCE Integration section. You also need the *Cisco Unified CCE Software ACD Supplement* document that is specific to your ACD to help you configure Unified CCE software.

Cisco CTI Driver

When working with Unified CCE, CMB uses its CTI driver to support legacy ACDs. The following properties are common to all of the ACD peripherals in the Media Blender > Server > Properties > CTI tab. These properties are essential and must be set before starting CMB:

- Peripheral Type—Select the Peripheral Type from the drop-down menu.
- Peripheral ID—Enter the value of the peripheral ID as defined on the CTI Server.
- Peripheral Host Name—Enter the hostname or the IP address of the CTI Server.
- Peripheral Host Port—Enter the host port of the CTI Server.
- Peripheral Host Name2—If using a duplexed CTI Server, enter the hostname or IP address of the other CTI Server.
- Peripheral Host Port2—If using a duplexed CTI Server, enter the host port of the other CTI Server.

See the Cisco CTI Medium topic for additional information about properties you can set for the legacy ACDs.

ACD-specific Information

This section provides ACD-specific information to help you configure CMB to work with Avaya Definity G3 ACD.

Avaya Definity G3

When you are configuring CMB to work with the Avaya Definity ACD, remember to do the following:

- Set the essential properties in the Media Blender > Server > Properties > CTI tab. (See the Cisco CTI Driver section.)

- In the Unified CCE Configuration Manager, ensure that Vector Directory Numbers (VDNs) used for phantom calls are monitored.
- Ensure that phantom phones are monitored by Unified CCE. For each phantom line on the Unified CCE Peripheral Monitor tab, enter the instrument ID in the Extension field or enter a range of instrument IDs in the Config Param field using a hyphen as a delimiter.
- Ensure that VDNs used for predictive calls are not monitored by Unified CCE software. On the Unified CCE Peripheral Target tab make sure the DNIS entered is not the actual VDN that you want to place the predictive call. Instead, specify the VDN that will place the call in the label associated with the peripheral target. On the Definity, you must maintain two VDNs—one that the Unified CCE script can monitor but not place the call, and another to actually place the predictive call.
- If using multiple call classes, you must create a call class table using the Media Blender > Server > Properties > callclass tab. The call class table maps different call classes to predictive or phantom CTI strategies that are used when placing the outbound call to the caller. On the Definity, you must maintain separate VDNs for predictive and phantom calls.

Long Distance Calls

You can set up dialing scenarios for local, special, and long distance calls across international borders. When you set up the scenarios, you have to create an HTML callback page designed for international calls. This form, which is located on the Unified WIM, contains the country code and phone number that CMB uses to determine the type of call it needs to place. You also need to configure the dialing properties for your ACD medium.

Dialing Properties

You can set up properties that control and account for international dialing scenarios using the properties file for your ACD medium. CMB uses the information obtained from the callback page (country code and phone number) to determine the type of call it needs to place. You can configure your ACD properties so that CMB can recognize and place the following types of calls:

- Calls within the country code and local area code (local calls):

Use the diallocalprefix and Ignore AreaCode properties in the CTI property tab in the CMB GUI.

- Calls within the country code, but outside the local area code (special calls):

  Use the dialspecialprefix, specialdiallist, and specialdigitstrim properties in the property XML file for the ACD medium (located in C:/CiscoMB/servlet/Properties/Blender/CiscoCTI.xml).

- Calls outside the country code (long distance calls):

  Use the dialongdistanceprefix property in the CTI property tab in the CMB GUI.

Local and International Calling Examples

Consider two call centers:

Boston	Amsterdam
Country Code = 1	Country Code = 31
Local Area Code = 1	Local Area Code = 1

The following table lists the values used in the ACD properties files at each site:

ACD.XXX.Properties	Boston	Amsterdam
ignoreareacode	1617	3120
diallocalprefix	9	9
specialdiallist	1	31
dialspecialprefix	91	90
specialdigitstrim	True	True
diallongdistanceprefix	9011	900

Assume that each call center receives callback requests from the following four telephone numbers:

- 1-617-777-xxxx—Local to Boston and long distance to Amsterdam
- 1-408-777-xxxx—Special to Boston and long distance to Amsterdam
- 31-20-123-xxxx—Long distance to Boston and local to Amsterdam

- 31-40-123-xxxx—Long distance to Boston and special to Amsterdam

The following table shows how each call center arrives at the appropriate callback number:

Callback Phone Numbers	Boston	Amsterdam
1-617-777-xxxx	ignoreareacode—strips 1617 diallocalprefix—adds 9 Resulting number: 9-777-xxxx	diallongdistanceprefix —adds 900 Resulting number: 900-1-617-777-xxxx
1-408-777-xxxx	specialdiallist—strips 1 dialspecialprefix—adds 91 Resulting number: 91-408-777-xxxx	diallongdistanceprefix—adds 900 Resulting number: 900-1-408-777-xxxx
31-20-123-xxxx	diallongdistanceprefix—adds 9011 Resulting number: 9011-31-20-123-xxxx	ignoreareacode—strips 3120 diallocalprefix—adds 9 Resulting number: 9-123-xxxx
31-40-123-xxxx	diallongdistanceprefix—adds 9011 Resulting number: 9011-31-40-123-xxxx	specialdiallist—strips 31 dialspecialprefix—adds 90 Resulting number: 90-40-123-xxxxx

If you need to dial within a country, follow these steps:

- Set the `ignoreareacode` property to strip out the area code for local numbers.
- Set the `diallocalprefix` property to dial local numbers.
- Set the `diallongdistanceprefix` property to dial long distance.

Example:

```
ignoreareacode=408
diallocalprefix=9
dialongdistanceprefix=91
```

Email Notification

CMB issues alerts to notify key personnel of potential problems with CMB, ACD, and Unified WIM connections. Alerts appear on the CMB control panel when problems occur. See CMB Alerts for a complete list of alerts.

You can configure CMB to automatically send a list of CMB alerts to a particular email address. This ensures that the problems are communicated to individuals responsible for administering CMB. You can set up email notification using the Media Blender > Server > Properties > blender tab. You can enter values such as the recipient of the email notification, the sender of the notification, and the text for the subject field. You can also specify the path of header and footer files.

Email notices sent by CMB can include descriptions of:

- New alerts—Alerts that are appearing for the first time.
- Current alerts—Alerts that have appeared in previous email notices, but are still active.
- Dropped alerts—Alerts that have appeared in previous notices and are no longer active (the problem has been resolved).
- CMB messages—Messages that report on one-time-only CMB events. (Examples of CMB messages are “Startup complete” and “Shutdown complete”, sent on CMB startup and shutdown.)

Note If the email server is down, CMB cannot deliver email notification. Also, network problems can prevent CMB from reaching the mail server. Therefore, you should monitor the server using the /status alias in addition to using email notification.

Integration of CMB with Cisco Interaction Manager

Prerequisites: The Cisco Interaction Manager (CIM) must be installed and the UI Configuration Wizard run successfully before starting CMB configuration.

Complete the following tasks to configure CMB with the CIM integration:

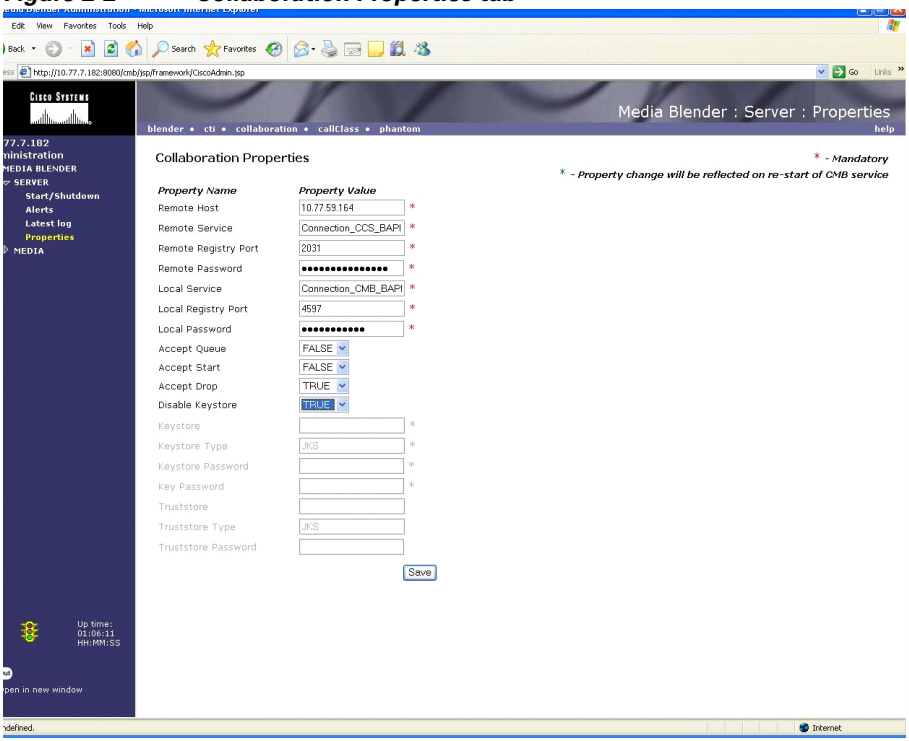
Step 1 You can configure CMB and all participating media from the CMB properties GUI page.

The files/pages that you need to configure for CMB with the CIM integration are:

- Media Blender > Server > Properties > Collaboration page
- Media Blender > Server > Properties > CTI page
- `<<CMB IP>_<PORT>.properties` (you have to create this file manually as explained in the steps below)
- `logManager.properties`
- `logOutputAdapter.properties`

Step 2 Update the Collaboration property tab in the CMB GUI: A sample page is shown in Figure 2-2.

Figure 2-2 Collaboration Properties tab



Step 3 Create the <CMB-IP>_<RMI-PORT>.properties file on the CIM file server.

Create a file <CMB-IP>_<RMI-PORT>.properties in the location <CIM_INSTALL_DIR>/config/cmb/.

A sample file is given below for reference:

#path for CMB server filesystem

WLROOT=C:\\CiscoMB

#Do not change this

package=com.cisco.ics.blender.remote

TransportType=rmi

Name for this medium

name=Remote-BAPI

#Hostname or ip address of BAPI application

RemoteHost=<IP_ADDRESS OF CMB>

#Remote Port number for BAPI application

RemoteRegistryPort=Ensure that the port numbers you provide are the ones that were used when Cisco Unified EIM and WIM were installed.

#Local Port number for BAPI application

LocalRegistryPort=Ensure that the port numbers you provide are the ones that were used when Cisco Unified EIM and WIM were installed.

#Name for this (Blender) side of the rmi service

LocalService=Connection_CCS_BAPI

#name for the other (API) side of the rmi service

RemoteService=medium

Remote password

RemotePassword=<Encrypted Password of CMB>

#password for this (Blender) side

LocalPassword=<Encrypted Password of CIM>

PROVIDER_IN_SERVICE_WAIT_TIME=10

Step 4 Copy the encrypted passwords.

Copy the localPassword from the Collaboration.xml (located in C:\CiscoMB\servlet\Properties\Blender\) and paste it in the REMOTE PASSWORD of <CMB-IP>_<RMI-PORT>.properties file. A sample is shown below:

RemotePassword=<Encrypted Password of CMB>

Copy the remotePassword from the Collaboration.xml (located in C:\CiscoMB\servlet\Properties\Blender\) and paste it in the LOCAL PASSWORD of <CMB-IP>_<RMI-PORT>.properties file. A sample file is shown below:

LocalPassword=<Encrypted Password of CIM>

Step 5 Update the RemoteHost.

Update the IP address of CMB in <CMB-IP>_<RMI-PORT>.properties file.

RemoteHost=<IP_ADDRESS OF CMB>

Step 6 Copy the CiscoMB folder from the CMB server and paste it on the Unified CIM services server. Make sure you paste the CiscoMB folder on the same drive on the services server as it was on the CMB server.

For example, if the CiscoMB folder on the CMB server was on the C drive, then paste it on the C drive of the Unified EIM and WIM services server.

Step 7 In the Cisco_Home\eService\config\cmb\<CMB-IP>_<RMI-PORT>. properties file, update the WLROOT property.

For example, if you copied the CiscoMB folder to the C drive, then WLROOT is updated as WLROOT = C:\\CiscoMB.

Step 8 Stop the Listener instance.

Note Firewalls between CIM and CMB are not officially supported because the underlying RMI protocol between CIM and CMB uses dynamic ports for its communication.

Step 9 Update the Listener instance.

Start the CIM application and log in to system administrator (sa). Then go to System > Partitions > <INSTALLED_PARTITION_NAME> > Services > Listener > Listener.

- Select the Agent_PG you want to configure from the List pane.
- Double-click the CMB parameters in the Properties pane. A new window appears.

- Select the Peripheral, update the IP Address (SIDE A) and the RMI port (SIDE A) of the CMB server. If it is Avaya Peripheral, the ACD Queue is located at Service Explorer from ICM Configuration manager. (<CIM-APP server name>,<ACD queue>,<label>)
- Press the **ENTER** key and click **OK**.

Note Make sure that the IP address and RMI port that you used in UI are the same as the file name of <CMB_IP_ADDRESS>_<CMB_RMI_PORT>.properties file.

Multiple CMB instances connecting to same peripheral

CMB Release 7.1 supports only one CMB instance connecting to a single peripheral. CMB Release 7.1(2) and later support multiple CMB servers connecting to a single peripheral. The supported peripherals are Avaya ACD and Cisco Unified Communications Manager. This feature requires configuration changes to the CMB and ICM script. It supports appropriate routing of callback and blended collaboration requests in cluster-based environments, where multiple CIM application instances connect to multiple CMBs, which in turn connect to a single ACD peripheral.

Note If you choose not to use this feature, ignore the configuration steps and follow the standard configuration and routing scripts used for single CMB instance deployments.

Configuration steps for Multiple CMB per peripheral feature

Follow these steps to configure multiple CMB servers connecting to a single peripheral:

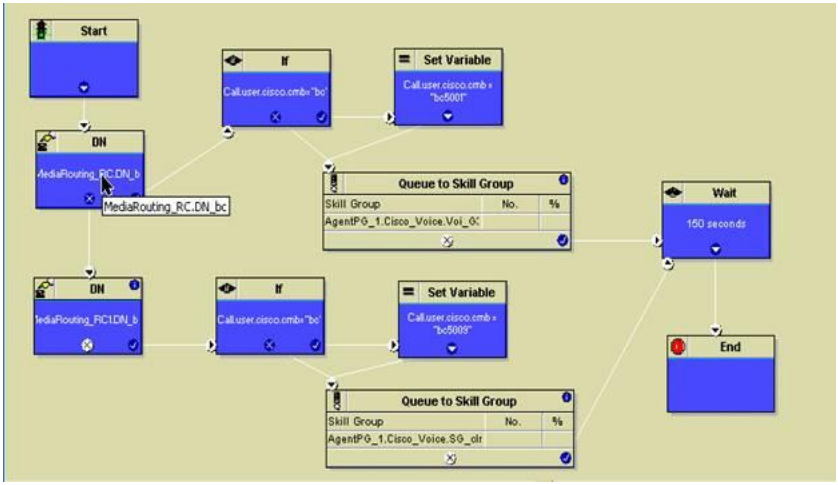
Step 1 Integrate CIM 1 with CMB 1 (Ensure all services are up and running).

Step 2 Integrate CIM 2 with CMB 2 (Ensure all services are up and running).

Step 3 Note the Application Path Ids for CIM1 and CIM2 from the ICM Configuration Manager/Configuration Database. You will need this data when configuring the ICM routing script and CMB.

Step 4 Create an ICM Routing script as shown in Figure 2-3:

Figure 2-3 Sample script created for blended collaboration



Note Figure 2-3 is a sample script created for blended collaboration. You need to set up a similar script for callback.

Step 5 In the script for Callback, set the IF condition variable Call.user.cisco.cmb to "callback" and to test for Blended Collaboration, set it to "bc" (see Sample script created for blended collaboration).

Step 6 In the script for Callback, set the variable Call.user.cisco.cmb to "callback" and for Blended Collaboration, set it to "bc". Append the appropriate <app.pathid> to "callback" or "bc" in the Set Variable function as shown in the sample script.

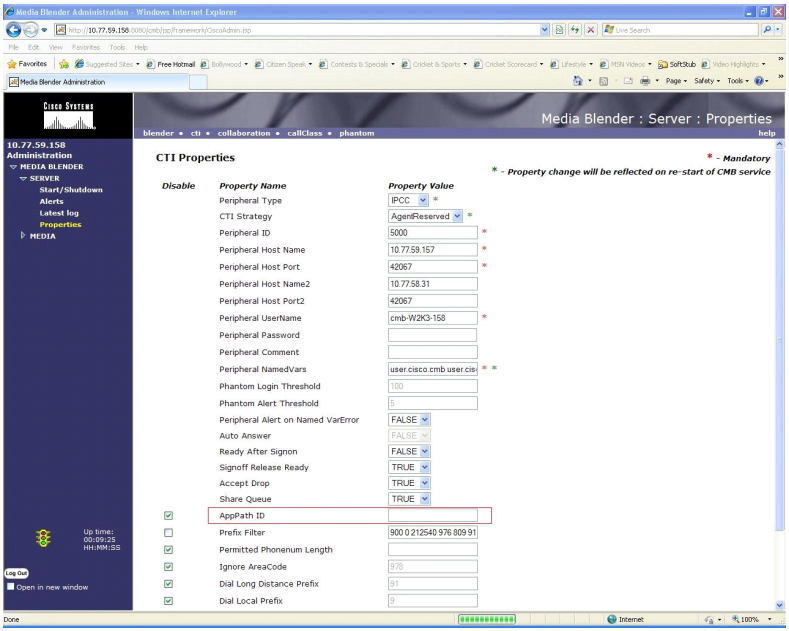
For example, if the application path id is 5009, set the variable as Call.user.cisco.cmb="bc5009" (for Blended collaboration routing script) and Call.user.cisco.cmb="callback5009" (for Callback routing script).

Step 7 In CMB1, go to the CTI property tab in the CMB GUI and add the following property: AppPath ID = <Application Path Id of CIM1 to which the CMB1 is connected>.

In CMB2, go to the CTI property tab in the CMB GUI and add the following property: AppPath ID = <Application Path Id of CIM2 to which the CMB2 is connected>.

Figure 2-4 shows you the AppPath ID in the CTI Properties tab.

Figure 2-4 AppPath ID in CTI Properties tab



Step 8 Reboot CMB1 and CMB2 after the configuration changes are made.

Note To disable the AppPath ID property from the CMB GUI, check the corresponding disable check box and save.

Note Callback and blended collaboration activities that are initiated from CIM1 and CIM2 are handled by CMB1 and CMB2 respectively. In both cases, the same peripheral is used and the agents who handle callback/blended collaboration tasks belong to the same peripheral.

Agent PG/CG failover

When the Agent PG fail over occurs from side A to side B, the CMB CTI server connectivity goes down temporarily and comes back after CMB establishes connectivity with the CTI server on side B.

Web Callback

The *callback activities* in progress (agent and caller talking over phone) at the time of a PG/CG failover are not affected, and the voice call is not dropped. However, callback activities that are initiated at the time of failover have a short delay before the agent and the customer are connected. This behavior (delay) is expected because the agent PG cannot send the “precall” events to CMB during failover (connectivity is down). When the failover is completed, CMB receives the “precall” events from the PG and initiates the callback between the agent and the customer.

Blended Collaboration

Blended collaboration activities in progress (agent and caller talking over the phone as well as collaborating through the web) are impacted when the agent PG /CG fail over occurs. When the agent PG/CG switches from side A to side B, CMB stops blending the blended collaboration sessions that are in progress (for example, CMB stops synchronizing the voice and collaboration media). The voice and web session are not dropped and only the blending stops; the caller and agent continue the session (voice and web separately). This behavior is the same for the CallManager and the Avaya-based deployments.

Blended collaboration activities initiated at the time of failover have a short delay before the agent and the customer are connected. This behavior (delay) is expected because the agent PG cannot send the “precall” events to CMB during failover (connectivity is down). When the failover is completed, CMB receives the “precall” events from the PG and initiates the blended collaboration session between the agent and the customer.

CMB Support for Join Across Lines/Direct Transfer Across Line features with Round Table and Round Table Lite phones

CMB provides web callback and blended collaboration services in a Cisco multichannel contact center environment in which agents use phones with single lines. However, the UCM and Phone teams require that all CTI applications support Join Across Lines (JAL) and Direct Transfer Across Line (DTAL) features along with multiline phones. This enhancement lets CMB support JAL and DTAL features for RT/RT lite phones which can handle multiple lines.

With this enhancement in CMB, the agents can use RT/RT lite phones to handle callback and blended collaboration requests; however, there are no changes to the customer experience.

CHAPTER 3

Cisco Media Blender Administration User Interface

Cisco Media Blender (CMB) provides web-based administration, allowing the administrator to gather information and troubleshoot problems from a simple web browser.

This section includes the following topics:

Getting Started

Before you use the CMB Administration user interface, you should understand the following:

- Resolution Requirements
- Accessing the CMB Administration UI

Resolution Requirements

To best view the CMB Administration user interface, we recommend that you set your display resolution at a minimum of 1024 x 768 pixels. You can view the interface at a lower resolution, such as 800 x 600 pixels; however, this setting truncates the Refresh button.

Accessing the CMB Administration UI

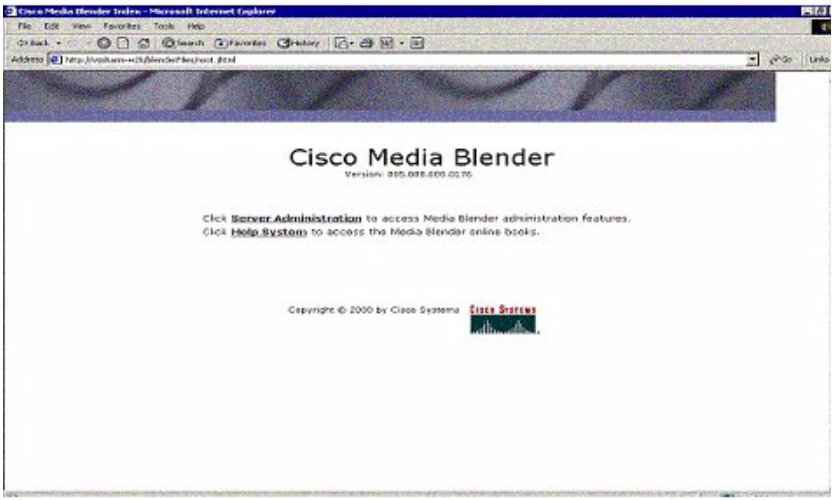
You can access the CMB Administration user interface in the following two ways:

- Using the CMB Index page
- Using the CMB Administration alias

Using the CMB Index page

Step 1 Open a web browser and enter the name of the CMB server in the location field. The CMB Index page appears.

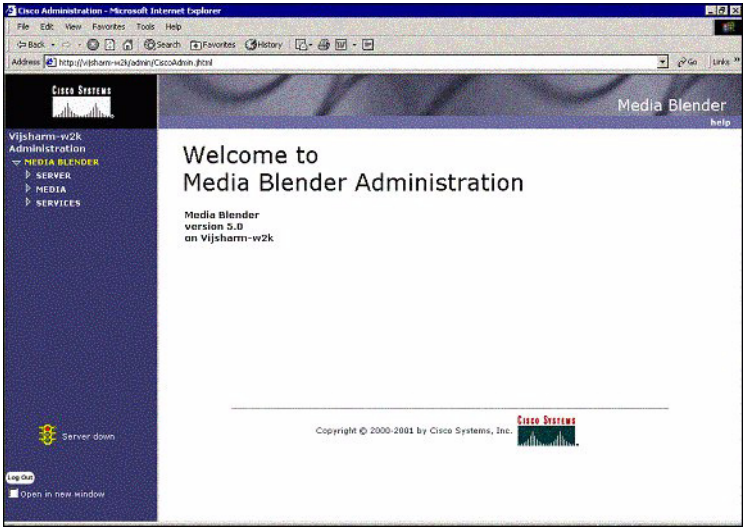
Figure 3-1 CMB Index Page



Note The first time you log in, you are prompted for a login name and password. See the section Grant Administration Access to CMB in the *Cisco Media Blender Installation Guide* for directions on setting up login access.

Step 2 Click **Server Administration**. The CMB Administration system page appears.

Figure 3-2 CMB Administration Page



Using the CMB Administration alias

Open a web browser and enter <servername>:<port>/cmb/ in the location field. The CMB Administration system page appears.

This guide provides an overview of the user interface pages. For details on how to use the CMB Administration user interface, refer to the online Help. You access the online Help by clicking **Help System** on the index page or by clicking the **Help** button on any CMB Administration page.

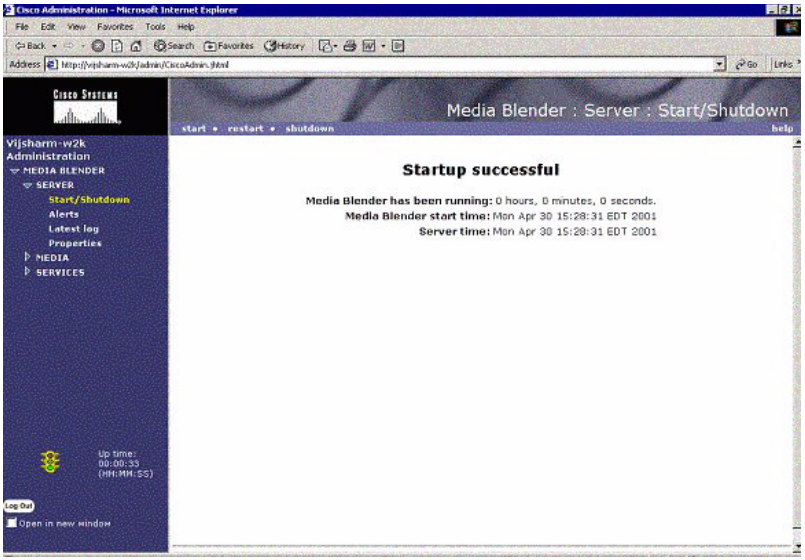
Starting and Stopping CMB

To access the CMB, from the Server: Start/Shutdown page, select the **Server > Start/Shutdown** option on the CMB Administration menu. From that page you can start, stop, and restart CMB.

Starting CMB

To start CMB, click **Start** on the **Media Blender**: **Server**: **Start/Shutdown** control panel. A "Startup successful" message displays with information about how long CMB has been running, the start time, and the server time.

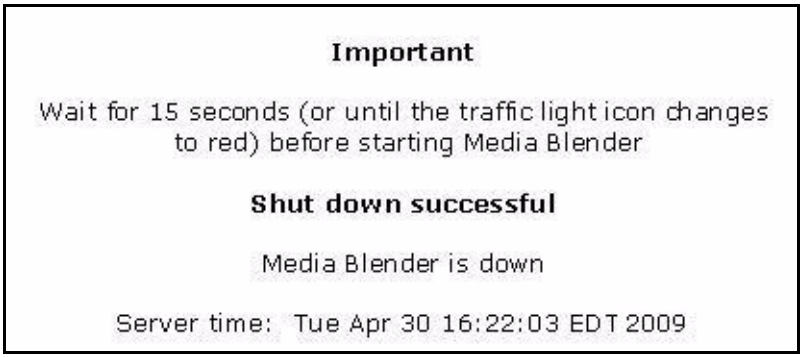
Figure 3-3 **Startup Successful Message**



Shutting Down CMB

To stop CMB, click **Shut Down** on the CMB control panel. The system displays a message asking if you are sure you want to shut down. When you click **OK** on the message box, CMB shuts down and displays a "Shut down successful" message.

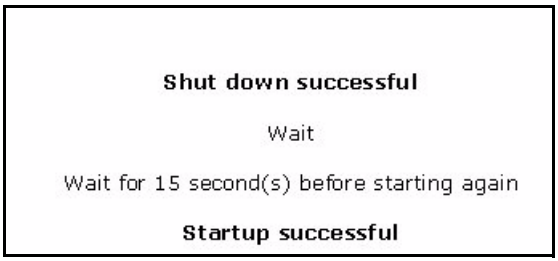
Figure 3-4 **Shut Down Successful Message**



Restarting CMB

To restart CMB click **Restart** on the CMB control panel. The system displays a message asking if you are sure you want to restart CMB. When you click **OK** on the message box, CMB shuts down and then restarts automatically, displaying the following message:

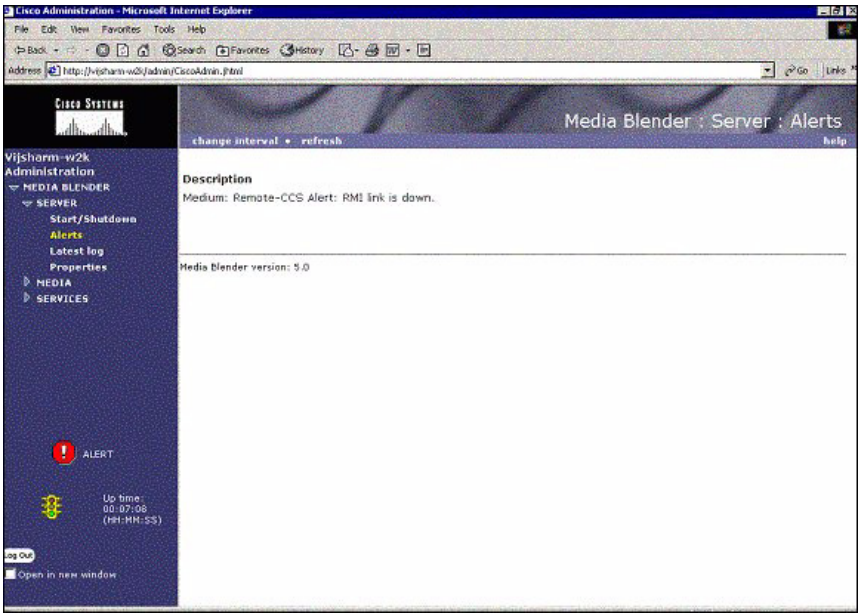
Figure 3-5 **CMB Restart Message**



Viewing Alerts

CMB issues an alert when a problem occurs. You will see a red ALERT icon in the left pane under the menu options. If you click the **ALERT** icon or select **Server > Alerts** on the Administration menu, the alert message displays in the Media Blender: Server: Alerts page.

Figure 3-6 **CMB Alert Message**

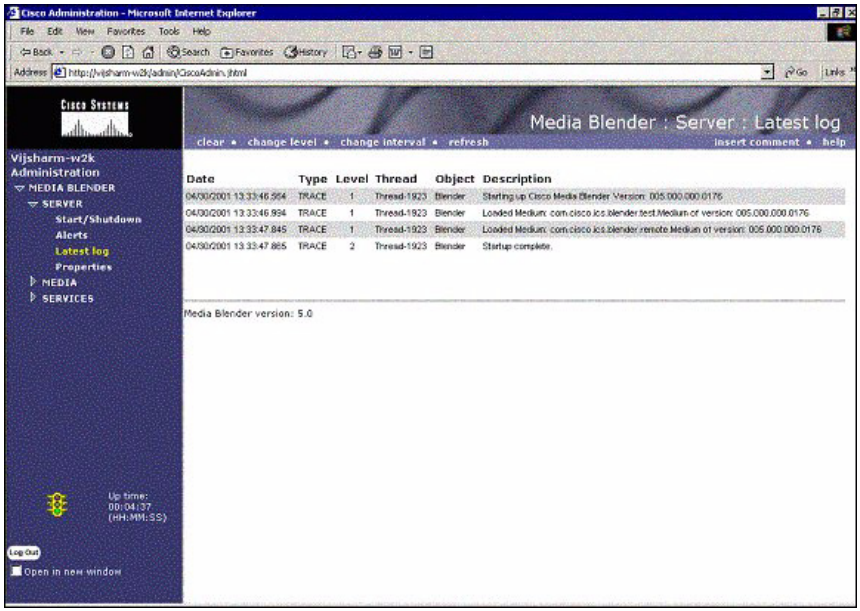


Refer to the CMB Alerts section for more information about how to use alerts to troubleshoot CMB problems.

Viewing the Latest Log

You can view the alerts and messages that CMB logs into a log file. Select the **Server > Latest Log** option on the CMB Administration menu to view the Media Blender: Server: Latest Log page.

Figure 3-7 **Latest Log File**



The following table describes the fields that are displayed on the Log page.

Table 3-1 Fields Displayed on Log Page

Field	Description
Date	The current date
Type	The type of message
Level	The importance of message, such as: • 1 = Urgent • 2 = Critical • 3 = Important • 4 = Information • 5 = Debug
Thread	The CMB command handler involved in this event

Table 3-1 Fields Displayed on Log Page

Field	Description
Object	The medium involved in this message
Description	Information about the event taking place

See the Using the Log Information section for additional information.

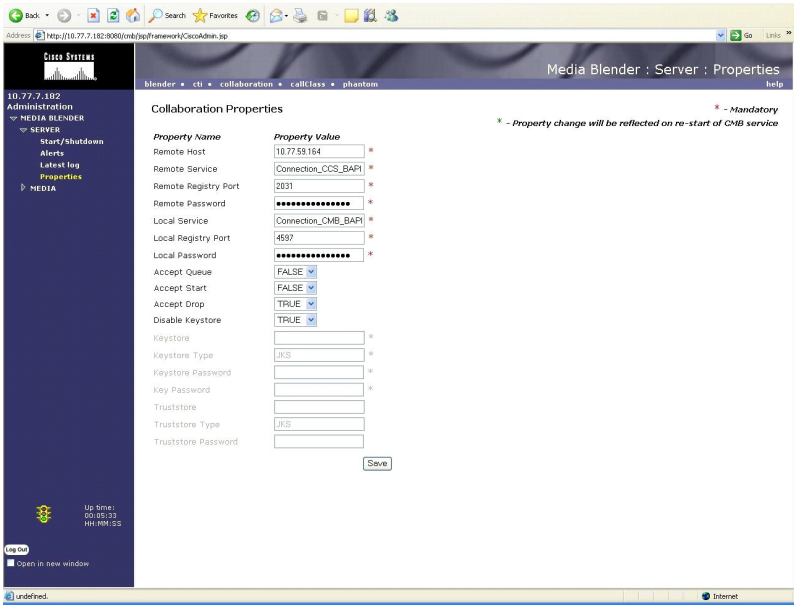
View/Edit CMB Properties

You can view/edit property file configuration information. Select the **Server > Properties** option on the CMB Administration menu to view the Media Blender: Server: Properties page.

See the Property File Reference section for more information about property files.

Figure 3-8 shows where you view/edit the property file information.

Figure 3-8 CMB Properties



You can currently view/edit the following tabs in the GUI:

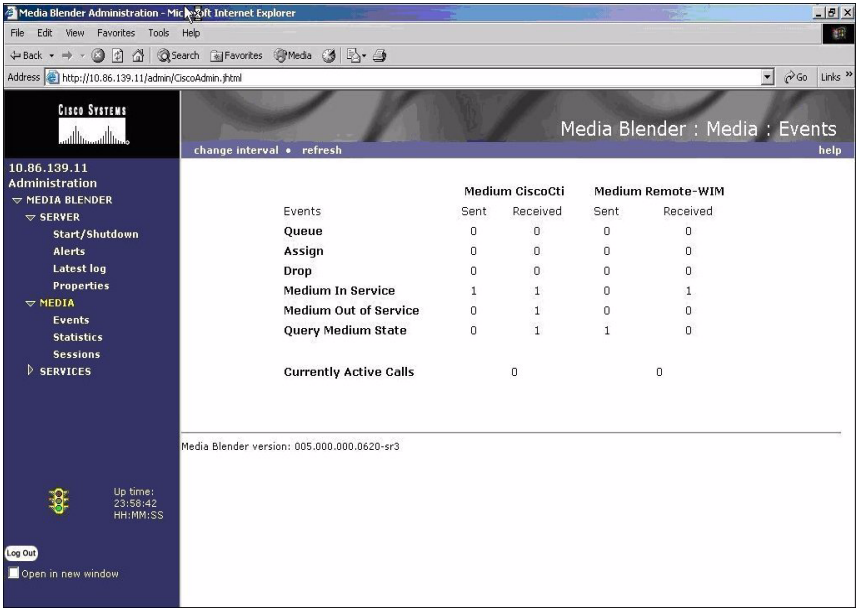
- Media Blender > Server > Properties > Blender
- Media Blender > Server > Properties > CTI
- Media Blender > Server > Properties > Collaboration
- Media Blender > Server > Properties > Call class
- Media Blender > Server > Properties > Phantom

See the Property File Reference section for more information about property files.

Monitoring Media Events

You can monitor information about media events. Select the **Media > Events** option on the CMB Administration menu to view the Media Blender: Media: Events page.

Figure 3-9 CMB Events



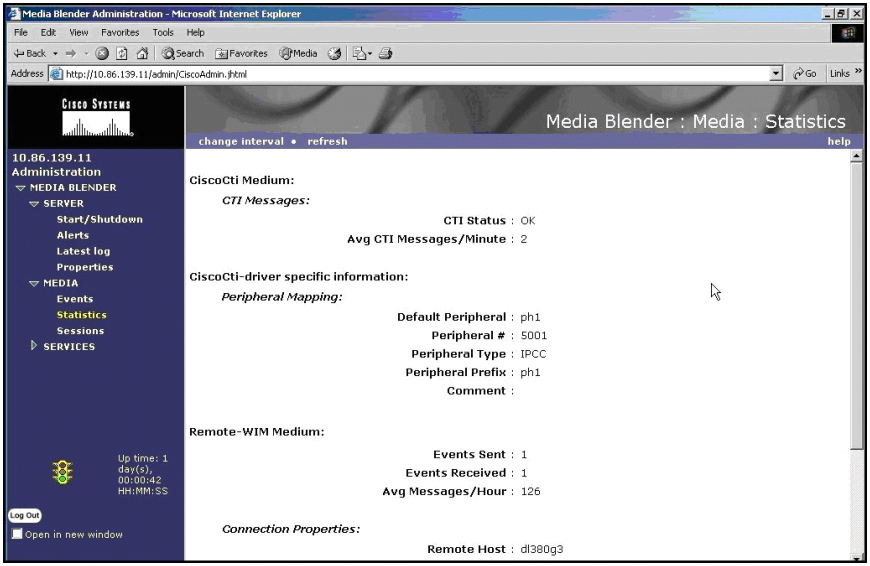
For each medium, CMB reports the number of sent and received events. For more information about events, see the Event Filters sections.

Monitoring Media Statistics

You can monitor information about media statistics. Select the **Media > Statistics** option on the CMB Administration menu to view the Media Blender: Media: Statistics page.

Figure 3-10 figure shows the CMB Statistics page.

Figure 3-10 CMB Statistics



The following table describes the type of messages and statistics that are provided.

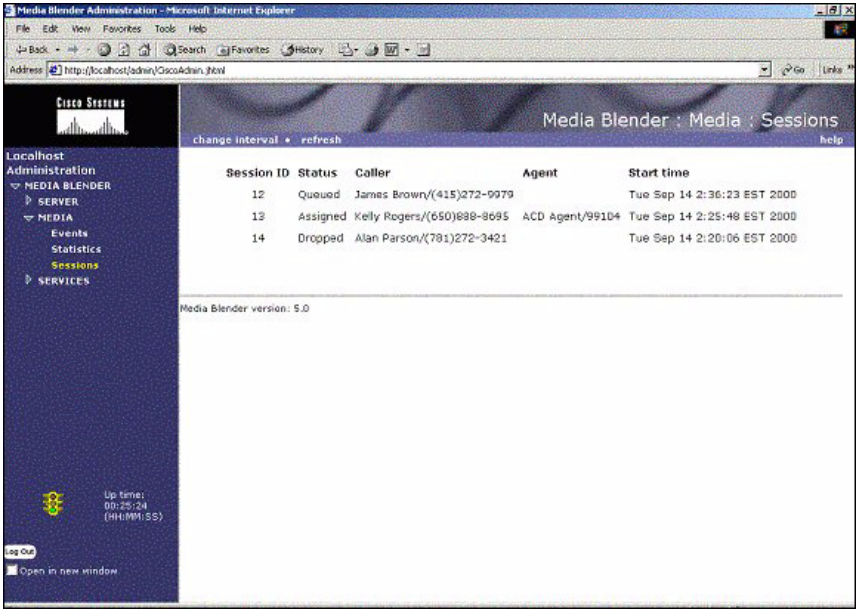
Table 3-2 CMB Statistics Types

Category	Statistics
Remote-WIM Medium	Number of events sent Number of events received Average messages per hour Connection properties: • Remote Host • Remote Service • Remote Registry Port • Local Service • Local Registry Port
CiscoCti Medium	CTI messages: • CTI status • Average CTI messages per minute Phantom Pool Status: • Total Phantom Lines • Available Phantom Lines Phantom Lines
CiscoCti driver-specific information	Peripheral Mapping: • Default Peripheral • Peripheral number • Peripheral type • Peripheral prefix Comment

Monitoring Media Sessions

You can monitor information about media sessions. Select the Media > Sessions option on the CMB Administration menu to view the Media Blender: Media: Sessions page.

Figure 3-11 CMB Sessions



The following table describes the fields on this page.

Table 3-3 CMB Sessions Fields

Field	Description
Session ID	Identifies the CMB session.
Status	Displays the status of each session. Possible states are Assigned, Queued, and Dropped.

Table 3-3 CMB Sessions Fields

Field	Description
Agent	Displays the logical ID for the agent to whom that caller is assigned.
Start Time	Displays the date and time that the CMB session started.

Internationalizing the CMB UI

The CMB Administration user interface software and the CMB alert descriptions and resolutions have been internationalized to support the following languages:

- Chinese
- English
- French
- German
- Korean
- Spanish

For each supported language there are five properties in the CMB `adminui.properties` file that you must uncomment (remove the # character preceding the property) in order to localize the software. The `adminui.properties` file is located in the `\CiscoMB\servlet\Properties\` directory. The five properties for each language are:

- `adminui.LANGUAGE=`
- `adminui.COUNTRY=`
- `adminui.inputEncoding=`
- `adminui.outputEncoding=`
- `adminui.htmlCharset=`

Locale Example

Here is an example of the properties and values for the German locale:

```
adminui.LANGUAGE=de
```

```
adminui.COUNTRY=DE
adminui.inputEncoding=8859_1
adminui.outputEncoding=8859_1
adminui.htmlCharset=ISO-8859-1
```

Note Some differences in the spelling of the username Administrator occur for the Spanish and French locales when granting administrative access to CMB. See the section Grant Administrative Access to Media Blender in the *Cisco Media Blender Installation Guide*.

CHAPTER 4

Property File Reference

This section provides a complete listing of all properties that are used to configure all supported CTI drivers. It also describes each of the configuration files used by Cisco Media Blender (CMB).

All of the frequently used properties are shown in the CMB GUI under the Properties menu. You can modify the least used properties in the XML files directly (path: C:\CiscoMB\servlet\Properties\Blender\) but you must restart CMB services for the changes to take effect. In releases earlier than Cisco Media Blender 7.1(2), properties were configured in the following property files:

- `blender.properties`
- `collaboration.properties`
- `ACD.ciscocti.properties`
- `phantomagents.properties`
- `phantompasswords.properties`
- `callclasses.properties`
- `phantoms.properties`

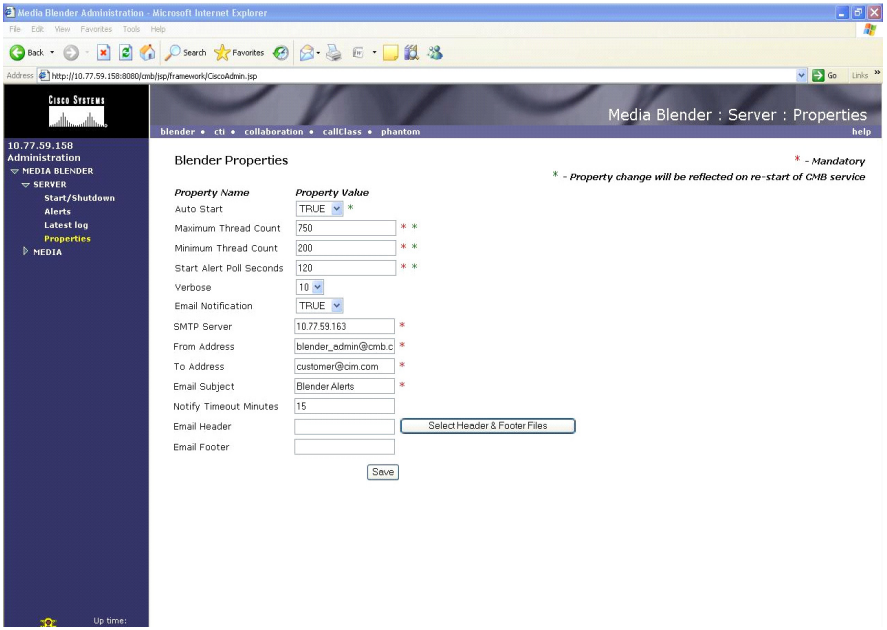
To increase ease of use, a GUI based approach is introduced in Cisco Media Blender 7.1(3) to configure CMB.

The above-mentioned properties are categories on the Blender, CTI, Collaboration, CallClass, and Phantom pages.

On the GUI, the red * indicates properties that are mandatory and the green * indicates that the property change is reflected on a restart of CMB service.

Figure 4-1 shows the Properties page.

Figure 4-1 Properties Page



CMB Properties

This section describes the properties you can use to configure the behavior of CMB. The properties that are defined in the following sections are found in the Blender page in the CMB GUI.

This page contains the following sections:

- Identifying CMB
- Controlling the Log File Size
- Specifying Threads
- Starting and Restarting CMB
- Setting Alert Notification

Identifying CMB

The following property displays information about CMB; you do not have to set it. This property identifies the CMB and is not shown in the GUI.

- name

  Display only.

Controlling the Log File Size

- Verbose

  Type: Integer

  Default: 7

  This property indicates the level of verbosity of logged messages. Acceptable values are:

  6—Urgent

  7—Critical

  8—Important

  9—Informational

  10—Debug

Note If the verbosity level is set too high, the system generates large log files, which impacts system performance and causes the files to rotate frequently.

Specifying Threads

- Minimum Thread Count

  Type: Integer

  Default: 200

  This property indicates the number of threads that are normally used by this CMB. Higher values improve performance at high call volume. This is a mandatory field and a field change requires a restart of CMB service.

- Maximum Thread Count

Type: Integer

Default: 750

This property indicates the maximum number of threads this CMB can use. Cisco recommends using a value of 500 or greater. This is a mandatory field and a field change requires a restart of CMB service.

Starting and Restarting CMB

The following property specifies whether CMB starts with the web Server.

- Auto Start

  Type: Boolean

  Default: false

  This property indicates whether to start CMB and all media when the web Server and the Blender servlet are started. Set this property to true only after all the media is properly configured. If set to false, CMB starts from the Blender menu panel. (Refer to the online help for the CMB menu panel.)

- restartwaitseconds

  Type: Integer

  Default: 5

  This property sets the number of seconds that pass before CMB restarts. You can increase the time by changing the number of seconds. This property is not shown in the CMB GUI. You must make modifications in the C:\CiscoMB\servlet\Properties\Blender\blender.xml file and restart the CMB service.

Setting Alert Notification

- Start Alert Poll Seconds

  Type: Integer

  Default: 120

  This property sets the number of seconds CMB waits before checking for alerts after startup. This is a mandatory field and a field change requires a restart of CMB service.

- Email notification

  Type: Boolean

  Default: false

  This property turns alert notification off and on. Set this property to true if you want to email alert notices. Set this property to false if you do not want to email alert notices.

- SMTP Server

  Type: String

  Default: none

  This property identifies the Simple Mail Transfer Protocol (SMTP) server that is used to deliver the alert notice. Property change is reflected in a restart of CMB service.

- From Address

  Type: String

  Default: blender@<localhost>

  This property specifies an email address that appears in the From field of the email message. Property change is reflected in a restart of CMB service.

- To Address

  Type: String

  Default: none

  This property specifies an email address to which the alert notices are sent. To send the notification to more than one recipient, you can enter a comma-separated list of several email addresses. Property change is reflected in a restart of CMB service.

- Email Subject

  Type: String

  Default: none

  This property contains the text to be inserted in the Subject field when no new Blender alerts are listed. Property change is reflected in a restart of CMB service.

- Notify Timeout Minutes

Type: Integer

Default: 1440 minutes (one day)

This property specifies the amount of time (in minutes) between email messages. You must set this property to 15 minutes or higher.

- Email Header

  Type: String

  Default: none

  This property allows you to specify a text file to be appended to the beginning of the email alert notice.

- Email Footer

  Type: String

  Default: none

  This property allows you to specify a text file to be appended to the end of the email alert notice.

- phonehomenotify

  Type: Boolean

  Default: false

  Set this property to true to activate phone home alerting. For the Cisco Technical Assistance Center (TAC) to receive this alert, both CMB and a Standalone Distributed Diagnostics and Service Network (SSDSN) system must be installed at the customer site.

Application Medium Configuration

You can configure CMB to communicate with the Unified WIM. The Collaboration page provides the connection from CMB to the Unified WIM. Properties in this page determine the behavior of the Collaboration (remote) medium on the CMB server.

In addition, you can use the C:\CiscoMB\servlet\Properties\Blender\collaboration.xml file to configure CTI event filters. See the Event Filters section for information about the properties you can use to share and accept events.

This page contains the following sections:

Identifying the CMB Remote Medium

This section describes properties that display information; you do not have to set them. Do not change any of these properties.

- name

  Display only. This property identifies the medium. The default is Remote-WIM.

- package

  This property identifies the Java package name of the Blender medium. In this file, it must be set to com.cisco.ics.blender.remote. This package must be accessible to the servlet engine through its CLASSPATH.

Specifying Application Connections

Use these properties to set up the connections from the Unified WIM to the Application medium. In the properties that follow, note that “local” properties refer to the Application medium on CMB; “remote” values indicate the Unified WIM.

- Remote Host

  Type: String

  Default: None

  This property identifies the host name of the Unified WIM. This name must be in the system hosts file. It is a mandatory field.

- Remote Service

  Type: String

  Default: None

  This property identifies the remote service name for this connection; that is, the Unified WIM. The value here must match the value in the localservice property on the Unified WIM. It is a mandatory field.

- Remote Registry Port

  Type: Numeric

  Default: 1099

  This property identifies the remote port for this connection; that is, the Unified WIM. The value here must match the value entered in the localregistryport property on the Unified WIM. It is a mandatory field.

- Remote Password

  Type: String

  Default: None

  This property identifies the password for this connection. The value here must match the value in the localpassword property on the Unified WIM. It is a mandatory field.

- Local Service

  Type: String

  Default: None

  This property identifies the local name for this connection; that is, the name of the Unified WIM end of the connection. It is a mandatory field.

- Local Registry Port

  Type: Numeric

  Default: 1099

  This property identifies the local port for this connection; that is, the Application medium on CMB. It is a mandatory field.

- Local Password

  Type: String

  Default: None

  This property identifies the password for this connection. The value here must match the value indicated in the remotepassword property on the Unified WIM. This password is automatically encrypted; when you edit this file, the value appears as an encrypted code.

Procedure

After changing the remote and/or local password in the CMB, complete the following steps:

Step 1 Save the modified password.

Step 2 Get the encrypted password from the C:\CiscoMB\servlet\Properties\Blender\collaboration.xml file.

Step 3 Paste the password in <CMB-IP>_<RMI-PORT>.properties file on the CIM file server.

Step 4 Restart the listener process and instance.

Step 5 Restart the CMB server.

Securing the Remote Method Invocation (RMI) Driver

If you want to secure the communication between Unified WIM and CMB, you must disable the "Disable Keystore" property in the Collaboration page and then give them values.

- socketType

  Type: String

  Default: SSL

  The type of socket. If the value is set to "SSL," the properties that follow apply; otherwise, the other properties are not picked up. This property is not shown in the GUI.

- Keystore

  Type: Absolute path

  Default: none

  Enter an absolute path to the keystore filename. A keystore is a database of key material. Key material is used for a variety of purposes including authentication and data integrity.

  Example: KeyStore=d:\cisco\keys\mykeystore

- KeyStore Type

Type: String

Default: JKS

The type of keystore to use is the Sun Microsystems JKS, a proprietary type of the keystore implementation. This is specified by the following line in the java.security.properties file:

keystore.type=jks.

- Keystore Password

  Type: String

  Default: none

  The password specified when the keystore was created.

- Key Password

  Type: String

  Default: none

  The password specified when the key was created.

- Truststore

  Type: Absolute path

  Default: none

  A truststore is a keystore that is used when making decisions about what to trust. If you receive some data from an entity that you already trust, and if you can verify that the entity is the one it claims to be, then you can assume that the data came from that entity.

  Example: Truststore=d:\cisco\keys\mytruststore

- Truststore Type

  Type: String

  Default: JKS

  The type of truststore to use is the Sun Microsystems JKS, a proprietary type of the keystore implementation.

- Truststore Password

  Type: String

  Default: none

The password specified when the truststore was created.

Cisco CTI Medium

You use the CTI page to configure the Cisco CTI driver for use with CMB. You can modify frequently used property files in the GUI. You modify the remaining properties from the C:\CiscoMB\servlet\Properties\Blender\collaboration.xml file.

You also use this XML file to configure CTI event filters. The default CMB configuration is set to share all events, which are ideal for most configurations. You can, however, decide to alter certain event filters based on the particular installation. See the Event Filters section for information about the properties that are used to share and accept CTI events.

This page contains the following sections:

Identifying CMB

This section describes properties that display information and that you do not have to set. Do not change any of these properties. These properties are not shown in the CMB GUI.

- name

Display only. This property identifies the medium.

- package

  This property displays the package name of this Blender medium. In this file, it must be set to com.cisco.ics.blender.acd. This package must be accessible to the servlet engine through its CLASSPATH. See the *Cisco Media Blender Installation Guide* for information on setting the CLASSPATH.

- ctipackage

  Display only. This property specifies which kind of ACD medium to load. In this file, it must be set to com.cisco.ics.blender.acd.ciscocti.

Configuring Connection Properties

Use the following properties to identify the CTI server.

- Peripheral Type

  Type: String

  Default: IPCC

  Required. This property identifies the type of ACD with which the CTI server communicates. The change of property value is reflected on a restart of CMB service. Values are:

  - IPCC
  - Lucent

Note If you are using the Avaya switch, choose the value Lucent.

- Peripheral ID

  Type: String

  Default: 5000

  Required. This property specifies the peripheral ID, as defined on the CTI server. The value you enter here must match the corresponding value on the CTI server.

- Peripheral Host Name

  Type: String

Default: none

Required. This property identifies the hostname or IP address for the CTI server.

- Peripheral Host Port

  Type: String

  Default: none

  Required. This property identifies the host port for the CTI server. The value you enter here must match the corresponding value on the CTI server.

- Peripheral Host Name2

  Type: String

  Default: none

  When this property is used with Peripheral Host Name2, it provides support for a duplexed CTI server. To activate this property, either provide the hostname or IP address or leave it empty. The duplexed server acts as a single peripheral gateway (PG), but only one side is active at a time. When one side goes down, the other takes over.

- Peripheral Host Port2

  Type: Integer

  Default: none

  When this property is used with Peripheral Host Port2, it provides support for a duplexed CTI server. To activate this property, either provide the host port or leave it empty. The duplexed server acts as a single PG, but only one side is active at a time. When one side goes down, the other takes over.

- Peripheral UserName

  Type: String

  Default: blender

  Required. This property identifies the user name used when CMB connects to the CTI server. The value you enter here must match the corresponding value on the CTI server.

- Peripheral Password

  Type: String

  Default: none

This property identifies the password used when CMB connects to the CTI server. The value you enter here must match the corresponding value on the CTI server. You can leave this property blank if authentication is not used. If you add a password value and then restart CMB, the value is rewritten with an encrypted value for the password.

- Peripheral Comment

  Type: String

  Default: none

  This property lets you add a comment to associate with this peripheral.

Identifying Named Variables

Use the following properties for named variables.

- Peripheral NamedVars

  Type: String

  Default: user.cisco.cmb user.cisco.cmb.callclass

  This property identifies any named variables in which you want to register interest from the CTI server. If using more than one variable, enter them in a space-delimited list. These variables MUST be configured in the Unified CCE Expanded Call Variable database table as string types; otherwise, registration will fail.

Note You must register the variable user.cisco.cmb to have web callback requests work in an Unified CCE routing integrated configuration.

  The other default variable, user.cisco.cmb.callclass, is used to send the call class over to CMB by way of the PreCall message. Do not change these values unless you are instructed to do so or you need to add more named variables to the list for screen pop purposes using the MakeCall. See the Session MatchKey property.

- Peripheral Alert on Named VarError

  Type: Boolean

  Default: false

Use this property to generate an alert when a named variable registration fails. Normally, just a log message is created.

Propagating Unified CCE Variables

The following properties are used with an ACD in the Unified CCE integration; they are not designed to work with IPCC.

- Session MatchKey

  Type: String

  Default: ICMTaskID

  The session match key is used to propagate Unified CCE script variables to the CTI server calls, such as CMB phantom calls, for application screen pops. Normally this property is set to the task ID returned by the Media Routing peripheral gateway (MR PG) and passed from the Unified WIM to CMB in the caller session. If this property is disabled in the CMB GUI, variable propagation is disabled. Also, if the caller session does not contain the key, variable propagation does not occur. If the key is given in the caller session but it does not match any outstanding call variables sent to CMB by the CTI server, then the request is dropped with a queue error. Leave this setting alone unless you are instructed to change it, or disable it if you do not wish to propagate variables at all.

- Session MatchShort Timeout

  Type: Numeric

  Default: 5000

  The session match short timeout (in milliseconds) indicates how long the CTI strategy waits for the call variables to arrive at CMB from the Unified CCE.

  Since this uses a system thread for every request, it should be set to a relatively short period of time. Leave this setting alone unless you are instructed to change it. The default is to wait for 5 seconds.

- Precall Short Timeout

  Type: Numeric

  Default: 15000

The precall short timeout (in milliseconds) indicates how long CMB waits for the request to arrive from the Unified WIM to propagate call variables for Blended Collaboration sessions.

Because this uses a system thread for every precall event, it should be set to a relatively short period of time. Do not change this setting unless you are instructed to change it. The default is to wait for 15 seconds.

- Precall Long Timeout

  Type: Numeric

  Default: 60000

  The precall long timeout (in milliseconds) is used after the precall short timeout expires. It does not use a system thread for each event. Since resource utilization is lower, it can be set to a significantly longer period of time than the short timeout to account for higher network latencies. Do not change this setting unless you are instructed to change it. The default is to wait for 60 seconds.

Using Unified CCE Call Variable 10

The following property is for use with Avaya (Lucent) switches only.

- callTag

  Type: Numeric

  Default: none

  This property allows you to free up Unified CCE call variable 10.When using the predictive call strategy with an Avaya (Lucent) switch, CMB makes internal use of Call variable 10. If you need to use call variable 10 in the application, you can free up variable 10 by setting this calltag property to another Unified CCE call variable. You must set this field to the values that are specified in the Unified CCE CTI Server specification (13-22) that correspond to call variables 1-10. shows the corresponding values and variables:

Table 4-1 Unified CCE Variables and Values

Use this value	To refer to this Unified CCE Variable
13	1
14	2
15	3
16	4
17	5
18	6
19	8
20	9
22	10

Configuring a Callback Strategy

Use the ctistrategy property to specify the callback strategy used.

- CTI Strategy

  Type: String

  Default: none

  This property specifies the CTI Strategy to be used. Use any one of the first seven properties that are listed below for a single call strategy. For multiple call classes, select "Use CallClass Strategies" property and fill in the strategy details in the callClass property tab in the CMB GUI.

  - AgentReserved
  - PhantomWaitRelease
  - PhantomWaitNoRelease
  - PhantomNoCallRelease
  - PhantomNoCallNoRelease
  - PhantomNoCallNoHold
  - Predictive

- Use CallClass Strategies

Using Phantom Line Strategies

The following properties are used with the phantom strategies.

- Phantom Alert Threshold

  Type: Integer

  Default: 5

  This property determines when CMB sends an alert regarding phantom lines being unavailable. When a call is queued to a phantom strategy and all phantom lines are being used for other calls, CMB holds the call request until a phantom line is available. The number you enter in Phantom Alert Threshold, however, lets you specify the number of calls CMB holds under these circumstances before sending an alert message.

- Phantom Login Threshold

  Type: Integer

  Default: none

  This property determines the minimum percentage of phantom agents configured in the phantom pool file that gets logged into the phones. Blender raises an alert if the number of phantom agents logged in falls below this threshold. The percentage range is 1 to 100.

Adjusting Phantom Strategy Behavior

The following properties allow you to control the timing used by CMB to accomplish phantom strategy call flows. These properties are not shown in the CMB GUI, so you have to modify these properties in C:\CiscoMB\servlet\Properties\Blender\CiscoCTI.xml file.

Stop the CMB service and make the necessary changes in the XML file. The changes take effect when you restart the CMB service.These properties affect how long CMB takes when doing the following:

- Answering a phantom call from an agent phone
- Placing a phantom call on hold
- Placing an outbound call from the agent's phone

- Dropping a phantom call

Note In most cases, these properties should be set to 0. Enter other values here only if you need to effect a delay.

- delayonassignanswer

  Type: Numeric

  Default: 0

  Used with all the phantom line strategies, this property lets you specify how many milliseconds CMB waits before answering a phantom call placed to the agent's phone. Acceptable values are 0 to any number of milliseconds.

- delayonassignhold

Type: Numeric

  Default: 0

  Used with PhantomWaitRelease and PhantomWaitNoRelease, this property lets you specify how many milliseconds CMB waits before placing a phantom call on hold from the agent phone. Acceptable values are 0 to any number of milliseconds.

- delayonassigncallout

  Type: Numeric

  Default: 0

  Used with PhantomWaitRelease and PhantomWaitNoRelease, this property lets you specify how many milliseconds CMB waits before placing an outbound call to the caller from the agent phone. Acceptable values are 0 to any number of milliseconds.

- delayonassigndropphantom

Type: Numeric

  Default: 0

  Used with PhantomWaitRelease and PhantomNoCallRelease, this property lets you specify how many milliseconds CMB waits before dropping the phantom line. Acceptable values are 0 to any number of milliseconds.

Determining CTI Strategy by Call Class

Use this property only if you are using multiple call classes. For more information on setting up a Call Class Table, see the Call Class Table section.

- callclassfield

  Type: String

  Default: callclass

  This property specifies which field on the Unified WIM web callback form contains the call class code.

Setting Dialing Prefixes and Filters

Use the following properties to establish the local and long distance dialing parameters. See the Long Distance Calls section for more information on how these properties work together.

- Dial Local Prefix

  Type: Phone digits, 0–9, *, #

  Default: 9

  This property indicates the prefix that you must dial before a local telephone number.

- Dial Long Distance Prefix

  Type: Phone digits, 0–9, *, #

  Default: 91

  This property indicates the prefix that you must dial before a long distance telephone number.

- dialspecialprefix

  Type: Phone digits, 0–9, *, #

  Default: none

  This property lets you enter a prefix that can be used instead of the prefix that was entered in the diallongdistanceprefix. Specify any prefix that you must enter to place a call within the country code but outside the local area code. For instance, you can enter 9 to indicate that 91 must be dialed before the phone number of a special call.

- specialdiallist

  Type: Numeric

  Default: none

  This property determines whether CMB assigns the prefix specified in the dialspecialprefix property to a phone number. This property contains a space-delimited list of numbers. If a phone number begins with one of these numbers, CMB assigns the prefix specified in the dialspecialprefix property to it. If a phone number does not begin with one of these numbers, the prefix specified in the diallongdistanceprefix property is used instead.

- specialdigitstrim

  Type: Boolean

  Default: false

  This property indicates whether CMB strips the numbers listed in the dialspecialprefix property when placing a call. If this property is set to true and CMB detects a call that begins with a number in the specialdiallist, CMB strips the prefix (listed in the dialspecialprefix property) when placing the call.

- dialacdprefix

  Type: Phone digits, 0–9, *, #

  Default: none

  This property sets the prefix that you must dial before dialing in to an ACD queue.

- allowcharacters

  Type: String

  Default: none

  Normally, CMB strips out non-numeric characters before dialing a number. This property allows specialized characters to remain in the dial string. It sets up a space-delimited list of characters that are included when dialing.

  For example, "# " allows the hash and comma characters to be used when dialing.

- Ignore AreaCode

  Type: Phone digits, 0–9

Default: 978

This property indicates the local area code that is stripped from 10-digit telephone numbers that begin with this area code. This property is required unless the ACD uses a direct long distance trunk. Acceptable values: area codes.

- prefixfilter

  Type: Space-delimited list of phone digits

  Default: 900 0 212540 976 809 911

  This property defines a set of illegal prefixes that you should not use. If a caller enters a callback number beginning with any of these digits, the caller receives an error. The default value, 900 0 212540 976 809 911, is a list of standard toll or emergency prefixes.

- Permitted Phonenum Length

  Type: Digits

  Default: 10

  This property indicates acceptable lengths for phone numbers (excluding prefixes). Enter a space-delimited list of acceptable lengths. For example, 10 11 indicates that phone numbers can be either 10 or 11 digits long. If you do not want to check for telephone number length, you can disable this feature by entering a negative number here, for example, –1.

Configuring Agent Properties

Use the following properties to configure the agent phone and various agent states.

- Auto Answer

  Type: Boolean

  Default: false

  This property specifies whether CMB causes the agent phone to automatically answer incoming calls. If the ACD is set to answer automatically, set this property to false. For Phantom CTI Strategies, one of the systems must answer for the agent.

- Ready After Signon

Type: Boolean

Default: false

This property indicates whether the agent is placed in a ready state when logged in.

- Signoff Release Ready

  Type: Boolean

  Default: false

  This property indicates whether the agent is placed in a not ready state just before logging off.

- Accept Drop

  Type: Boolean

  Default: false

  Set this property if you want the agent to speak on the phone after dropping the Collaboration session.

- sharedrop

  Type: Boolean

  Default: false

  Set this property if you want the agent to continue a Collaboration session after hanging up the voice call.

- Share Queue

  Type: Boolean

  Default: false

  Set this property to disable web callback handling from the CTI server.

- peripheral.agentlogoutreasoncode

  Type: Integer

  Default: 3

  If you are using CMB with the IPCC, a reason code (value 1 through 6) is required to log out an agent from Unified WIM. The following reason codes are visible on the agent phone display:

  - 1—Break

- 2—Lunch
- 3—End duty
- 4—Personal
- 5—Meeting
- 6—Training

Note If an agent wants to enter a different reason code each time, then the agent should log out from the phone rather than from the ACD. If an agent wants to filter out signoff events from reaching the ACD, then the agent would set the property acceptsignoff to false in the cti.xml file to ensure that logout is from the phone.

Call Class Table

The call class table maps call class codes (embedded in the agent "precall" message) to CTI strategies. You can do this mapping in the callClass tab in the CMB GUI. Select the corresponding check box to disable any property except default property. CallClass property change are reflected on a restart of CMB service. To add more rows, press the + button and to delete rows, use the - button.

Each line of the call class table maps web-based textual call class codes embedded in the agent "precall" message to CTI Strategies in the following format:

bc=Predictive

callback=PhantomWaitRelease

call class code=CTI Strategy

where:

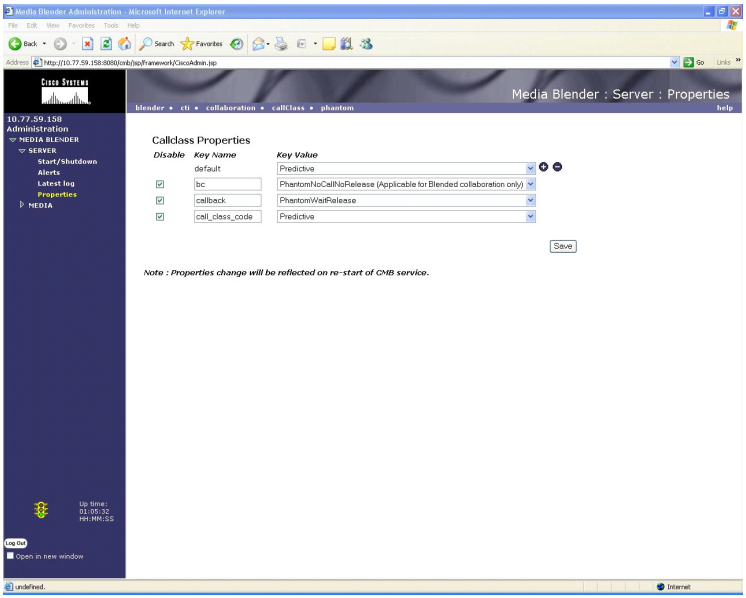
- Call class code is a code configured in the Unified WIM entry point and passed by Unified CCE to CMB by way of agent precall message.
- CTI Strategy defines the call flow strategy to be followed by the call class. Acceptable values are:
  - AgentReserved
  - Predictive
  - PhantomWaitRelease
  - PhantomWaitNoRelease

- PhantomNoCallRelease
- PhantomNoCallNoRelease
- PhantomNoCallNoHold

Refer to the CTI Strategies for Call Classes section for more information about these strategies.

Figure 4-2 shows the properties in the Callclass tab.

Figure 4-2 Callclass Tab Properties



Note AgentReserved is used only for IPCC in the Unified CCE integration. The Avaya Definity G3 switches support the Predictive strategy.

Note If the Peripheral Type is selected as IPCC in the CTI tab and then on the Callclass tab, an alert message is shown stating “Callclass Properties are not applicable for Pheripheral Type 'IPCC” and the Save button is disabled.

Phantom Pool Properties

The phantom property tab in the CMB GUI lists the phantom lines. To add more lines, press the + button; to delete lines, use the - button.

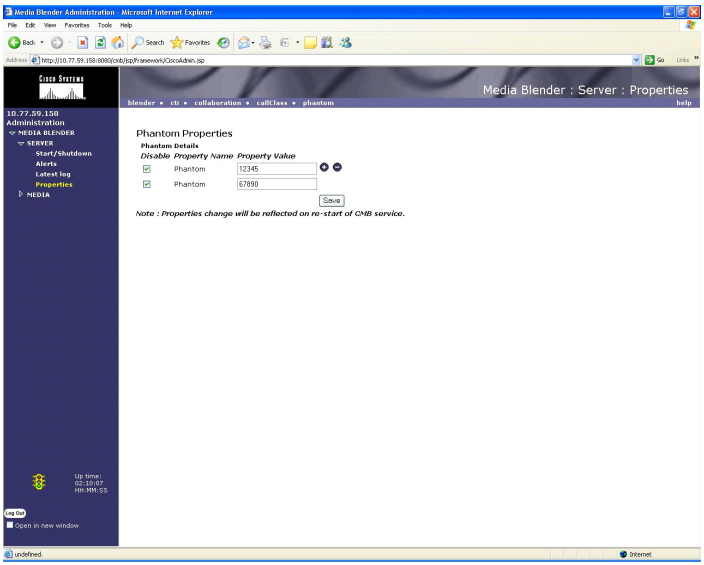
The Phantom ID is entered in the property value text box in the CMB GUI, where phantomID is either the phantom physical ID on the ACD or the Voice Agent ID on Unified WIM.

Note CMB currently supports only digital line types.

Note If the Peripheral Type is selected as IPCC in the CTI tab and then on the phantom tab, an alert message is shown stating "Phantom Properties are not applicable for Pheripheral Type 'IPCC'" and the save button is disabled.

Figure 4-3 shows the Phantom Pool properties.

Figure 4-3 Phantom Pool Properties



Event Filters

CMB shares different types of events between all participating media. The property file for each type of medium in your configuration lets you determine whether the medium can accept or share various events. The default configuration shares all events and is ideal for most installations. This section provides information for users who want to alter these default settings.

For example, to prevent a web collaboration session's drop from terminating a phone call, you set the sharedrop property to false in the Cisco Application medium property file. To set this property for CTI, you make the modifications in C:\CiscoMB\servlet\Properties\Blender\CiscoCTI.xml; to set the property for collaboration, you make the modifications in C:\CiscoMB\servlet\Properties\Blender\Collaboration.xml.

Understanding Events

You can use the events described in the following table to alter the default settings.

Table 4-2 Events and Descriptions

Event	Description
signon	Indicates that an agent has signed on.
signoff	Indicates that an agent has signed off.
signonsuccess	Indicates that an agent sign-on was successful. This event is shared only by the ACD medium.
signonfailed	Indicates that the sign-on did not occur on the switch. This event is shared only by the ACD medium.
start	Indicates that a caller session has started.
queue	Indicates that an incoming call request has been added to the queue.
queuing	Indicates that an incoming call was successfully queued into CMB. This event is shared only by the ACD medium.
assign	Indicates that a queued call has been assigned to an agent.
drop	Indicates that a call has been disconnected.
popurl	Indicates that an error has occurred.
displaymsg	Requests the display of the specified message on the caller's browser.
error	Indicates that an error has occurred.
addparticipant	Adds a participant to a session. This event is used with transferring and conferencing calls. This event is shared only by the ACD medium.

Table 4-2 Events and Descriptions

Event	Description
removeparticipant	Removes a participant from a session. This event is used with transferring and conferencing calls. This event is shared only by the ACD medium.
blindtransfer	Transfers a call from one participant to another. This event is used with transferring calls. This event is shared only by the ACD medium.

Event Filter Properties

Use the following properties to accept and share each type of event.

- acceptqueue

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts queue events from other media.

- sharequeue

  Type: Boolean

  Default: true

  This property indicates whether this medium shares queue events with other media.

- acceptqueuing

  Type: Boolean

  Value: true

  This property indicates whether this medium accepts queuing events from other media.

- sharequeuing

  Type: Boolean

  Value: true

  This property indicates whether this medium shares queuing events with other media.

- acceptstart

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts start events from other media.

- sharestart

  Type: Boolean

  Default: true

  This property indicates whether this medium shares events with other media.

- acceptassign

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts assign events from other media.

- shareassign

  Type: Boolean

  Default: true

  This property indicates whether this medium shares assign events with other media.

- acceptdrop

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts drop events from other media.

  You use the acceptdrop property to control whether drop events are accepted by either your Application medium or your ACD medium. For example, if you do not want to share a drop on the Application medium with the ACD medium, set the acceptdrop property to false in the properties file for your ACD medium. If you do not want to share a drop from your ACD medium with the Application medium, set the acceptdrop property to false in the properties file for the Application medium.

- acceptsignon

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts sign-on events from other media.

- sharesignon

  Type: Boolean

  Default: true

  This property indicates whether this medium shares signon events with other media.

- acceptsignonsuccess

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts signonsuccess events from other media.

- sharesignonsuccess

  Type: Boolean

  Default: true

  This property indicates whether this medium shares signonsuccess events with other media.

- acceptsignonfailed

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts signonfailed events from other media.

- sharesignonfailed

  Type: Boolean

  Default: true

  This property indicates whether this medium shares signonfailed events with other media.

- acceptsignoff

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts signoff events from other media.

Note For IPCC, sharing of signoff events from the ACD medium and acceptance by the Application medium is required. Otherwise, an agent can receive a blended collaboration request but might not be able to place a phone call.

- sharesignoff

  Type: Boolean

  Default: true

  This property indicates whether this medium shares signoff events with other media. If you do not want to share signoffs, set this property to false.

Note For IPCC, sharing of signoff events from the ACD medium and acceptance by the Application medium is required. Otherwise, an agent can receive a blended collaboration request but might not be able to place a phone call.

- acceptaddparticipant

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts addparticipant events from other media. This property is used by the Unified WIM medium when it receives a shareaddparticipant event from the ACD medium. (This property is used for call transferring and conferencing.)

- shareaddparticipant

  Type: Boolean

  Default: true

This property indicates whether this medium shares addparticipant events with other media. This property is used by the ACD medium to add a conferenced or transferred call to the Unified WIM. (This property is used for call transferring and conferencing.)

- acceptdropparticipant

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts dropparticipant events from other media. This property is used by the Application medium when it receives a sharedropparticipant event from the ACD medium. (This property is used for call transferring and conferencing.)

- sharedropparticipant

  Type: Boolean

  Default: true

  This property indicates whether this medium shares dropparticipant events with other media. This property is used by the ACD medium to disconnect a conferenced or transferred call from the Unified WIM. (This property is used for call transferring and conferencing.)

- acceptblindtransfer

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts blindtransfer events from other media. This property is used by the Application medium when it receives a shareblindtransfer event from the ACD Medium. (This property is used for call transferring.) Acceptable values are true and false.

- shareblindtransfer

  Type: Boolean

  Default: true

  This property indicates whether this medium shares blindtransfer events with other media. This property is used by the ACD medium to share blindtransfer events with the Application medium.

- acceptpopurl

  Type: Boolean

Default: true

This property indicates whether this medium accepts popurl events from other media. Acceptable values are true and false.

- sharepopurl

  Type: Boolean

  Default: true

  This property indicates whether this medium shares popurl events with other media. Acceptable values are true and false.

- acceptdisplaymsg

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts displaymsg events from other media. Acceptable values are true and false.

- sharedisplaymsg

  Type: Boolean

  Default: true

  This property indicates whether this medium shares displaymsg events with other media. Acceptable values are true and false.

- accepterror

  Type: Boolean

  Default: true

  This property indicates whether this medium accepts error events from other media. Acceptable values are true and false.

- shareerror

  Type: Boolean

  Default: true

  This property indicates whether this medium shares error events with other media. Acceptable values are true and false.

CHAPTER 5

Troubleshooting Cisco Media Blender

The Cisco Media Blender (CMB) Administration user interface allows you to view statistics, session details, properties, event counts, alerts, and log messages. The log files and alerts are particularly helpful in troubleshooting any problems. If you are not able to resolve the problems through your own troubleshooting efforts, you can contact the Cisco Technical Assistance Center (TAC).

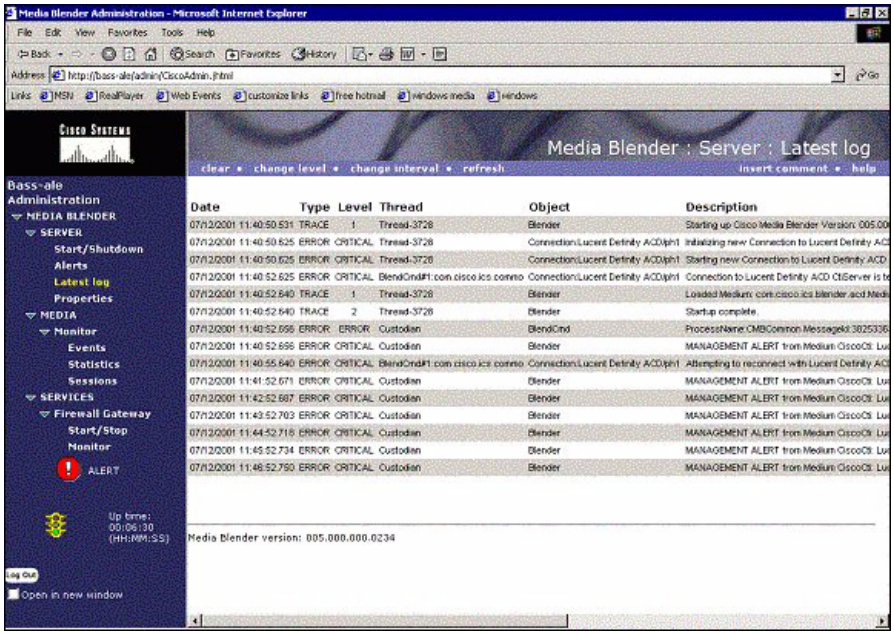
This section describes:

- Using the Log Information
- CMB Alerts
- Before You Contact the Cisco Technical Assistance Center

Using the Log Information

The Media Blender: Server: Latest Log page on the Administration user interface allows you view an online report of the most current log file. Refer to the online Latest Log page to help diagnose any problems that may occur with the CMB configuration. Figure 5-1 is a sample Latest Log page that shows CMB starting up. Notice that problems have occurred and the red ALERT icon appears in the left pane.

Figure 5-1 Log Page



If you experience problems, you can change the logging level (using the change level option) to control the trace messages that are displayed in the log. CMB generates alerts and errors of varying degrees of severity. Setting the logging level to a low number restricts the display to only a few trace messages. Higher logging levels expand the log to include many additional trace messages as well. There are five levels:

- 1—Urgent (fewest entries)
- 2—Critical
- 3—Important
- 4—Information
- 5—Debug (most entries)

Note All error messages are logged. You cannot change the number of error messages that display.

Sample Log File

A log file containing additional information is also created and resides in the `\CiscoMB\logs directory`. The following segments show a CMB log file when it is integrated with ICM. You can see the log messages that occur as CMB starts up and processes a call flow, as assign and queue events take place.

- Messages on Starting CMB
- Event Messages

Messages on Starting CMB

As CMB starts up, the messages about the JDK and ServletExec starting up are displayed.

```
01/31/2002 11:12:57.212 TRACE GLOBAL_EVENT Blender
com.cisco.ics.blender.Blender "" Blender "" - Starting up
Cisco Media Blender Version: 005.000.000.0349
```

```
01/31/2002 11:12:57.244 TRACE EXTERNAL_STATE Blender
com.cisco.ics.blender.Blender "" Blender "" - Java Version:
1.3.0
```

```
01/31/2002 11:12:57.244 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.Blender "" Blender "" - Java Home:
C:\jdk1.3\jre
```

```
01/31/2002 11:12:57.244 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.Blender "" Blender "" - Java Class Path:
C:\Program Files\New Atlanta\ServletExec
ISAPI\lib\servlet.jar;C:\Program Files\New
Atlanta\ServletExec ISAPI\lib\jaxp.jar;C:\Program Files\New
Atlanta\ServletExec ISAPI\lib\crimson.jar;C:\Program
Files\New Atlanta\ServletExec ISAPI\lib\jndi.jar;C:\Program
Files\New Atlanta\ServletExec
ISAPI\lib\ServletExec40.jar;C:\Program Files\New
Atlanta\ServletExec
ISAPI\classes;C:\CiscoMB\servlet;C:\CiscoMB\servlet\xml.jar;
C:\CiscoMB\servlet\perltools.jar;C:\CiscoMB\servlet\Resource
;C:\CiscoMB\servlet\servlet.jar;C:\CiscoMB\servlet\jms.jar;C
:\CiscoMB\servlet\flexlm.jar;C:\CiscoMB\servlet\magellanInfo
.jar;C:\jdk1.3\lib\tools.jar
```

```
01/31/2002 11:12:57.244 TRACE CODE_MARKER Blender
com.cisco.ics.blender.Blender "" Blender "" - Java Class
Version: 47.0
```

```
01/31/2002 11:12:57.244 TRACE EXTERNAL_STATE Blender
com.cisco.ics.blender.Blender "" Blender "" - Operating
System: Windows 2000 5.0 on x86

01/31/2002 11:12:57.790 TRACE GLOBAL_EVENT Blender
com.cisco.ics.blender.Blender "" Blender "" - License
information: Max assigned sessions=10. Remote medium
supported. CiscoCTI supported.

01/31/2002 11:12:57.884 TRACE STATIC_FIELD Blender
com.cisco.ics.common.sys.CommandManager "" Blender "" -
BlendCmd is started with 200 command threads and a ceiling of
750 threads.

01/31/2002 11:12:57.900 TRACE CODE_MARKER Blender
com.cisco.ics.blender.Blender "" Blender "" - Creating
Service:com.cisco.ics.blender.fwgw.Service

01/31/2002 11:12:58.775 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.fwgw.Service "" Blender "" - Set of all
stubs: [mr_primary, arm]

01/31/2002 11:12:58.869 ERROR INFO Messaging.50
GatewayStartupInfo com.cisco.msg.plugin.fw.Gateway_stub
startup Blender "" - Firewall Gateway MR_Primary started up.

01/31/2002 11:12:58.869 ERROR INFO Messaging.50
GatewayStartupInfo com.cisco.msg.plugin.fw.Gateway_stub
startup Blender "" - Firewall Gateway ARM started up.

01/31/2002 11:12:58.884 TRACE GLOBAL_EVENT Blender
com.cisco.ics.blender.Blender "" Blender "" - Loaded Service:
com.cisco.ics.blender.fwgw.Service of version:
005.000.000.0349
```

The following displays messages about the Cisco CTI medium and its properties: the CTI strategy, AgentReserved; the ICM ECC variables, `user.cisco.cmb` and `user.cisco.cmb.callclass`; and the peripheral being used, IPCC. Note the warning about the length of the Ignoreareacode property value, and the error about the firewall gateway stub.

```
01/31/2002 11:12:58.900 TRACE CODE_MARKER Blender
com.cisco.ics.blender.Blender "" Blender "" - Creating
Medium:com.cisco.ics.blender.acd.Medium01/31/2002
11:12:59.462 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti Blender "" -
Initializing CtiStrategy
```

```
01/31/2002 11:12:59.462 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti Blender "" -
StartingAgentReserved strategy

01/31/2002 11:12:59.478 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti Blender "" -
Initializing CtiStrategy

01/31/2002 11:12:59.509 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - ctiTimeout=600000

01/31/2002 11:12:59.587 ERROR CRITICAL cmb.0 Error
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - Warning: Property IgnoreAreaCode should be 3 digits only
- it is:978275

01/31/2002 11:12:59.587 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - Loading skills
file:C:\CiscoMB\servlet\properties\Blender\skills.properties

01/31/2002 11:12:59.603 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - pfxFilter={809=809, 976=976, 212540=212540, 0=0, 900=900,
911=911}

01/31/2002 11:12:59.603 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - skillTable={}

01/31/2002 11:12:59.603 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - postCallState=?

01/31/2002 11:12:59.634 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti Blender
"" - Opcodevar: "user.cisco.cmb" callback op: "callback"
blended callback op: "bc" callclass var:
"user.cisco.cmb.callclass"

01/31/2002 11:13:00.478 ERROR INFO common.2 LegacyError
com.cisco.io.net.rmi.RmiDriver Init "Gateway_stub (ARM)" "" -
Legacy error: Attached to existing RMI Registry.

01/31/2002 11:13:02.744 ERROR INFO Messaging.51
GatewayEstablishedConnectionInfo
com.cisco.msg.plugin.fw.Gateway_stub linkUp "EventHelper #1"
"" - Firewall Gateway ARM established RMI link to the remote
application.
```

```
01/31/2002 11:13:02.744 ERROR INFO Messaging.51
GatewayEstablishedConnectionInfo
com.cisco.msg.plugin.fw.Gateway_stub linkUp "EventHelper #2"
"" - Firewall Gateway MR_Primary established RMI link to the
remote application.
```

```
01/31/2002 11:13:03.087 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.PeripheralImplIPCC ""
Blender "" - Adding named variable to registration list:
user.cisco.cmb
```

```
01/31/2002 11:13:03.087 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.PeripheralImplIPCC ""
Blender "" - Adding named variable to registration list:
user.cisco.cmb.callclass
```

```
01/31/2002 11:13:03.087 TRACE EXTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.PeripheralManager ""
Blender "" - Peripheral 1: IPCC ID=5005 Prefix=ph1 [enabled]
```

The messages about the remote medium for the Unified WIM and some Collaboration properties and the "Startup complete" message are displayed. Note the Alert message, AlertCMBCommon, saying that Blender has started.

```
01/31/2002 11:13:03.369 TRACE CODE_MARKER Blender
com.cisco.ics.blender.Blender "" Blender "" - Creating
Medium:com.cisco.ics.blender.remote.Medium
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
AcceptQueue = false
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
AcceptAssign = true
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
AcceptDrop = true
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
shareQueue = true
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
ShareAssign = true
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
ShareDrop = true
```

```
01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
displayMsgURL =
/webline/displaymsg?head=Web+Callback+Message&body=

01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
Creating rmi transport.

01/31/2002 11:13:03.447 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
Creating rmi driver with properties
{RemotePassword={enc:2}Zm9v, LocalPassword={enc:2}Zm9v}

01/31/2002 11:13:03.447 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.Medium Remote-WIM Blender "" -
Creating peer synchronizer.

01/31/2002 11:13:03.462 TRACE GLOBAL_EVENT Blender
com.cisco.ics.blender.Blender "" Blender "" - Loaded Medium:
com.cisco.ics.blender.remote.Medium of version:
005.000.000.0349

01/31/2002 11:13:03.462 TRACE CODE_MARKER Blender
com.cisco.ics.blender.Blender "" Blender "" - Comparing new
Medium to platform version: 005.000.000.0349

01/31/2002 11:13:03.478 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Custodian ""
- Sending Message:Heartbeat Req ( invokeID=9 ) of length 12

01/31/2002 11:13:03.478 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Heartbeat Conf ( invokeID=9 )

01/31/2002 11:13:03.556 ERROR NOTICE AlertCMBCommon.18
EMSG_BLENDER_START_SUCCESS com.cisco.ics.blender.Blender
startup Blender "" - ProcessName:CMBCommon
MessageId:1677852690 Media Blender started.

01/31/2002 11:13:03.556 TRACE EXTERNAL_EVENT Blender
com.cisco.ics.blender.Blender "" Blender "" - Startup
complete.
```

Event Messages

The messages that occur when CMB receives a start event from Unified WIM are displayed along with the call transfer event. The media class is "bc," which means this is a blended collaboration session. Note the placing of the call, and how the problem with the length of the area code is corrected.

```
02/01/2002 11:14:07.751 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM
"RemoteRmiPoller - cmb3_conn_WIM_BAPI" "" - Handling event
Start#cmb3_conn_WIM_BAPI21012580054767 with key
cmb3_conn_WIM_BAPI21012580054767
```

```
02/01/2002 11:14:07.766 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.Medium Remote-WIM
BlendCmd#145:Start#cmb3_conn_WIM "" - Remote-WIM sent Blender
a Start#cmb3_conn_WIM_BAPI21012580054767 event of type:Start
and key:cmb3_conn_WIM_BAPI21012580054767
```

```
02/01/2002 11:14:07.766 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.Medium ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Blender is creating
session for:Transfer from 4001 to 4102[9782753008]  with bc01
4001[4001]
```

```
02/01/2002 11:14:07.782 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Query Agent State Conf ( invokeID=5923
agentState=2 numSkillGroups=1 mrdID=1 numTasks=0 agentMode=1
maxTaskLimit=1 icmAgentID=5553 agentID+=4001
agentExtension+=3007 agentInstrument+=3007 )
```

```
BlendCmd#145:Start#cmb3_conn_WIM "" - Prepared to dial these
digits:3008 to reach Transfer from 4001 to 4102 [ 9782753008
] on terminal #9782753008
```

```
02/01/2002 11:14:07.798 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Placing call from:bc01
4001 [ 4001 ] on terminal #3007 to:Transfer from 4001 to 4102
[ 9782753008 ] on terminal #9782753008
```

```
02/01/2002 11:14:07.798 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.PeripheralManager ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Creating call based on
peripheral match on 3007
```

```
02/01/2002 11:14:07.798 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - base:9782753008
stripped to:9782753008

02/01/2002 11:14:07.798 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Passed prefix filter
test with:9782753008

02/01/2002 11:14:07.798 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Removed
ignoreAreaCode:978275 to make:3008

02/01/2002 11:14:07.798 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Prepared to dial these
digits:3008 to reach Transfer from 4001 to 4102 [ 9782753008
] on terminal #9782753008

02/01/2002 11:14:07.798 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Sending Message:Make
Call Req ( invokeID=5925 peripheralID=5005
callPlacementType=2 callMannerType=2 alertRings=10
callOption=0 facilityType=0 answeringMachine=0 priority=false
postRoute=false numNamedVariables=0 numNamedArrays=0
agentInstrument+=3007 dialedNumber+=3008 ) of length 50

02/01/2002 11:14:07.829 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Agent State Event ( peripheralID=5005
sessionID=0 peripheralType=17 skillGroupState=4
stateDuration=0 skillGroupNumber=29405 skillGroupID=5005
skillGroupPriority=1 agentState=4 eventReasonCode=0 mrdID=1
numTasks=0 agentMode=1 maxTaskLimit=1 icmAgentID=5553
agentID+=4001 agentExtension+=3007 agentInstrument+=3007 )

02/01/2002 11:14:07.845 TRACE CODE_MARKER Blender
com.cisco.ics.common.xsys.cisco.cti.MessageFieldCti ""
Connection "" - Skipping tag type: TIME for Cti Client
Timestamp

02/01/2002 11:14:07.845 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Begin Call Event ( peripheralID=5005
peripheralType=17 numCTIClients=1 numNamedVariables=0
```

```
numNamedArrays=0 callType=10 connectionDeviceIDType=0
connectionCallID=4194394 calledPartyDisposition=0
connectionDevID+=3007 ctiClientSignature+=cmb-m2cmb3 )
```

```
02/01/2002 11:14:07.845 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Make Call Conf ( invokeID=5925
newConnectionCallID=4194394 newConnectionDeviceIDType=0
lineHandle=0 lineType=2 newConnectionDevID+=3007 )
```

```
02/01/2002 11:14:10.454 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Call Established Event (
peripheralID=5005 peripheralType=17 connectionDeviceIDType=0
connectionCallID=4194394 lineHandle=0 lineType=2
serviceNumber=4294967295 serviceID=4294967295
skillGroupNumber=29405 skillGroupID=5005 skillGroupPriority=1
answeringDeviceType=0 callingDeviceType=0 calledDeviceType=0
lastRedirectDeviceType=65535 localConnectionState=3
eventCause=65535 connectionDevID+=3008 answeringDevID+=3008
callingDevID+=3007 calledDevID+=3008 )
```

The end call events and a drop event are displayed here.

```
02/01/2002 11:18:27.817 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.CallIPCC ""
"BlendCmd#145:End Call Event ( pe" "" - Call already ended,
not dropping: bc4102 4102 [ 4102 ] on terminal #3004 with
Properties: {terminalPw={enc:1}GsUsOPwfpKmj6kh9NncBhg==,
terminal=3004}
```

```
02/01/2002 11:18:27.817 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection ""
"BlendCmd#145:End Call Event ( pe" "" - Sending Message:Query
Agent State Req ( invokeID=5971 peripheralID=5005 mrdID=1
icmAgentID=0 agentInstrument+=3004 ) of length 31
```

```
02/01/2002 11:18:27.848 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Agent State Event ( peripheralID=5005
sessionID=0 peripheralType=17 skillGroupState=2
stateDuration=0 skillGroupNumber=29405 skillGroupID=5005
skillGroupPriority=1 agentState=2 eventReasonCode=0 mrdID=1
numTasks=1 agentMode=1 maxTaskLimit=1 icmAgentID=5556
agentID+=4102 agentExtension+=3004 agentInstrument+=3004 )
```

```
02/01/2002 11:18:28.035 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Query Agent State Conf ( invokeID=5969
agentState=2 numSkillGroups=1 mrdID=1 numTasks=0 agentMode=1
maxTaskLimit=1 icmAgentID=5556 agentID+=4102
agentExtension+=3004 agentInstrument+=3004 )

02/01/2002 11:18:28.035 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.AgentIPCC ""
"BlendCmd#200:Call Cleared Event " "" - Setting logical ID to
4102 on instrument 3004

02/01/2002 11:18:28.035 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Query Agent State Conf ( invokeID=5971
agentState=2 numSkillGroups=1 mrdID=1 numTasks=0 agentMode=1
maxTaskLimit=1 icmAgentID=5556 agentID+=4102
agentExtension+=3004 agentInstrument+=3004 )

02/01/2002 11:18:28.035 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti BlendCmd#50:Drop#3
"" - CiscoCti sent Blender a Drop#3 event of type:Drop and
key:3

02/01/2002 11:18:28.035 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.AgentIPCC ""
"BlendCmd#145:End Call Event ( pe" "" - Setting logical ID to
4102 on instrument 3004


02/01/2002 11:18:28.035 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.BlenderSession 3 BlendCmd#50:Drop#3 ""
- Blender received a Drop#3 event from the medium CiscoCti with
Blender Session ID #3 [Assigned]

02/01/2002 11:18:28.035 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti BlendCmd#200:Drop#3
"" - CiscoCti sent Blender a Drop#3 event of type:Drop and
key:3

02/01/2002 11:18:28.035 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.MediumSession
Remote-WIM:cmb3_conn_WIM_BAPI21012580054767
BlendCmd#50:Drop#3 "" - doEvent():Drop#3

02/01/2002 11:18:28.051 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.Blender Blender BlendCmd#50:Drop#3 "" -
Decrement Current assigned sessions:0 MAX Sessions=10
```

```
02/01/2002 11:18:28.051 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.BlenderSession 3 BlendCmd#200:Drop#3 ""
- Blender received a Drop#3 event from the medium Cisco CTI.
```

The Media Blender handling a conference call is displayed here.

```
02/01/2002 12:58:38.487 TRACE CODE_MARKER Blender
com.cisco.ics.blender.remote.Medium Remote-WIM
"RemoteRmiPoller - cmb3_conn_WIM_BAPI" "" - Handling event
Start#cmb3_conn_WIM_BAPI71012586325680 with key
cmb3_conn_WIM_BAPI71012586325680

02/01/2002 12:58:38.487 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.Medium Remote-WIM
BlendCmd#145:Start#cmb3_conn_WIM "" - Remote-WIM sent Blender
a Start#cmb3_conn_WIMWIMWIM_BAPI71012586325680 event of
type:Start and key:cmb3_conn_WIM_BAPI71012586325680

02/01/2002 12:58:38.503 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.remote.Medium ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Blender is creating
session for:Conference between agents 4001 &4102[9782753008]
.... with bc4102 4102[4102]

02/01/2002 12:58:38.503 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.BlenderSession 8
BlendCmd#145:Start#cmb3_conn_WIM "" - Blender received a
Start#cmb event from the medium Remote-WIM with Blender
Session ID #8 [Idle]

02/01/2002 12:58:38.503 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Placing call
from:bc4102 4102 [ 4102 ] on terminal #3004

02/01/2002 12:58:38.503 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.PeripheralManager ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Creating call based on
peripheral match on 3004

02/01/2002 12:58:38.519 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.ciscocti.CtiDriver CiscoCti
BlendCmd#145:Start#cmb3_conn_WIM "" - Prepared to dial these
digits:3008 to reach Conference between agents 4001 &4102 [
9782753008 ] on terminal #9782753008
```

```
02/01/2002 12:58:38.519 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection ""
BlendCmd#145:Start#cmb3_conn_WIM "" - Sending Message:Make
Call Req

02/01/2002 12:58:38.565 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Begin Call Event

02/01/2002 12:58:38.565 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Make Call Conf

02/01/2002 13:03:19.210 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: Call Conferenced Event

02/01/2002 13:03:19.210 TRACE INTERNAL_STATE Blender
com.cisco.ics.blender.acd.Medium CiscoCti "BlendCmd#200:Call
Conferenced Ev" "" - Detecting possible ADD-PARTICIPANT
event:Call Conferenced Event

02/01/2002 13:03:19.210 TRACE CODE_MARKER Blender
com.cisco.ics.blender.acd.ciscocti.Connection "" Connection
"" - Read new message: End Call Event
```

CMB Alerts

CMB generates alerts (error messages) that require action.

When an alert is active, the red Alert icon appears under the CMB Administration menu (left pane).	

To view the active alerts, click the **Alert** icon or select the **SERVER > Alerts** option on the Administration menu. Each alert displays the medium or service generating the alert and a description of the problem. Figure 5-2 shows an example:

Figure 5-2 Server Alert Example

The alert description appears as a hyperlink. If you click the hyperlink, the system displays a more detailed description and a proposed resolution of the problem.

Each medium or service has a unique set of alerts. The following types of alerts are provided:

- Common
- Application medium
- Cisco CTI Medium

You can configure CMB (using the Blender Property page) to send an email message to key personnel when alerts are generated. Refer to the Email Notification section for more details.

Common Alerts

The following table lists generic CMB alerts.

Table 5-1 Generic CMB Alerts

Alert	Description	Resolution
CMB is using "MAXIMUM" number (n) of threads—n thread commands are pending. Consider a higher thread ceiling. Or MediaBlender is using n (n%) of the n maximum threads. Consider a higher thread ceiling.	CMB is currently using the maximum number of threads. Either the command handler ceiling is set too low, or the threads are stuck (due to a communication problem with the switch).	Increase the thread ceiling value using the commandhandlerceiling property in the Media Blender > Server > Properties > blender tab. If the value is already higher than 200, the threads may be stuck waiting for replies from the switch. In this case, ensure that communication with the switch is functioning correctly.
Blender has an excessive thread cycle ratio: n—the thread floor is probably too low: n	CMB's thread cycle ratio measures how many threads are created and destroyed relative to the thread pool floor (set in your Media Blender > Server > Properties > blender tab). If the ratio is greater than 1, it indicates the inefficient creation and deletion of these threads.	Increase the floor value for threads in your Media Blender > Server > Properties > blender tab using the commandhandlers property.

Table 5-1 Generic CMB Alerts

Alert	Description	Resolution
Blender thread pool has received an out of memory error: <*error*>. Check machine resources and reboot if necessary. Or Blender thread pool has received a virtual machine error: <*error*>. Check machine resources and reboot if necessary.	A serious memory error has occurred on this CMB. The machine may be out of memory or have a hardware problem.	Verify that the machine has minimum memory configuration and restart.
All phantom lines engaged. n calls queued and waiting for phantom lines.	Too many calls are in the phantom line queue.	This problem may be temporary; as the number of calls in the queue decreases, more calls in the phantom queue are connected. To prevent this alert from occurring, perform any of the following tasks: • Increase the number of available phantom lines. • Ensure the CTI strategy is set to PhantomWaitRelease (rather than PhantomWaitNoRelease). • Change the CTI strategy to Predictive.

Table 5-1 Generic CMB Alerts

Alert	Description	Resolution
Number of Blender sessions currently assigned is more than the n licenses bought.	Number of Blender sessions assigned is more than the licensing limits.	A drop in the number of currently assigned sessions clears this alert. If the problem persists, then the customer needs to buy licenses for more sessions.
Unable to assign sessions. Number of Blender sessions has reached the threshold (n percent) of n licenses bought.	Number of Blender sessions assigned has reached the licensing limit threshold. No more additional sessions can be assigned.	A drop in the number of currently assigned sessions clears this alert. If the problem persists, then the customer needs to buy licenses for more sessions.
Connection between CMB and the host <*name*> is DOWN: <*error*>	There is a problem with the connection between CMB and the host <*name*>.	Ensure that the network connectivity between CMB and the host is functional and that the host is up and running.
CMB startup failed. Reason: <*reason*>	There might be a problem with the license keys or the configuration.	Check that the license keys are properly installed and make sure the CMB property files are properly configured.

Table 5-1 Generic CMB Alerts

Alert	Description	Resolution
CMB is shutting down. Status: <*status*>	CMB is shutting down.	None
One n of nn phantoms is logged in and is less than the phantom login threshold (n percent).	Current configuration of CMB requires a minimum number of phantoms to log in successfully. This is determined by the phantomloginthreshold property in the ACD.xxx.properties file. Unavailability of phantom phones might affect the performance of CMB.	Make sure the phantoms are configured properly in the property files. Log out any agents that are already logged into the phantom phones. Restart CMB if problem happens during startup.

Application Medium Alerts

The following table describes all of the Application Medium alerts and how to resolve them.

Table 5-2 Application Medium Alerts

Alert	Description	Resolution
RMI link to <*Client*> is down: Reason <*error*>.	CMB is experiencing problems communicating with the Unified WIM (other BAPI clients).	Ensure that the Unified WIM (other BAPI clients) and network are running properly. Check the Remote-WIM connection properties on the Statistics page.

Note Collaboration alerts are called "Remote-WIM" alerts on the user interface.

Cisco CTI Medium Alerts

The following table provides a description of all the Cisco CTI Medium Alerts and how to resolve them.

Table 5-3 Cisco CTI Medium Alerts

Alert	Description	Resolution
Peripheral <*ID*> is off-line.	ICM CTI server has notified CMB that the peripheral connection is down or malfunctioning.	Ensure that the Peripheral Interface Manager (PIM) is up and functional on the ICM system.
The communication link between the Peripheral Gateway (PG) and the ICM Central Controller is down.	This indicates that the PG cannot communicate with the ICM Central Controller.	This indicates that the PG cannot communicate with the ICM Central Controller.
The communication link between the CTI server and the Open Peripheral Controller (OPC) is down.	This indicates that the CTI server cannot communicate with the OPC located on the Peripheral Gateway.	Ensure that the Peripheral Gateway that is attached to the ACD is operational.
Register variables request failed.	This indicates that CMB failed to register one of the named variables that is listed in the Peripheral NamedVars property to the CTI server.	Ensure that the named variables listed in Peripheral NamedVars are configured in the ICM.
Connection is DOWN: <*error*>	There is a problem with the connection between CMB and the ICM CTI server.	Ensure that the network connectivity between CMB and the ICM CTI server is functional, and that the CTI server is up and running.

CMB Exceptions

Along with the other status and event information, CMB also provides exception messages. For example, you may get an “out of memory” message on the CMB application.

Follow these steps to increase the heap size in the event of an out of memory exception:

Procedure

Step 1 In the Apache Tomcat 5.5 folder in the Start menu, click **Configure Tomcat**.

Step 2 Select the **Java** tab in the configuration dialog.

Step 3 Increase the 64 MB default value in the **Maximum memory pool** text box to increase the maximum heap size limit.

Before You Contact the Cisco Technical Assistance Center

If you have a problem that you cannot resolve through your own troubleshooting, you can contact the Cisco Technical Assistance Center (TAC) for help. Before contacting the TAC, please have the following information available:

- **CMB version**—This is available at `http://<cmb_server_name>:<port>/cmb/`. The version number is directly under the title.
- **Maintenance contract number**
- **Network topology details**—This includes all of the network devices involved in CMB communication and all of its media.
- **ACD type and version number**—The ACD driver differs depending on which CMB configuration you are using. Indicate whether you are using the basic or the ICM-integrated CMB. If you are using IPCC instead of a legacy ACD with the ICM-integrated CMB, indicate that as well.
- **Participating media**—The media are defined in the blender.properties file.

- **CMB configuration details**—Properties that are not shown in the CMB GUI are in the corresponding XML file located in \CiscoMB\servlet\properties\blender\ directory. See the View/Edit CMB Properties section for a list of the CMB XML files.
- **CMB log files**—These are available in the \CiscoMB\logs\ directory.
- **Problem description**—Include any error messages or alerts that occurred and what you tried to do to resolve them.

You can contact the Cisco TAC by telephone, email, or by opening a case on the Internet.

Telephone	(800) 553-2447 within the continental United States (408) 526-7209 outside the continental United States
Email	tac@cisco.com. Always include your maintenance contract number.
Internet	http://www.cisco.com/univercd/cc/td/doc/pcat/wwtacr.htm

GLOSSARY

A

ACD

Automatic Call Distributor. It is also called a switch. An ACD is a specialized phone system designed for handling incoming and outgoing calls.

ACD Medium

The ACD medium on the Media Blender handles CTI messages coming from an ACD.

Agent

An individual who receives and handles customer calls and web-based requests within a contact center.

Application Medium

The Application Medium communicates with the Unified WIM and accepts and shares session and agent-related events with the other Media Blender media.

B

Blended Collaboration

Blended collaboration sessions typically begin when a caller submits a web-based request by clicking a Callback button on a web page. The caller completes a callback form and Unified WIM retrieves caller information (name, phone number, skill group). Blended collaboration in the ICM integration is provided when the agent is assigned by ICM (when using IPCC) or by the ACD (when using a legacy ACD). When ICM software selects an agent for the task, the web collaboration interface appears on the agent desktop. At the same time, the agent telephone places an outbound call to the customer.

C

Callback Button

A button placed on a website that the caller uses to initiate a blended collaboration session.

Callback Page

A form sent to the caller to retrieve caller information, such as name, telephone number, and skill group.

Caller

An individual submitting a phone call or web-based request to a contact center.

Call Manager

Cisco CallManager (CCM) is a computer platform that provides traditional PBX telephony features and functions to packet telephony devices such as Cisco IP Phones and Voice over IP (VoIP) gateways. CallManager also supports supplementary and enhanced services such as hold, transfer, forward, conference, automatic route selection, speed dial, and last number redial.

Central Controller

The computer or computers running the ICM CallRouter and the ICM Database Manager. In addition to routing calls, the Central Controller maintains a database of data collected by the Peripheral Gateways (PGs) and data that the Central Controller has accumulated about the calls it has routed.

CTI

Computer Telephony Integration. A term for connecting a computer to a telephone switch. The computer issues telephone switch commands to move the calls around.

CTI Driver

Software designed to accommodate the CTI package and middleware used in a Media Blender configuration. The CTI driver supports the legacy ACDs when Media Blender is part of the ICM integration.

CTI strategy

Software that determines the call flow of the outbound call to the caller.

D

Driver

A module that controls data transferred to and received from peripheral devices.

E

Expert Agent Selection (EAS)

A mode for the Avaya (Lucent) Definity ECS ACD. In this mode, agents are automatically added to preassigned skill groups at login. Calls can be routed either to the agent's physical extension or to the agent's login ID. In non-EAS mode, agents must manually add themselves to hunt groups and calls can be routed only to physical extensions.

I

Intelligent Contact Management (ICM) software

The Cisco system that implements enterprise-wide call distribution across contact centers. ICM software provides Pre-Routing, Post-Routing, and performance monitoring capabilities.

Interactive Voice Response (IVR)

A telecommunications computer, also called a Voice Response Unit (VRU), responds to caller-entered touchtone digits. The IVR responds to caller-entered digits in much the same way that a conventional computer responds to keystrokes or a click of the mouse. The IVR uses a digitized voice to read menu selections to the caller. The caller then enters the touchtone digits that correspond to the desired menu selection. The caller-entered digits can invoke options as varied as looking up account balances, moving the call within or to another ACD, or playing a prerecorded announcement for the caller.

IPCC

Internet Protocol Contact Center. A virtual ACD that provides intelligent call routing, network-to-desktop CTI, IVR integration, call queuing, and consolidated reporting.

J

JRMP

Java Remote Message Protocol. The wire-level protocol to transport RMI calls and objects.

M

Media Blender Administrator

An individual responsible for installing, configuring, and administering Media Blender.

Media Routing Domain

The Media Routing Domain (MRD) is a collection of skill groups and services that are associated with a common communication medium. ICM software uses a MRD to route a task to an agent who is associated with a skill group and a particular medium. MRDs are assigned in ICM configuration and have unique IDs across the enterprise.

Media Routing Peripheral Gateway (MR-PG)

An ICM PG that is capable of routing media requests of different kinds; for example, email and web callback. An MR-PG supports multiple media routing clients by placing multiple, independent Peripheral Interface Managers (PIMs) on a PG platform.

Medium

An electronic form of session-based information. Media Blender functions as an event bus and shares events between participating media. In a typical installation, Media Blender shares events between a collaboration medium and an ACD medium.

P

PBX

Private Branch exchange. A small version of the phone company's larger central switching office.

Peripheral Gateway (PG)

The computer and process within the ICM system that communicates directly with the ACD, PBX, or IVR at the contact center. The Peripheral Gateway reads status information from the peripheral and sends it to the Central Controller. In a private network configuration, the Peripheral Gateway sends routing requests to the Central Controller and receives routing information in return.

Peripheral Interface Manager (PIM)

The Cisco proprietary interface between a peripheral and the Peripheral Gateway (PG).

Phantom Line

Phone lines set aside for providing callback to customers. Used with Phantom line CTI strategies, phantom lines wait in queue on behalf of the caller, ensuring the caller receives callback only when an agent is available.

Phantom Strategy

A CTI strategy that places a call in the ACD queue and waits for call assignment (agent selection). Once the agent is selected, the outbound call is placed to the customer.

PIM

Peripheral Interface Manager. The Cisco proprietary interface between a peripheral and the Peripheral Gateway (PG).

Predictive Strategy

A CTI strategy that places the call to the customer first and then places the caller in an inbound ACD queue.

R

RMI

Remote Method Invocation. A remote procedure mechanism for communicating between two Java programs within (potentially) separate Java Virtual Machines.

Routing logic

Logic set up on the ACD to ensure calls are routed to agents who possess appropriate skills.

Routing Script

A script executed by ICM software to find the destination for a call or web request. A routing script may examine information about several possible targets before choosing the best destination. You can schedule different scripts to execute for different types of calls and at different times and dates. Use the ICM Script Editor to create, modify, and schedule routing scripts.

S

Switch

An ACD or PBX.

Switch Administrator

An individual responsible for ACD administration. The switch administrator must work with the Media Blender Administrator to ensure proper communication between Media Blender and the ACD.

U

Unified WIM

Unified WIM is an application that provides contact centers with the ability to handle web requests. Unified WIM allows contact center agents to share information with customers over the web—including web pages, forms, and applications—while at the same time conducting a voice conversation or text chat using nothing more than a common web browser.

V

Voice over IP (VoIP) Gateway

Each IPCC solution includes a Cisco VoIP gateway, which provides a connection path between the PSTN and the Cisco AVVID IP telephony network. Its role is to convert analog and digital voice into IP packets.

W

Web Administrator

An individual responsible for creating and maintaining HTML pages and forms as they relate to Media Blender.

Web Callback

A feature of the Unified WIM that allows a customer to use a “callme” button on a company website. The resulting callback request is handled by the ICM software (for Media Blender in the ICM integration). Web callback, sometimes referred to as “callback only”, is for simple callbacks that do not involved blended web collaboration or blended text chat.

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