Cisco Media Blender
Switch Administration Guide

Cisco Media Blender, Version 5.0

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About This Guide

Welcome to the Cisco Media Blender Switch Administration Guide. This guide provides information to help you configure specific automatic call distributors (ACDs), which are also referred to as switches, to work with the Cisco Media Blender (CMB), Version 5.0, software.

Note that this book describes only the switches that are used with the basic Media Blender configuration for 5.0. If you are using a switch with Media Blender in the ICM integration, see the ACD Supplement for your specific ACD. The ACD Supplements are on the ICM documentation CD.

Audience

This book is written for switch administrators who need to configure one of the following switches to work with basic Media Blender:

- Aspect CallCenter
- Avaya (Lucent) Definity G3

Document Structure

This guide contains the following sections:

- Introduction—This section provides an overview of the basic Media Blender configuration and describes the phantom and predictive CTI strategies that must be configured on the ACDs.
- Drivers and Links—This section describes the Media Blender native drivers and the links from the ACDs to Media Blender.
- Configuring the Aspect CallCenter ACD—This section describes the tasks involved in configuring the Aspect CallCenter switch to work with Media Blender.
- Configuring the Avaya Definity G3 ACD—This section describes the tasks involved in configuring the Avaya Definity G3 switch to work with Media Blender.
- Sharing Information—This section explains information you need to share with the Collaboration Server and Media Blender administrators.

Related Documentation

You need the following Cisco documentation:

- *Cisco Media Blender Administration Guide*
- *Cisco Media Blender Installation Guide*
- *Cisco Collaboration Server Administration Guide*

You also need the product documents that are provided with the ACD that you plan to use.

Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

```
http://www.cisco.com
```

Translated documentation is available at the following URL:

```
http://www.cisco.com/public/countries_languages.shtml
```

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```
http://www.cisco.com/cgi-bin/order/order_root.pl
```

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```
http://www.cisco.com/go/subscription
```

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170 West Tasman Drive
San Jose, CA 95134-9883

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```
http://www.cisco.com/tac
```

To contact the TAC by e-mail, use the address `ccbu-csc@cisco.com`.

In North America, the TAC can be reached at 888-847-8162 or 978-458-4368. For other telephone numbers and TAC e-mail addresses worldwide, consult the following Web site:

```
http://www.cisco.com/public/support/tac/home.shtml
```

Introduction

Cisco Media Blender works with Cisco Collaboration Server to provide Web callback and blended collaboration. The following figure shows the basic Media Blender integration with the Collaboration Server and ACD components:
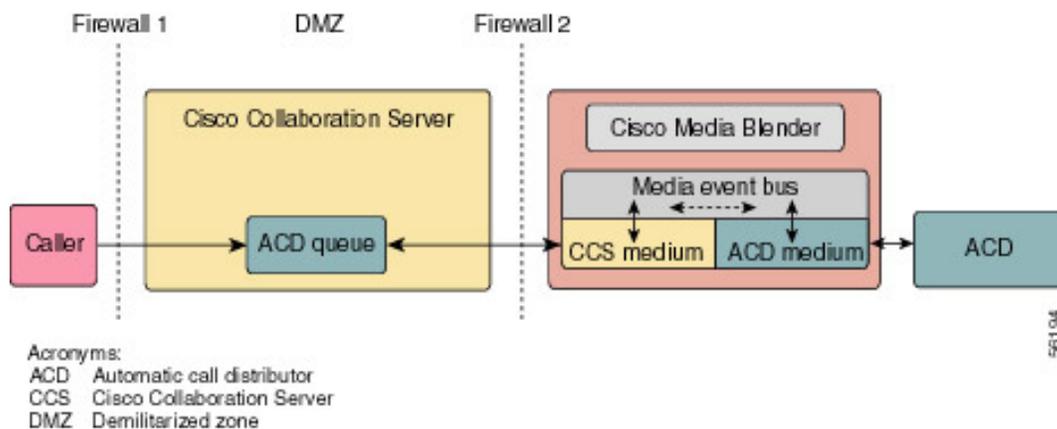
Media Blender functions as a media event bus with two participating media, one for the Collaboration Server and one for an ACD. The ACD medium on Media Blender is Java-based software designed to handle CTI events coming from an ACD. The same ACD medium is used for each telephony implementation, using the native drivers.

Before you configure any of the ACDs described in this guide, you should have a good understanding of ACD administration for your specific ACD. You should also understand the phantom and predictive call strategies. See the section Phantom and Predictive CTI Strategies for details.

While you are configuring the switches, you need to record specific values to share with the Collaboration Server Administrator and the Media Blender Administrator. See the section Sharing Information for details.

Phantom and Predictive CTI Strategies

Media Blender can use different outbound dialing strategies, or CTI strategies, to determine how the ACD places the outbound call to the caller. The Aspect CallCenter and the Avaya Definity G3 switches support both the phantom and the predictive CTI strategies.

Predictive CTI Strategy

The Predictive CTI call strategy places the call to the customer first and then places the caller in an inbound ACD queue. This strategy assumes that the ACD is capable of recognizing how an outgoing call is answered. The predictive strategy also assumes that the ACD has the ability to place an outgoing call into an inbound ACD queue.

Phantom Line CTI Strategies

Media Blender uses a pool of phantom lines, which are telephone lines on the ACD. For each request, Media Blender generates a call to the ACD from one of the phantom lines in the pool. The phantom line then waits in the ACD queue on behalf of the caller.

A phantom 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, Media Blender 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 Media Blender causes the agent's phone to dial back to the caller. For the Avaya Definity ACD, virtual or actual phones may be used. For the Aspect CallCenter ACD, phantom agents must be configured along with phone sets.

See the *Cisco Media Blender Administration Guide* for the following information:

- How to determine phantom line requirements
- How to define a pool of phantom lines

CTI Strategies for Specific ACDs

The following table lists the CTI strategies that can be used for each of the ACDs supported by the basic Media Blender configuration.

ACD	CTI Strategies
Aspect CallCenter	• PhantomWaitRelease • PhantomWaitNoRelease • PhantomNoCallRelease • PhantomNoCallNoRelease • PhantomNoCallNoHold • Predictive
Avaya Definity G3	• PhantomWaitRelease • PhantomWaitNoRelease • PhantomNoCallRelease • PhantomNoCallNoRelease • PhantomNoCallNoHold • Predictive

Understanding Drivers and Links

The Cisco Media Blender (CMB) native driver software is automatically installed when you install Media Blender. The drivers reside on Media Blender and control the interactions with specific switches. For each switch, a link must be established to Media Blender.

For example, if you are using the Aspect CallCenter ACD, you need to define the Data Interlink to the Aspect driver on Media Blender, and if you are using the Avaya Definity G3 ACD, you need to define the ASAI link to the ASAI driver on Media Blender.

The following table shows the links, drivers, and Media Blender property files for each ACD supported by the basic Media Blender configuration:

ACD	Link	Driver on CMB	CMB Property File
Aspect CallCenter	Data Interlink	Aspect driver	`ACD.aspect.properties`
Avaya Definity G3	CallVisor ASAI DLG link	ASAI driver	`ACD.asai.properties`

Aspect Driver

The Aspect CallCenter switch uses the Aspect driver on Media Blender. The Media Blender administrator configures the `ACD.aspect.properties` file for this ACD. The property file is located in the `\CiscoMB\servlet\Properties\Blender` directory.

The following figure shows the link between the Aspect CallCenter ACD and the Aspect driver on Media Blender:


```
Acronyms:
ACD   Automatic call Distributor
CCS   Cisco Collaboration Server
CMB   Cisco Media Blender
```
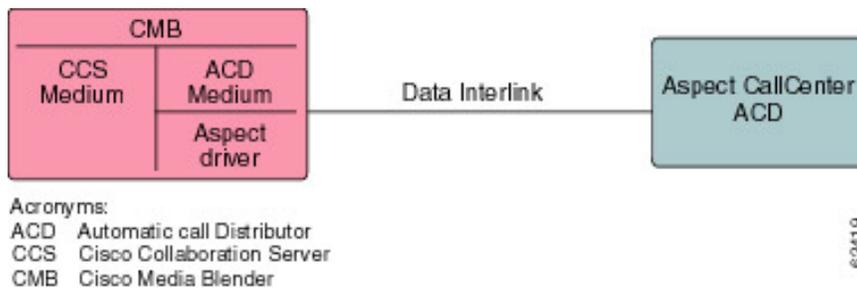
ASAI Driver

The Avaya (Lucent) Definity G3 switch uses the ASAI native driver on Media Blender. The Media Blender administrator configures the `ACD.asai.properties` file for this ACD. The file is located in the `\CiscoMB\servlet\Properties\Blender` directory.

The following figure shows the CallVisor ASAI Definity LAN Gateway (DLG) link between the Avaya Definity G3 ACD and the ASAI driver on Media Blender:

Acronyms:
ACD   Automatic call Distributor
ASAI   Adjunct Switch Application Interface
CCS   Cisco Collaboration Server
CMB   Cisco Media Blender

Configuring the Aspect CallCenter

To best understand the configuration of the Aspect CallCenter switch, you should begin with the Aspect documentation that was shipped with your switch. The information provided here is meant to supplement but not replace the Aspect documentation. We provide a limited amount of information to help you configure the switch to work with Media Blender.

The following tasks are described:

- Setting up the Data Interlink
- Updating the system hosts file
- Setting up classes of service
- Setting up agent groups
- Setting up agents
- Setting up phantom agents
- Setting up call routing

Setting up the Data Interlink

To set up the data link from the Aspect CallCenter to Media Blender, complete the following steps:

1. From a desktop running the Aspect Management Suite select **Start > Aspect Management Suite > Hardware Administrator**.
2. From the Hardware Administrator menu, select **Resources > Data Interlinks**.
   The Data Interlinks dialog box appears:
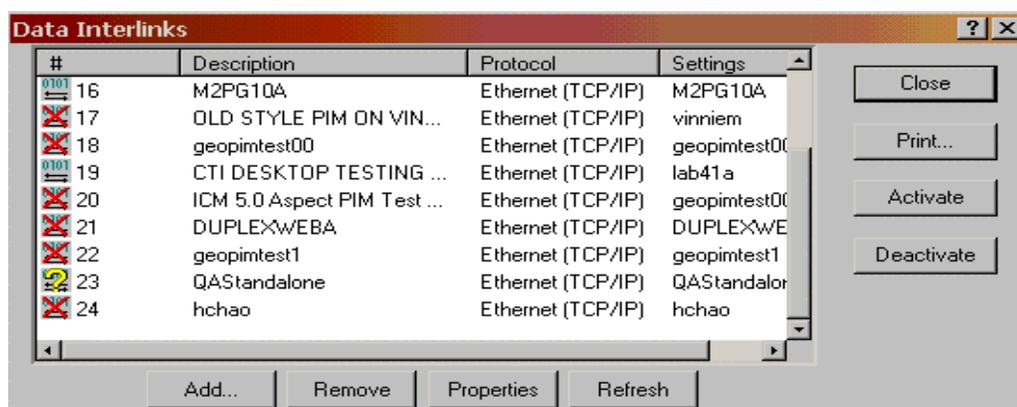
3. Click **Add**.
   The New Data Interlinks Wizard appears and guides you through the process of setting up the link.

4. On the first wizard screen do the following:
   - Select the radio button for TCP/IP (Ethernet).
   - Click **Next**.

5. On the next wizard screen:
   - Add a name for the Media Blender link such as "CMB1."
   - Select Version 4.
   - Accept the default of "none" for the Backup Link.
   - Click **Next**.

6. On this wizard screen, do the following:
   - Accept the default for Port "TCP/IP."
   - Enter "CallCenter" in the CallCenter System field.
   - Enter "CMB1" in the Data System field.
   - Click **Next**.

4. On this wizard screen, do the following:
   - For Message Length, select the Variable radio button.
   - Select the check box for Send disconnect notice and enter "Disconnect."
   - Select the check box for Send a transfer notice and enter "Transfer."
   - In the Field Separator field, enter a comma (,).
   - In the Character Set field, enter "ASCII."
   - Select the check box for Include Type Field in Message.
   - Click **Next**.

5. On the next wizard screen, accept the defaults and click **Next**.

6. On the final wizard screen, do the following:
   - Select the radio button for Automatically assign the next available number.
   - Click **Finish**.

To check your settings or to change them at some future time, click **Properties** on the Data Interlinks dialog box.

Updating the System hosts File

So that Media Blender can talk to the Aspect CallCenter ACD, you must also add the IP address for the Media Blender to the ACD system hosts file. The hosts file is located in the following directory:

```
<drive>:\Winnt\System32\drivers\etc
```

To add the IP address to the hosts file, complete the following steps:

1. Double-click the hosts file.
2. Using an ASCII text editor such as WordPad, add the IP address for Media Blender and the name you have chosen for the Media Blender machine to the bottom of the file, for example:

```
171.23.76.152      CMB1
```

3. Select **File > Save**.

Setting up Classes of Service

To support the various phantom and the predictive CTI strategies used by Media Blender, you must set up phantom and predictive classes of service. Note that the default class of service must be different for phantom agents, phantom lines, and predictive agents. You must also assign agents to the classes of service. See Setting up Agents.

To set up a phantom class of service, complete the following steps:

1. Click the Classes of Service icon on the Aspect Administrator desktop.
    The Classes of Service dialog box appears.
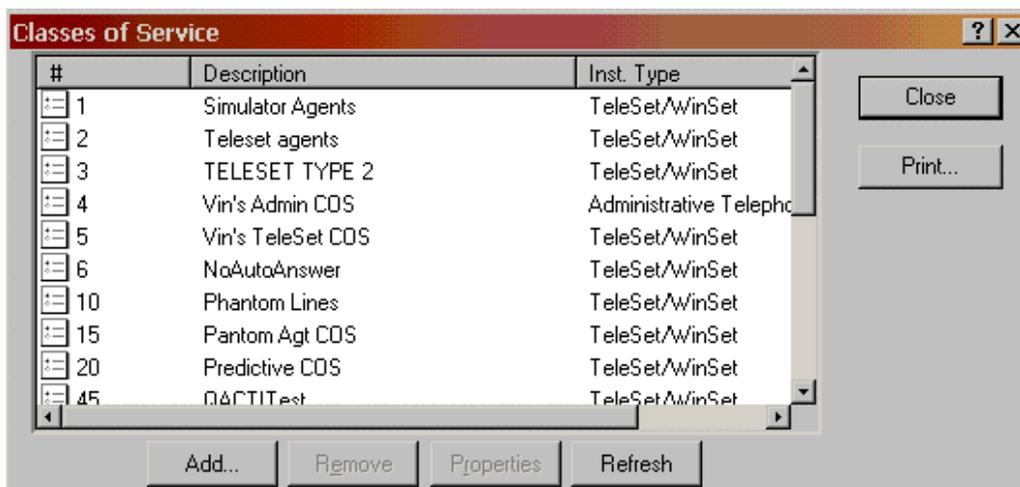
2. Click **Add**.
    The New Class of Service Wizard appears and guides you through the process of creating a class of service. On most of the wizard screens, you can accept the default values.
    Here are the exceptions:
    - On the first screen, add a description, such as "PhantomLine1."
    - Select the check box for Allow the agent to activate teleset one-way speaker or hands-free speakerphone.
    - Select "all calls" for incoming calls. You can also limit the types of calls according to the rules of your contact center.
    - Select "all the types of outgoing calls" unless you want to limit the types of calls.
    - On the last screen, select the radio button for Automatically assign the next available number.
    - Click **Finish**.

To check your settings or to change them at some future time, click **Properties** on the Classes of Service dialog box.

After adding the phantom classes of service, use the same procedure to create a predictive class of service.

Setting up Agent Groups

The agent groups you create can reflect a particular skill or an expertise that is shared by a number of agents. For example, you might create an agent group called "Spanish" for all agents who can speak Spanish. Another agent group might share a location and role, such as "Boston sales."

Note that you must assign a group for each phantom group. The default agent group must be different for phantom agents, phantom lines, and predictive agents.

To create an agent group, complete the following steps:

1. Click the Agent Group icon on the Aspect Administrator desktop.
   The Agent Groups dialog box appears:
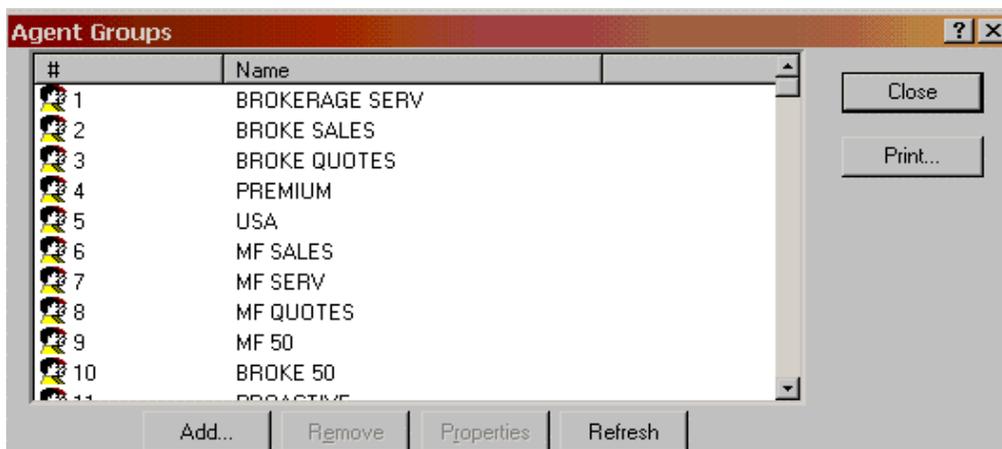
2. Click **Add**.
   The New Agent Group Wizard appears and guides you through the process of creating an agent group.

3. On the first wizard screen do the following:
   - Accept the default (1) for the number of resources to create.
   - Click **Next**.

4. On the next wizard screen do the following:
   - Add a description for the agent group, such as "Spanish."
   - Select the radio button for Route Calls to Agent available the longest.
   - Click **Next**.

5. On the next wizard screen do the following:
   - For CCT is for Outgoing Calls, select the types of calls required according to the rules of your contact center.
   - For Override the system thresholds in the following items, select the items required for your contact center. You can choose colors here to indicate agent conditions on your desktop.
   - Click **Next**.

6. On the final wizard screen do the following:
   - Select the check box for Automatically assign the next available number.
   - Click **Finish**.

To check your settings or to change them at some future time, click **Properties** on the Agent Groups dialog box.

Setting up Agents

When you set up agents, you assign them to an agent group and a class of service. Remember to record the agent's logical ID and password for the CCS administrator.

To set up an agent on the Aspect CallCenter, complete the following steps:

1. Select **Start > Aspect Management Suite > Agent Administrator.**
2. From the Agent Administrator window click the New User icon:

   The New Aspect CallCenter System User Wizard appears and guides you through the process of setting up a new agent.
3. On the first wizard screen do the following:
   - Select the number of resources to create.
   - Click **Next**.
4. On the second wizard screen do the following:
   - Add the last name, first name, and preferred name (such as a nickname) in the appropriate fields.
   - For reporting purposes, you can also add something in the User ID field.
   - Click **Next**.
5. On the third wizard screen do the following:
   - Select Agent from the Type of User drop-down list.
   - Under User Status, select the Active radio button.
   - Click **Next**.
6. On the fourth wizard screen do the following:
   - Put the agent under the appropriate Supervisor Team and/or Agent Group. "Spanish" might be a type of Agent Group.
   - For Class of Service, select the appropriate choice, such as "Teleset Agent." The class of service determines the types of calls the agent is allowed to make.
   - Click **Next**.
7. On the final wizard screen do the following:
   - Select the Automatically assign the next available number radio button. (Note that this is the agent extension number on the Aspect CallCenter and the logical ID on Media Blender.)
   - Click **Finish**.

The new agent's name should appear in the list of agents on the Agent Administrator window.

Note: In addition to setting up real agents on the Aspect CallCenter, you must set up phantom agents. See the section Setting up Phantom Agents.

Setting Up Phantom Agents

Because the Aspect CallCenter requires that agents be logged in before the ACD phone can be used to place calls, phantom agents must be set aside so that Media Blender can log in and use them with phantom phones. These phantom agents and their respective phantom phones are configured in the Media Blender `phantomagents.properties` file. Their passwords are set up in the Media Blender `phantompasswords.properties` file.

A phantom agent is simply a queuing agent on the Aspect CallCenter. When Media Blender starts up, it uses the phantom agent information. When a call comes in, Media Blender picks up a phantom agent extension number and calls into the queue (CCT). The Aspect CallCenter then finds a real available agent and routes the call to that agent.

You must configure a phantom agent for every phantom line you plan to use. As with real agents, when you set up phantom agents, you assign them to an agent group and a class of service. The default class of service needs to be different than the phantom line class of service.

To set up a phantom agent on the Aspect CallCenter, complete the same steps you followed for setting up regular agents. See the section Setting up Agents for details.

Remember to record the phantom agent name, phantom agent ID, phantom terminal ID, and phantom password for the Media Blender administrator.

Setting up Call Routing

The Aspect CallCenter ACD uses a Call Control Table (CCT) to route calls to appropriate agents. A CCT is really a script the ACD follows to ensure the right call gets to the right agent. CCTs can also direct outgoing calls, ensuring that the correct trunk group is used for each call.

Note: The property `autoanswer` in the `ACD.aspect.properties` file must be set to `true` if the `eventbridge` property is unset or set to `false` in that file, and if you are using a phantom CTI strategy such as PhantomWaitRelease or PhantomWaitNoRelease.

The ACD routes calls based on the CTI strategy used. The Aspect CallCenter supports both the phantom and the predictive CTI strategies. See the Aspect documentation for instructions on how to create a CCT.

Phantom CCT Example

The following is an example of a phantom CCT:
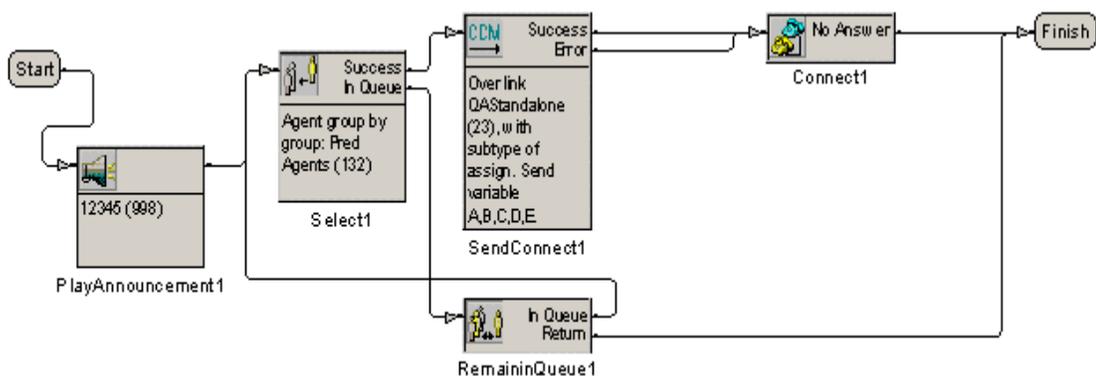
Note the variables A, B, C, D, and E in the above example. The Media Blender administrator configures the `ACD.aspect.properties` file to match the value in each data variable with an existing session.

Predictive CCT Example

The following is an example of a predictive CCT:
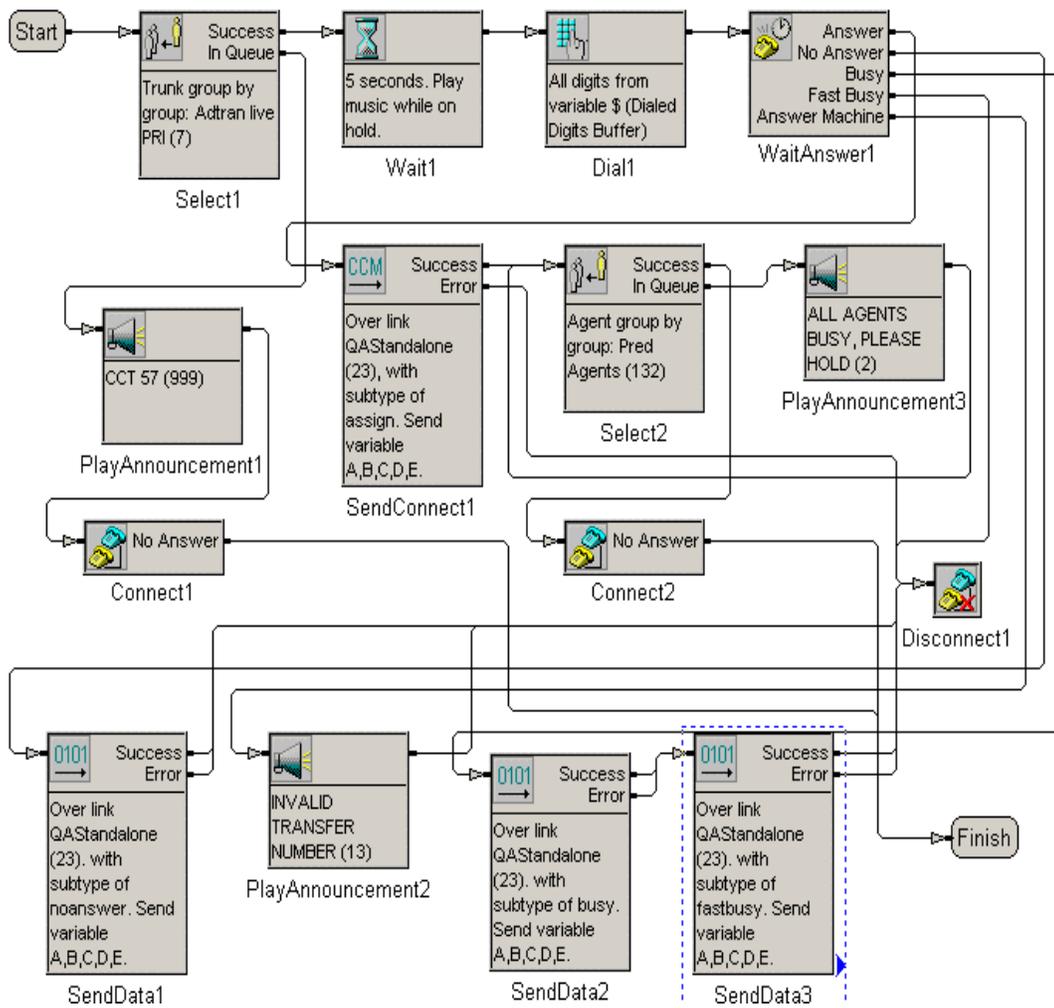
Configuring the Avaya Definity G3

To best understand the configuration of the Avaya (Lucent) Definity G3 switch, you should begin with the Avaya documentation that was shipped with your switch. The information provided here is meant to supplement but not replace the Avaya documentation. We provide a limited amount of information to help you configure the switch to work with Media Blender.

The following tasks are described:

- Setting up the ASAI link
- Setting up Agents in a Hunt group
- Creating a Station Record for Phantom Lines
- Setting up Call Routing

Setting up the ASAI Link

The Avaya Definity G3 switch communicates with the Ethernet network using the CallVisor ASAI Definity LAN Gateway (DLG) over a Multi-Application Platform Device (MAPD). The MAPD is a two-slot Definity board. Your Avaya representative is responsible for installing and configuring the DLG. This section describes how to establish the CallVisor ASAI DLG link on the board to Media Blender.

To establish the link complete the following steps:

1. Log on to the DLG system.
2. From the Main Menu, select **Port Administration > DLG Administration**.
   The DLG Administration screen appears:

```
                         DLG Administration

     Port    Client Name or IP Address    Client Link    Client Status
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____
     __      _____         __             _____




     This line is used to provide abbreviated help on the currently selected field.

     CANCEL   REFRESH   ADD   DELETE        HELP          UPDATE
```

3. Complete the screen fields as follows:
   - Port—Enter the IP port number for the CTI middleware server. Valid values are 1-8. You can use any unused port.
   - Client Name or IP Address—Enter the IP address of the CMB machine.
   - Client Link—Enter the link number to identify the link to the CTI middleware server. Links can be numbered from 1 to 8.
   - Client Status—Display only. This field displays the state of the client.
4. Press **F3** (for ADD).

Note: Remember to create a station called "ASAI extension."

Setting Up Agents in a Hunt Group

On the Avaya Definity switch, a hunt group is a group of extensions to which similar calls should be routed. For example, a hunt group might include all agents who have a particular skill, such as the ability to speak Spanish, or all agents who cover a geographical territory, such as Boston sales. A hunt group is sometimes referred to as a skill group.

To ensure proper call routing to agents who have access to the Cisco Collaboration Server (CCS), you must establish a hunt group for these agents. You can also use existing hunt groups as long as you establish vectors to ensure that calls are routed to specific agents. If you use existing hunt groups, be sure that there is no other CTI application monitoring that group. To see a list of existing hunt groups, enter the command **list hunt-group**.

Some ACD systems provide a feature called Expert Agent Selection (EAS). For a variety of reasons, you might want certain agents to handle specific types of calls. For example, you might want only your most experienced agents to handle your most important customers. You might have multilingual agents who can serve callers in a variety of languages. EAS allows you to classify agents according to their specific skills and then to rank them by ability or experience within each skill. The Avaya Definity ECS uses these classifications to match each call with the best available agent. Following are the procedures:

- Defining a Hunt Group for Agents on Systems without EAS
- Defining a Hunt Group for Agents on Systems with EAS

Defining a Hunt Group for Agents on Systems without EAS

To set up agents on systems without EAS, you must define a hunt group by completing the following steps:

1. Enter the command **add hunt-group next** and press **Return**. (You can also enter **add hunt-group *xxx***, where *xxx* is the hunt group number.)
   The first Hunt Group screen appears:

```
                                                          Page 1 of X
                              HUNT GROUP

          Group Number: ___                             ACD? _
            Group Name: _____      Queue? _
       Group Extension: ____                          Vector? _
            Group Type: _____            Coverage Path: ____
                    TN: ___        Night Service Destination: _____
                   COR: _              MM Early Answer? _
         Security Code: ____
       ISDN Caller Disp: _____

          Queue Length: ___
Calls Warning Threshold: ___     Port: x_____   Extension: ____
 Time Warning Threshold: ___     Port: x_____   Extension: ____
```

2. Complete screens 1 through 3 of the hunt group record as described in the Avaya documentation.

3. Press **Next Page**.
   The fourth Hunt Group form appears:

```
change hunt-group 1                                           Page   4 of  39
                                  HUNT GROUP
           Group Number: 1      Group Extension: 3001        Group Type: ucd
      Member Range Allowed: 1 - 999        Administered Members (min/max): 1  /9
                                             Total Administered Members: 9

GROUP MEMBER ASSIGNMENTS
       Ext     Name                              Ext      Name
     1:                                       14: 1023   station 1023
     2:                                       15:
     3:                                       16:
     4:                                       17:
     5:                                       18:
     6:                                       19:
     7:                                       20:
     8:                                       21:
     9:                                       22:
    10:                                       23:
    11:                                       24:
    12:                                       25:
    13:                                       26:
                                              27:

    At End of Member List
```
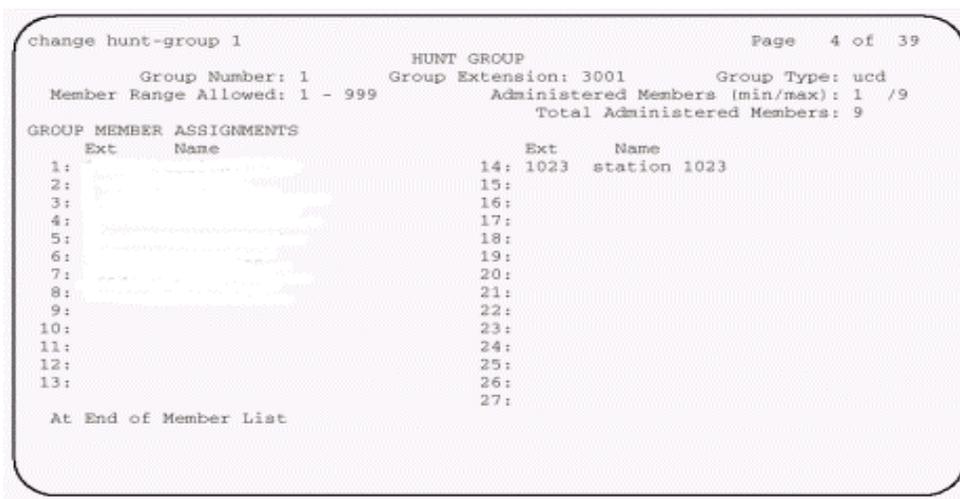
4. Enter the extensions of all agents you want to include in the hunt group.
5. Press **Enter**.

The hunt group is successfully created.

Defining a Hunt Group for Agents on Systems with EAS

Setting up agents on systems with EAS is a two-step process. First you set up a hunt group (skill group) for CCS agents, and then you modify the agent login ID for all agents who use CCS.

Setting up the Hunt Group

Complete the following steps to set up the hunt group:
1. Enter the command: **add hunt-group next** and press **Return**. (You can also type **add hunt-group** *xxx*, where *xxx* is the hunt group number.)
   The first Hunt Group screen appears.

```
                                                           Page 1 of X
                                  HUNT GROUP

            Group Number: ____                              ACD? _
              Group Name: _____        Queue? _
         Group Extension: ____                            Vector? _
              Group Type: _____              Coverage Path: ____
                     TN: ___        Night Service Destination: _____
                    COR: _                     MM Early Answer? _
           Security Code: ____
        ISDN Caller Disp: _____

            Queue Length: ___
Calls Warning Threshold: ___    Port: x____   Extension: ____
 Time Warning Threshold: ___    Port: x____   Extension: ____
```
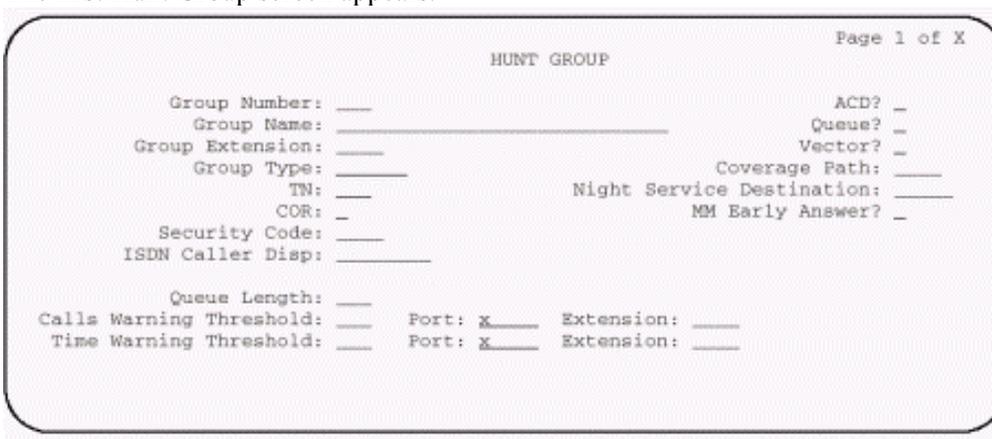
2. Complete screens 1 through 3 of the hunt group as described in the Avaya documentation.
3. Press **Enter**.
The hunt group has been successfully added.

Modifying the Agent Login ID

For each agent who uses CCS, you must add the CCS hunt group to the Agent login ID form. Complete the following steps to modify the Agent login ID.

1. Enter the command **change agent-loginID** *<agent login ID number>*
   The Agent Login ID screen appears:

```
add agent-loginID 9011                                        Page  1 of  1
                              AGENT LOGINID

               Login ID: 9011_                          AAS? _
                   Name: _____        AUDIX? _
                     TN: 1__                      LWC Reception: msa-spe
                    COR: 1              AUDIX Name for Messaging: _____
          Coverage Path: ____   Messaging Server Name for Messaging: _____
          Security Code: ____            LoginID for ISDN Display? n
      Direct Agent Skill: ___                         Password: _____
 Call Handling Preference: skill-level    Password (enter again): _____
       Service Objective? _                      Auto Answer: _____

     SN  RL SL  PA        SN  RL SL  PA        SN  RL SL  PA        SN  RL SL  PA
 1: __  _  __  ___    6: __  _  __  ___   11: __  _  __  ___   16: __  _  __  ___
 2: __  _  __  ___    7: __  _  __  ___   12: __  _  __  ___   17: __  _  __  ___
 3: __  _  __  ___    8: __  _  __  ___   13: __  _  __  ___   18: __  _  __  ___
 4: __  _  __  ___    9: __  _  __  ___   14: __  _  __  ___   19: __  _  __  ___
 5. __  _  __  ___   10: __  _  __  ___   15: __  _  __  ___   20: __  _  __  ___

    WARNING:  Agent must log in again before skill changes take effect
```

2. If this is a new agent, type the hunt group number that indicates CCS agents in the Direct Agent Skill field. If this is an existing agent, add the hunt group that indicates CCS agents in the SN (Skill Number) field in the table at the bottom of the screen.

3. Complete the remaining fields as described in the Avaya documentation.

Creating a Station Record for Phantom Lines

If your site uses any of the phantom line CTI strategies to handle call flows, you need to set up a pool of phantom lines and create a station record for each phantom line. For information on how to create a pool of phantom lines and determine your phantom line requirements, see the *Cisco Media Blender Administration Guide*.

Phantom lines are phone lines set aside for use by Media Blender to make phone calls. The phone lines you use do not need to have actual phones; you must configure them as you would an agent in your contact center. If you have the Avaya Definity G3 switch, version 6.3 or higher, you can set up phantom lines without hardware using the Administration Without Hardware (AWOH) feature. Earlier versions required actual phones for your phantom lines.

To create a station record for a phantom line, complete the following steps:

1. Enter the command **add station next**. You can also enter **add station *xxx***, where *xxx* is the actual station number you want to assign to the phantom line.
   The first station screen appears:

```
                              STATION

Extension: 2345                   Lock Messages? _           BCC: _
     Type: 8411D                  Security Code: _____     TN: 1
     Port: _____         Coverage Path 1: ____      COR: 1
     Name: _____ Coverage Path 2: ____      COS: 1


STATION OPTIONS
          Data Option: none           Personalized Ringing Pattern: 1
         Speakerphone: 2-way                    Message Lamp Ext: 2345
     Display Language: english               Mute Button Enabled? y
           PassageWay? n

                                            MM Complex Data Ext: ____
```

2. Enter "x" in the Port field. This configures the phantom line without hardware.

3. Complete all station screens to configure each phantom line. See the Avaya documentation for information on completing these screens.

Setting up Call Routing

After you have set up your CCS agents and the phantom lines, you need to ensure that the Avaya Definity switch routes calls to them correctly. You must:

- Write a Vector to route calls
- Create a Vector Directory Number (VDN) to access the vector

Write a Vector to Route Calls

A vector is a set of instructions the switch follows to ensure the right call gets to the right agent. Whether you use predictive or phantom CTI strategies, you must write a vector that routes appropriate incoming calls to a CCS agent hunt group. You must write a vector for each group to which you want to route calls, and you need the hunt group number established for CCS agents when setting up a vector to route calls to those agents.

To create a vector, complete the following steps:

1. Enter the command **change vector *xx***, (where *xx* is the vector number) and press **Return**. The Call Vector form appears:

```
                                                            Page 1 of 3
                                  CALL VECTOR
      Number:                  Name: _____    Multimedia? n    Lock? n


       Basic? y    EAS? n    G3V4 Enhanced? y   ANI/II-Digits? y   ASAI Routing? n
     Prompting? y  LAI? n   G3V4 Adv Route? y          CINFO? y              BSR? n

     01 _____
     02 _____
     03 _____
     04 _____
     05 _____
     06 _____
     07 _____
     08 _____
     09 _____
     10 _____
     11 _____
```

2. Complete the Call Vector screens 1 through 3. Instructions for completing these screens are provided in the Avaya documentation.

If you are using both predictive and phantom CTI strategies, create a separate vector for each strategy. Note that when creating vectors for phantom lines, you should avoid using prompts or announcements. The caller is not actually on the call when the phantom line calls the vector.

Example of a Vector for a Phantom Call

Following is an example of a phantom call vector. Note that no announcements are played. If no agents are available, the vector disconnects the phone call. Media Blender then serves an error page informing the caller that no agents are available.

```
                              CALL VECTOR

     Number: 2                   Name Service              Lock? n


       Basic? y     EAS? y          G3V4 Enhanced? n    ANI/II-Digits? n   ASAI Routing? y
     Prompting? y   LAI? y          G3V4 Adv Route? n           CINFO? n            BSR? r

     01 goto          step   3        if staffed-agents   in skill 6        < 1
     02 queue-to      skill 6         pri 1
     03 goto          step   6        if staffed-agents   in skill 7        < 1
     04 queue-to      skill 7         pri 1
     05 wait-time     999 secs hearing silence
     06 disconnect
```

Example of a Vector for a Predictive Call

Following is an example of a predictive call vector. Note that this vector plays an announcement if no agents are available.

```
                              CALL VECTOR

     Number: 2                   Name Service              Lock? n


       Basic? y     EAS? y          G3V4 Enhanced? n    ANI/II-Digits? n   ASAI Routing? y
     Prompting? y   LAI? y          G3V4 Adv Route? n           CINFO? n            BSR? r

     01 goto          step   3        if staffed-agents   in skill 6        < 1
     02 queue-to      skill 6         pri 1
     03 goto          step   7        if staffed-agents   in skill 7        < 1
     04 queue-to      skill 7         pri 1
     05 announcement  24282
     06 wait-time     999 secs hearing 49763 then music
     07 disconnect    announcement 49764
```

Create a Vector Directory Number

After setting up a vector for CCS calls, you must set up VDNs to direct incoming calls to that vector. You can create several VDNs that refer to the same vector, ensuring that calls from a variety of sources can be routed to the same skill group.

To create a VDN, complete the following steps:

1. Enter the command **add VDN** *xxxx* (where *xxxx* indicates the VDN).
   The Vector Directory Number screen appears:
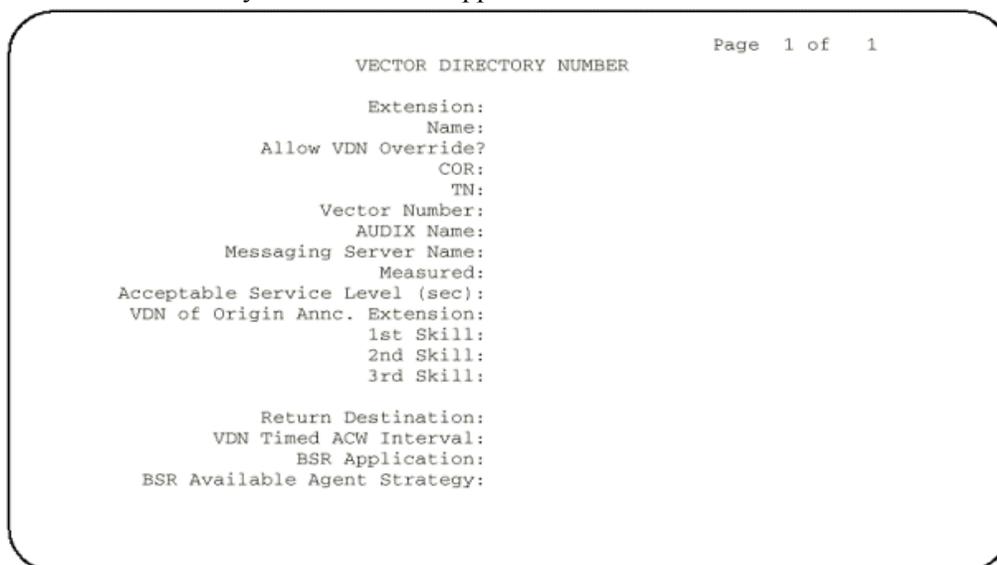
```
                                              Page  1 of   1
                      VECTOR DIRECTORY NUMBER

                    Extension:
                         Name:
             Allow VDN Override?
                          COR:
                           TN:
                Vector Number:
                   AUDIX Name:
         Messaging Server Name:
                     Measured:
     Acceptable Service Level (sec):
      VDN of Origin Annc. Extension:
                     1st Skill:
                     2nd Skill:
                     3rd Skill:

               Return Destination:
          VDN Timed ACW Interval:
                 BSR Application:
      BSR Available Agent Strategy:
```

2. Complete this form according to the instructions in the Avaya documentation. Make sure you enter the number of the vectors set up for CCS calls in the Vector Number field.

Identifying Call Classes

You can set up a VDN-of-origin announcement to let the agent know the call class if you are using multiple call classes. For instance, you can create an announcement for chat calls so that the agent knows to start a chat session. You can set up multiple VDNs to the same vector—each identifying an individual call class.

Reporting

If you choose to use an existing vector, you might want to create a separate VDN for CCS calls. This enables you to create reports based on those calls.

Using VDNs for Skills-based Routing

Your Media Blender administrator creates and maintains a file (`skills.properties`) that enables Media Blender to route calls to appropriate VDNs set up on the Avaya Definity switch. The Media Blender administrator maps VDNs to CCS routing codes hidden on the callback page. Keep a record of all the VDNs and give them to the Media Blender administrator.

Sharing Information

To ensure proper call flow, you must record and then share information with the Cisco Collaboration Server Administrator and the Cisco Media Blender Administrator. The Collaboration Server administrator needs some switch configuration information from you in order to set up agents on Collaboration Server. The Media Blender administrator needs certain values for the Media Blender property files.

Collaboration Server Administrator

For the basic Media Blender configuration, agents must be set up in two places. As the switch administrator, you set up agents on the ACD, and the Cisco Collaboration Server administrator sets up agents on the Collaboration Administration desktop using the **Agents : Create** node. The Collaboration Server administrator must enter the Voice agent ID when setting up an agent. This Voice Agent ID must be the same as the logical ID (agent ID) used on the ACD.

If agents need to be able to log in to the ACD and Collaboration Server at the same, time, blended login capability must be configured on Collaboration Server. How the Collaboration Server administrator sets up blended login depends on whether the agent will frequently change phones. The Collaboration Server administrator might also need the terminal ID (the identifier of the phone on the ACD system) and the ACD password for each agent.

See the *Cisco Collaboration Server Administration Guide* for details about setting up agents on Collaboration Server.

Media Blender Administrator

The Media Blender administrator is responsible for creating a phantom pool file, `phantoms.properties,` which lists the phantom physical ID on the ACD or the agent's permanent extension with the phantom line type (D). Note that "D" is the only phantom line type because Media Blender only supports digital line types. To set up phantom agents, the administrator must also configure two other files—the `phantomagents.properties` file, which maps a phantom agent's logical ID to a specific physical phone ID, and `phantompasswords.properties`, which maps a phantom agent's logical ID to a specific phantom password. See the *Cisco Media Blender Administration Guide* for details about the property files.

For the Aspect CallCenter ACD, the administrator needs the value you used for the phantom logical ID and the phantom terminal ID. Also, the administrator needs the password for each phantom agent for the file. The Media Blender Administrator must configure the `ACD.aspect.properties` file for the Aspect CallCenter ACD. When you are setting up the Data Interlink, make note of the values for the link ID, the socket port number, the delimiter, and the header or host name.

For the Avaya Definity G3 ACD, the administrator needs the station IDs for the phantom phones, as well as the link, host name, and hunt group extension number to configure the `ACD.asai.properties` file. The Media Blender Administrator also configures the `skills.properties` file, which maps routing addresses to ACD routing logic. For example, for the Aspect CallCenter ACD, the administrator needs the call control table (CCT) number. For the Avaya Definity G3 ACD, the administrator needs the vector directory number (VDN) or the hunt group extension number.

Recording Aspect CallCenter Information

The following tables describe the information you need to record when configuring the Aspect CallCenter switch. Please share the information with the Collaboration Server and Media Blender administrators.

For the Collaboration Server Administrator

Collect the information in the following table for each agent you configure on the switch and share this information with the Collaboration Server Administrator:

Agent Name	Logical ID	Password	Terminal ID

For the Media Blender Administrator

The Media Blender Administrator needs three types of information:

- Phantom line
- Data Interlink
- Call Control Table

Phantom Line Information

Because the Aspect CallCenter requires a logged in agent ID before it will place calls, you need to assign a logical ID (agent permanent extension) to each phantom line as you would to an agent. The Media Blender administrator needs information for three Media Blender property files: `phantom.properties`, `phantomagents.properties`, and `phantompasswords.properties`. Collect the information in the following table and share this information with the Media Blender Administrator:

Phantom Agent Name	Phantom Agent ID	Phantom Terminal ID	Phantom Password

Data Interlink Information

The Media Blender administrator needs the following information for the `ACD.aspect.properties` file. Collect the information in the following table and share this information with the Media Blender administrator:

Link ID	Socket port number	header (host name)	Delimiter (separator)

Call Control Table Information

The Media Blender administrator needs information from you in order to configure the `skills.properties` file and set up skills-based routing. Collect the information in the following table and share this information with the Media Blender administrator:

CCT Number	Description

Recording Avaya Definity Information

The following tables describe the information you need to record when configuring the Avaya Definity switch. Please share the information with the Collaboration Server and Media Blender administrators.

For the Collaboration Server Administrator

Collect the information in the following table for each agent you configure on the switch and share this information with the Collaboration Server Administrator:

Agent Name	Logical ID	Password	Station ID

For the Media Blender Administrator

The Media Blender Administrator needs four types of information:

- Phantom phone
- ASAI link
- Vector Directory Number
- Hunt Group Extension

Phantom Phone Information

The Media Blender administrator needs the Station IDs in order to configure the `phantom.properties` file and set up phantom phones. Record the information in the following table and share this information with the Media Blender Administrator:

Station ID

ASAI Link Information

The Media Blender administrator needs the following information for the `ACD.asai.properties` file. Note that the link is the port number in use on the MAPD board; the host name is the IP address or the network name of the MAPD board. Collect the information in the following table and share this information with the Media Blender administrator:

Link	host name

Vector Directory Number Information

The Media Blender administrator needs the Vector Directory Numbers (VDNs) from you in order to configure the `skills.properties` file and set up skills-based routing. Collect the information in the following table and share this information with the Media Blender administrator:

Vector Directory Number	Description

Hunt Group Extension Number Information

The Media Blender administrator needs the Hunt Group extension numbers for the `monitorskills` and `monitorqueues` properties in the `ACD.asai.properties` file. Collect the information in the following table and share this information with the Media Blender administrator:

Hunt Group Extension Number	Description

Glossary

ACD

Automatic Call Distributor. 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 Cisco Media Blender handles CTI messages coming from an ACD.

agent

An individual who receives and handles customer calls and Web-based requests within a call center.

ASAI

Adjunct/Switch Application Interface. A software message set or interface protocol on the Definity® G3 for PBX to file server CTI applications. ASAI supports activities such as event notification and call control.

AWOH

An Avaya Definity feature that allows administration of ports without associated terminals or other hardware.

call control table (CCT)

A CCT is a script the Aspect CallCenter ACD follows to ensure the right call gets to the right agent. A CCT can also direct outgoing calls, ensuring that the correct trunk group is used for each call.

Collaboration medium

The Collaboration medium communicates with the Cisco Collaboration Server (CCS) and accepts and shares session and agent-related events with the other CMB media.

Collaboration Server

The Cisco Collaboration Server (CCS) is an application that provides contact centers with the ability to handle Web requests. CCS 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.

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 strategy

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

driver

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

Expert Agent Selection (EAS)
A mode for the Avaya (Lucent) Definity ECS ACD. In this mode, agents are automatically added to pre-assigned 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.

hunt group
A hunt group is typically a designated group of individuals in a company or department that handle the same types of incoming phone calls. Also called a skill group.

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

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.

phantom agent
A phantom agent is a queuing agent on the Aspect CallCenter ACD.

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.

predictive strategy
A CTI strategy that places the call to the customer first and then places the caller in an inbound ACD queue. This strategy requires a predictive dialer. Predictive dialing is an automated outbound dialing method in which a computer estimates the ratio of outbound calls that will be answered, dials more numbers than there are available agents to handle the call, then sends calls that are answered to available agents. Saves agents time dialing and waiting for calls that might be received by busy or unanswered telephones or by answering machines or wrong numbers.

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

switch
An Automatic Call Distributor (ACD) or Public Branch Exchange (PBX).

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

vector

A customized program in the switch for processing incoming calls.

Vector Directory Number (VDN)

An extension number used in ACD software to connect calls to a vector for processing. The VDN by itself may be dialed to access the vector from any extension connected to the switch. (See also vector.)

Web administrator

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

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