Administering Avaya Aura™ Call Center Features

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Agent LoginID screen

Use this screen to administer agent login IDs for the Expert Agent Selection (EAS) feature, which is part of Avaya Call Center Software: Elite.

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List Agent-LoginID field descriptions on page 15

Agent LoginID administration commands

Use the following commands to administer the Agent LoginID screen.

Action	Object	[1] Qualifier[1]
add	agent-loginid	xxxxx (extension) or next
change	agent-loginid	xxxxx (extension)
display	agent-loginid	xxxxx (extension) [print or schedule]
duplicate	agent-loginid	xxxxx (extension) start xxxxx (starting extension number) count x
remove	agent-loginid	xxxxx (extension)
list	agent-loginid	[staffed |unstaffed [name x][aas y/n]]

Agent LoginID field descriptions

Make assignments as required for the following fields on the screen:

[1] Brackets [ ] indicate the qualifier is optional. Enter the text depicted inside single quotes (' ') exactly as shown or enter an abbreviated screen of the word.

Field	Description
AAS?	Enter y if this extension is used as a port for an Auto Available Split/Skill(AAS) and the default is n for no. **Important:** Entering y in the AAS field clears the password and requires execution of the **remove agent-loginid** command. To set AAS to n, remove this agent and add it again. This option is intended for communication server adjunct equipment ports only and not human agents.
ACW Agent Considered Idle	Enter y to have agents who are in After Call Work (ACW) included in the Most-Idle Agent queue. This means that ACW is counted as idle time. Enter n to exclude ACW agents from the queue. Valid entries are system (default), n, and y for yes.
AUDIX?	Enter y if this extension is used as a port for AUDIX (Audio Information Exchange). Default is n. **Note:** The AAS and AUDIX fields cannot both be y.
AUDIX Name for Messaging	Do one of the following actions: • Enter the name of the messaging system used for LWC (Leave Word Calling) Reception. • Enter the name of the messaging system that provides coverage for this Agent LoginID • Leave blank (default) When using EAS, the agent's setting applies to the station where the agent logs in. If the setting for that station is different, the agent's setting overrides the station's setting. The following entries are valid: • **All** — Immediately sends all ACD and all non ACD calls to the agent. The station is also given a single ring while a non-ACD call is connected. You can use the ringer-off button to prevent the ring when the feature-related system parameter, **Allow Ringer-off with Auto-Answer** is set to y. • **acd** — Only ACD split /skill calls and direct agent calls go to. If this field is acd then all, non ACD calls terminated to the agent ring audibly. • **none** — All calls terminated to this agent receive an audible ringing treatment. This is the default. • **station** — for the agent is controlled by the field on the Station screen.

Field	Description
Aux Work Reason Code Type	Determines how agents enter reason codes when entering AUX (Auxiliary) work. • **system** — Settings assigned on the Feature Related System Parameters screen apply. This is the default. • **none** — You do not want an agent to enter a reason code when entering AUX work. • **requested** — You want a staffed agent to enter a reason code when entering AUX mode but do not want to force the agent to do so. To enter this value, the reason codes and EAS on the System-Parameters Customer-Options screen must be set to `y`. • **forced** — You always want to force a staffed agent to enter a reason code when entering AUX mode. To enter this value, the **Reason Codes** and **EAS** on the **System-Parameters Customer-Options** screen must be set to `y`.
Call Handling Preference	Options are skill-level (default), greatest-need, and percent-allocation. When calls are in queue and an agent becomes available, skill-level delivers the oldest, highest priority call waiting for the agent's highest level skill. Greatest-need delivers the oldest, highest priority call waiting for any of the agent's assigned (administered) skills. Percent allocation delivers a call from the skill that will otherwise deviate most from its administered allocation. Percent-allocation is available only whenAvaya Business Advocate software is active. For more information, see *Avaya Business Advocate User Guide*.
COR	Enter the Class of Restriction (COR) for the agent. Valid entries are 0-995. Default is `1`.
Coverage Path	Enter the number of the Coverage Path used by calls to the LoginID. Valid entries are a path number between 1-999, time of day table t1-t999 or blank (default). This is used when the agent is logged out (not staffed), busy, or does not answer.
Direct Agent Calls First (not shown)	This field replaces the Service Objective field when percent-allocation is entered in the Call Handling Preference field. Enter y if you want direct agent calls to override the percent-allocation call selection method and be delivered before other ACD calls. Enter n if you want direct agent calls to be treated like other ACD calls. For more information, see *Avaya Business Advocate User Guide*.
Direct Agent Skill	Enter the number of the skill used to handle Direct Agent calls. Valid entries are 1-8000, or blank (default).
Forced Agent Logout Time	Enables the Forced Agent Logout by Clock Time feature by administering a time of day to automatically log out agents using an hour and minute field. Valid entries for the hour field are 01-23. Valid entries for the minute field are 00, 15, 30, and 45. The default is blank (not administered). Examples: 15:00, 18:15, 20:30, 23:45.

Field	Description
	For more information about this feature, see Forced Agent Logout by Clock Time.
Local Call Preference	You can administer Local Preference Distribution to handle agent-surplus conditions, call-surplus conditions, or both. Use this field to administer call-surplus conditions. To set up an algorithm for agent-surplus conditions, set the **Local Agent Preference** field on the Hunt Group screen. Valid entries are `y` or `n`. The default is `n`. You can set this field to `y` only if the Call Center Release field is set to `3.0` or later and the Multiple Locations customer option is active. For more information, see Location Preference Distribution.
Login ID	Display-only field. Contains the identifier for the Logical Agent as entered on the command line.
LoginID for ISDN/SIP Display	Enter y if the Agent LoginID CPN (Calling Party Number) and Name field is to be included in ISDN and SIP messaging over network facilities. If set to `n` (the default), the physical station extension CPN and Name is sent. The Send Name on the ISDN Trunk Group screen prevents sending the calling party name and number if set to n and may prevent sending it if set to r (restricted).
Logout Reason Code Type	Determines how agents enter reason codes. • `system` — Settings assigned on the Feature Related System Parameters screen apply. This is the default. • `none` — You do not want a staffed agent to have to enter a reason code when logging out. • `requested` — You want a staffed agent to enter a reason code when logging out but do not want to force the agent to do so. To enter this value, the Reason Codes and EAS fields on the System-Parameters Customer-Options screen must be set to `y`. • `forced` — You want to force a staffed agent to enter a reason code when logging out. To enter this value, the Reason Codes and EAS fields on the System-Parameters Customer-Options screen must be set to `y`.
LWC Reception	Valid Leave Word Calling entries are `audix`, `msa-, spe` (default), and `none`.
Maximum time agent in ACW before logout (sec)	This field is used for setting a maximum time the agent can be in After Call Work (ACW) on a per agent basis. Valid entries are: • `system` - This is the default. Settings assigned on the Feature Related System Parameters screen apply. • `none` - ACW timeout does not apply to this agent. • 30-9999 sec (seconds) - Indicates a specific timeout period. This setting will take precedence over the system setting for maximum time in ACW.

Field	Description
	For more information, see Tips for administering Forced Agent Logout from ACW mode in *Avaya Aura™ Call Center Feature Reference*.
Messaging Server Name for Messaging	Do one of the following actions: • Enter the name of the Messaging Server used for LWC Reception • Enter the name of the Messaging Server that provides coverage for this Agent LoginID • Leave blank (default)
MIA Across Skills	Enter `y` to remove an agent from the Most Idle Agent (MIA) queue for all the splits/skills/hunt groups that he or she is available in when the agent answers a call from any of his or her splits/skills/hunt groups. Valid entries are system, n, and y. The default is system.
Name	Enter up to a 27-character string naming the agent. Any alpha-numeric character is valid. Default is blank.
PA (Percent Allocation)	If the call handling preference is percent-allocation, you must enter a percentage for each of the agent's skills. Enter a number between 1-100 for each skill. Your entries for all the agent's skills together must add up to 100%. Do not use target percent allocations for reserve skills. Percent Allocation is available as part of the Avaya Business Advocate software, if active.
Password	Only displayed if both the AAS and AUDIX fields are n. Enter up to nine (9) digits as the password the Agent must enter upon login. Valid entries are the digits 0 through 9. Enter the minimum number of digits in this field specified by the Minimum Agent-LoginID Password Length field on the Feature-Related System Parameters screen. Default is blank.
Password (enter again)	Only displayed if both the AAS and AUDIX fields are n. Reenter the same password exactly as it was entered in the Password field. Default is blank. **Note:** Values entered in this field are not echoed to the screen.
Port Extension	Only displayed if either the AAS or AUDIX field is y. Enter the assigned extension for the AAS or AUDIX port. This extension cannot be a VDN or an Agent LoginID. Default is blank.
RL (Reserve Level)	Enter the reserve level to be assigned to this agent for the skill with the Business Advocate Service Level Supervisor feature or the type of interruption with the Interruptible AUX Work feature. You can assign a reserve level of `1` or `2` or an interruptible level of `a`, `m`, or `n` (a=auto-in-interrupt, m=manual-in-interrupt, and n = notify-interrupt) or blank for no reserve or interruptible level. Changes to this field take effect the next time the agent logs in. Values of `1` and `2` are allowed only if Business Advocate is enabled. A skill level cannot be assigned with just a reserve level setting. RL set to `1` or `2` defines the EWT (Expected Wait Time) threshold level for the agent to

Field	Description
	be added to the assigned skill as a reserve agent. When the EWT for this skill reaches the corresponding threshold set on the Hunt Group screen, the agent automatically has this skill added to their logged in skills. The agent is delivered calls from this skill until the skill's EWT drops below the assigned overload threshold for that level or if Oldest Call Waiting (CW) is used as threshold. The Interruptible Aux feature is a way to help meet service level targets by requesting agents who are on break to become available when the service level target is not being met. For more information on Service Level Supervisor, see the *Avaya Business Advocate User Guide*. For more information on Interruptible Aux, see Interruptible Aux work in *Avaya Aura™ Call Center Feature Reference*.
Security Code	Enter the 4-digit security code (password) for the Demand Print messages feature. This field can be blank (default).
Service Objective	This field is displayed only when the call handling preference is greatest-need or skill-level. Enter `y` or `n` in this field. Service Objective is administered on the `Hunt Group` screen and the `agent LoginID` screen. The communication server selects arriving ACD calls for staffed agents according to the ratio of Predicted Wait Time (PWT) or Current Wait Time (CWT) and the administered service objective for the skill. Service Objective is a feature that is part of the Avaya Business Advocate software.
SN (Skill Number)	Enter the Skill Hunt Group(s) that this agent handles. The same skill may not be entered twice. Consider the following options: • If EAS-PHD (Expert Agent Selection - Preference Handling Distribution) is not optioned, enter up to four (4) skills. • If EAS-PHD is optioned, enter up to 60 or 120 skills depending on the platform in use that is providing the Avaya Call Center Software: Elite. **Important:** Assigning a large number of skills to agents can potentially impact system performance. Review system designs with the Avaya Sales Factory when a significant number of agents have greater than 60 skills per agent.
SL (Skill Level)	Enter a skill level for each of an agent's assigned skills. If EAS-PHD is not optioned then only 2 priority levels are available. If EAS-PHD is optioned, 16 priority levels are available. Virtually all centers using Expert Agent Selection use Expert Agent Selection - Preference Handling Distribution (EAS-PHD).
TN	Enter the Tenant Partition number. Valid entries are 1-100. Default is `1`.

List Agent-LoginID field descriptions

The following fields appear on the List Agent LoginID screen. All these fields are display-only:

Field	Description
Name	This field shows the name administered for the agent on the Agent LoginID screen.
AAS/AUD	This field is y if the login ID is assigned as an auto-available split or skill or an AUDIX port.
Agt Pr	Shows the call handling preference assigned to a loginID.
Dir Agt	Shows the entry in the Direct Agent Skill field.
Extension	The physical extension at which this agent is currently logged in. This field is blank if the agent is not logged in.
Skl/Lv	Shows the agent's assigned skills and the skill level for each one.
COR	This field displays the administered Class of Restriction for a loginID.
SO	Shows the entry in the Service Objective field. If you are not using Service Objective, this field is blank.

Best Service Routing Application Plan Screen

Use this screen to identify the remote locations used in each Best Service Routing (BSR) application.

Note:

For an explanation of BSR Application Plans see Best Service Routing.

Related topics:

BSR administration commands on page 15
BSR application field descriptions on page 16

BSR administration commands

Use the following administration commands to administer the BSR screen.

Action	Object	[2] Qualifier[2]
add	best-service-routing	xxx (application number) or ‘next’
change	best-service-routing	xxx (application number)
display	best-service-routing	xxx (application number)
remove	best-service-routing	xxx (application number)
list	best-service-routing	

Note:
If you execute **remove best-service-routing** against a BSR application table with no name assigned, the system will generate error “Identifier not assigned.” To resolve the situation, give the table a name and then you will be able to remove it.

BSR application field descriptions

Make assignments as required for the following fields on the screen:

Field	Description
Interflow VDN	Enter the routing number including the dial access code your communication server uses to access the Interflow Vector Directory Number (VDN) at the remote location. Valid entries can be up to 16 characters long and contain the following characters: • 0-9 • * or # • p (pause) • w/W (wait) • m (mark) • s (suppress)
Location Name	Give each location a name with up to 15 characters.
Lock	When set to y, this field provides extra security by not sending the information over the CMS. When set to n, the system sends the information.
Maximum Suppression Time	Enter the maximum poll suppression time in seconds from 0-60. This value applies when a subsequent Call Vector **consider** command replaces a location as the best. For example, if the poll suppression time

[2] Brackets [ ] indicate the qualifier is optional. Single quotes (’ ’) indicate that you must enter the text inside the quote exactly as shown. You can also enter an abbreviated screen of the word.

Field	Description
	is set to 30 seconds, the remote location polling is suppressed for up to 30 seconds if the Expected Wait Time (EWT) is far from being the best.
Name	Give the application plan a name with up to 15 characters.
Net Redir	When set to y, this field enables network call redirection. When set to n, network call redirection is not enabled. Default is n.
Num	Enter the location number. Location numbers are identifiers, and therefore need not be in sequential order. For example, you can assign locations with the identifiers 1, 3, 14 and 89 to one application plan.
Number	This display-only field shows the identifying number of the plan you are working with. Numbered from 1 to 255 or 511, depending on the platform (Avaya Server type driving your Communication Manager).
Status Poll VDN	Enter the routing number including the dial access code your communication server uses to access the Status Poll VDN at the remote location. Valid entries can be up to 16 characters long and contain the following characters: • 0-9 • * or # • p (pause) • w/W (wait) • m (mark) • s (suppress)
Switch Node	This is an optional field. If you are using Universal Call ID, enter the UCID Network Node ID for each communication server. Valid Network Node IDs range from 1-32,767.

BCMS/VuStats Login ID screen

You must administer the BCMS/VU-Stats Login IDs screen, if:

- The EAS feature is not optioned.
- The **BCMS/VuStats Login ID** field on the Feature-Related System Parameters screen is set to y. This field is located in the Call Management System section of the screen.

You do not have to enter agent names to administer the screen. If you choose not to associate names with login IDs, the data you receive from BCMS or VuStats defaults to:

ID xxxxxxxxx

where xxxxxxxxx is an agent login ID.

Important:

Only agents using administered login IDs can successfully log in to a split or skill that is measured by BCMS.

Related topics:

BCMS/VuStats login ID administration commands on page 18
BCMS/VuStats field descriptions on page 18
Implementation notes for BCMS/VuStats login ID administration on page 19

BCMS/VuStats login ID administration commands

Use the following administration commands to administer the BCMS/VuStats Login ID screen.

Action	Object	[3] Qualifier[3]
add	bcms/vustats login IDs	
change	bcms/vustats login IDs	[login ID]
display	bcms/vustats login IDs	[login ID]
list	bcms/vustats login IDs	[login ID] count X

BCMS/VuStats field descriptions

Make assignments as required for the following fields on the screen:

Field	Description
Login ID	This field has the following requirements: • Make the login ID the same length as the ACD Login Identification Length field that is specified on the Feature Related System Parameters screen. If the length does not match, the system displays an error message and places the cursor at the field that is incorrect. • If you change the administered login length to a different value, you will change the allowed length for all other IDs entered on this screen. If you do not adjust the login lengths, agents will not be able to log on. Change the ACD login

[3] Brackets [ ] indicate the qualifier is optional.

Field	Description
	identification length to fit the existing logins or change the logins to match the ACD login identification length. • If you enter a duplicate login ID, the system displays an error message and places the cursor at the duplicated field.
Name	A name associated with the login ID (optional).

Implementation notes for BCMS/VuStats login ID administration

The screen displays only two pages at a time. This is equivalent to 64 login IDs. If you are adding login IDs, you can enter two pages, and reissue the command to fill an additional two pages, and then repeat as necessary. When you change or display login IDs, the system displays two pages of login IDs beginning with the ID you specify. If you do not specify a login ID, the display begins with the first login ID. The **`list`** command lists all login IDs and may run to 63 pages.

Call Classification screen

ASAI SCC operation

Related topics:

Description of ASAI SCC on page 19
How the hunting algorithm works on page 20
How the call classifier is inserted on page 21
How the call attempt is rejected on page 22

Description of ASAI SCC

When an ASAI (Adjunct Switch Applications Interface)-connected adjunct places a Third Party Make Call, the adjunct can invoke a Switched Classified Call (SCC). The adjunct uses an ASAI

REGister message with the Service Circuit parameter set to “classifier”. The ASAI REGister message can also include:

- A request to perform Answering Machine Detection (AMD) on the call by including the Answer Machine parameter.
- A ringback timeout value specified by the number of rings that is converted to seconds. The number of rings can be 2 to 15 ring cycles using the value of “6 seconds equates to one ring cycle.” The ringback timeout value is used by the classifier to determine how long to wait for a far-end answer after ringing is detected. If this timeout value is not provided in the request message, a default of 60 seconds for 10 rings is used. No answer timeout drops the classifier and ends the call with a cause CS3/19 - No Answer.

Switch Classified Calls use call-classification resources to place outgoing calls as requested by adjunct predictive dialing and Outgoing Call Management applications. Call classifiers detect:

- Inband call progress signals including network Special Intercept Tones (SIT) tones
- Live answers
- Modems
- Answers made by an answering machine

How the hunting algorithm works

When a Switch Classified Call has been requested, the algorithm searches the members of the outgoing trunk group for an available trunk on a Port Network Gateway (PNG) or H.248 type Media Gateway (MG) such as a G450 or G430.

If the trunk member terminates on an H.248 Media Gateway then the algorithm checks the gateway for an available classifier or tone detector resource:

- If a classifier or tone detector resource is available, the SCC is launched.
- If a classifier resource is not available, the algorithm checks the outgoing trunk group for an available member on another MG or PNG with an available classifier or tone detector resource.

If the trunk member terminates on a Port Network Gateway then the algorithm checks the gateway for an available classifier board:

- If a classifier port network board exists in the PNG, the SCC is launched.
- If a classifier board is not available on that PNG, and the PNG is TDM multi-connected with other PNGs, an available classifier board is used on another PNG. The SCC is then launched.
- If the PNG is IP-connected, or there are no available classifier boards among the TDM multi-connected PNGs, the trunk group is checked again for an available member on another PNG or MG with an available classifier or tone detector resource.

If no available classifier is found: If the algorithm does not find a trunk member on either a PNG or H.248 MG with an available classifier or tone detector resource after searching through the entire trunk group, the algorithm uses the first available trunk member found for launching the call. If there is not an available classifier board on that gateway when the classifier is to be connected, the SCC fails.

Note:

The hunting algorithm is applicable only when the outgoing trunk group is distributed across gateways so that a trunk member and classifier resource match can be made on another gateway after the first attempt fails.

How the call classifier is inserted

The **Call Classification After Answer Supervision?** field on the Feature Related System Parameters screen determines when the classifier is inserted in the connection.

If set to	Then the classifier is
n	Always inserted as soon as all digits have been outpulsed or the SETUP message has been sent. This is true even with ISDN trunks. D-Channel call progress indications usually take precedence over classifier-detected progress tones. This setting is the default.
y	Inserted after the answer has been received for the call if Answering Machine Detection is requested on the call. Otherwise, the classifier is not inserted in the connection with this setting. The network needs to reliably determine answer supervision through ISDN-type facilities.

While connection of the call classifier is required for switch-classified calls over ISDN trunks, you can use the Call Classification After Answer Supervision (CCAAS) option to avoid using a classifier resource.

A classifier is NOT reserved during the call establishment when the CCAAS option is enabled. It is reserved and connected at the time the call is answered. If there is no classifier available at the time the classifier is to be connected, the call is allowed to continue. The application may receive a cause value with “no classifiers available” in the Answer event.

If CCAAS is NOT enabled and no classifiers are available during the reservation phase, then the call is not allowed to continue and it is dropped. Note that if CCAAS is not enabled, the call classifier is reserved at the time the outgoing trunk is seized.

How the call attempt is rejected

If an outgoing trunk could not be selected for the call, when the call attempt is rejected depends on how the **Call Classification After Answer Supervision?** field on the Feature Related System Parameters screen is set.

If set to	Then the call attempt is
n	• Rejected with cause CS3/20 - no trunks • Rejected with cause CS3/21 - no classifiers - or a classifier could not be obtained
y	• Rejected with cause CS3/20 - no trunks • Rejected with cause CS3/21 - no classifiers - if Answering Machine Detection is requested for the call and a classifier could not be connected after answer supervision has been received

About the SIT Treatment for Call Classification screen

Use this screen to specify the treatment of Special Information Tones (SITs) used for Outbound Call Management type calls with USA tone characteristics. The port network TN744 Call Classifier circuit pack ports or H.248 Media Gateway internal tone detector resources in classified mode are used to detect Special Intercept Tones (SITs). The classifiers are capable of detecting the following six (6) SITs:

- SIT Ineffective Other
- SIT Intercept
- SIT No Circuit
- SIT Reorder
- SIT Vacant Code
- SIT Unknown
- AMD (Answering Machine Detection) Treatment

SIT Treatment for Call Classification administration commands

Use the following administration commands to administer the SIT Treatment For Call Classification screen. In some cases, just the most commonly used commands are shown. See Administering Avaya Aura™ Communication Manager, for a listing of all administration

commands, the command structure, and the use of abbreviated command words when entering a command.

Action	Object	[4] Qualifier[4]
change	sit-treatment	-
display	sit-treatment	['print' or 'schedule']

SIT Treatment for Call Classification field descriptions

Make assignments as required for the following fields on the screen:

Note:

In the field following each type of SIT, enter `answered` to specify that the call is classified as answered, and because is answered it therefore sent to a staffed agent; or enter `dropped` to specify that the call is classified as not answered, and is therefore not sent to a staffed agent.

Field	Description
AMD (Answering Machine Detected)	An ASAI adjunct can request AMD for a call. If an Answering Machine is detected, one of two treatments is specified. Valid entries are `dropped` and `answered`. Default is `dropped`. AMD Treatment has two separately administrable subfields. Talk Duration is for full seconds and Pause Duration is for fractions of a second, separated by a display-only decimal point. Talk Duration defaults to 2.0 seconds and allows a range from 0.1 seconds to 5.0 seconds in increments of 0.1 seconds. Pause duration defaults to 0.5 seconds and allows a range from 0.1 seconds to 2.0 seconds in increments of 0.1 seconds.
SIT Ineffective Other	Sample announcement following this SIT - *You are not required to dial a 1 when calling this number.* Valid entries are `answered` and `dropped`. Default is `dropped`.
SIT Intercept	Sample announcement following this SIT - *XXX-XXXX has been changed to YYY-YYYY, please make a note of it.* Valid entries are `answered` and `dropped`. Default is `answered`.
SIT No Circuit	Sample announcement following this SIT - *All circuits are busy, please try to call again later.* Valid entries are `answered` and `dropped`. Default is `dropped`.

[4] Brackets [ ] indicate the qualifier is optional. Single quotes (' ') indicate the text inside the quote must be entered exactly as shown or an abbreviated screen of the word can be entered.

Field	Description
SIT Reorder	Sample announcement following this SIT - *Your call did not go through, please hang up and dial again.* Valid entries are `answered` and dropped. Default is `dropped`.
SIT Unknown	A situation or condition that is unknown to the network is encountered. Valid entries are `answered` and `dropped`. Default is `dropped`.
SIT Vacant Code	Sample announcement following this SIT - Your call cannot be completed as dialed, please check the number and dial again. Valid entries are `answered` and `dropped`. Default is `dropped`.

Feature-Related System Parameters screen

Call center system parameters are listed on four pages of the Feature-Related System Parameters screen.

For a description of the rest of the Feature-Related System Parameters screens, see Administering Avaya Aura™ Communication Manager.

This section includes the following topics:

Related topics:

System Parameter administration commands on page 24
Agent and Call Selection screen field descriptions on page 25
Call Center Miscellaneous fields on page 29
Call Center System Parameters field descriptions on page 29
Forced Agent Logout Parameters field descriptions on page 30

System Parameter administration commands

Use the following administration commands to administer the call center System Parameters.

Action	Object	Qualifier
change	system-parameters	features

Action	Object	Qualifier
display	system-parameters	features

Agent and Call Selection screen field descriptions

Field	Description
ACD Login Identification Length	Enter the number of digits (0 through 9) for an ACD Agent Login ID if **Expert Agent Selection (EAS)** on the System-Parameters Customer-Options screen is n. Default is 0. If **BCMS/VuStats Login IDs** is y, the ACD login ID length must be greater than 0. This field identifies an ACD agent to CMS. The number you enter in this field must equal the number of digits in the agent's login ID. For CMS, this field cannot be 0.
ACW Agents Considered Idle?	Enter y (default) to have agents who are in After Call Work (ACW) included in the Most-Idle Agent (MIA) queue. Enter n to exclude agents from the queue while they are in ACW and return them to the bottom of the queue when they become available.
Reporting Adjunct Release	Specifies the release of the CMS reporting adjunct (**CMS (appl mis)**) and/or the Avaya IQ reporting adjunct (Avaya IQ **(appl ccr)**) used with the system. **Note:** The actual mis and ccr links are administered on the "communication-interface processor-channels" administration form, and there can be a maximum of 2 links of each type (maximum of 4 reporting adjunct links). If SA9090 is enabled, up to 4 links can be administered as appl mis (CMS). However, even with SA9090, the maximum number of links is still 4 and the maximum number of appl ccr (IQ) links is still 2. The following explain the usage of various valid entries in CMS: • R12: CMS R12 is connected to the mis1 link and the mis2 link for a second CMS. The IQ field must be blank. • R13: CMS R13 is connected to the mis1 link and the mis2 link for a second CMS. The IQ field must be blank. • R13.1: CMS R13.1 is connected to the mis1 link and the mis2 link for a second CMS. Reporting adjuncts CMS, Avaya IQ, or both can be connected. • R14: CMS R14 is connected to the mis1 link and the mis2 link for a second CMS. Reporting adjuncts CMS, Avaya IQ, or both can be connected. • R14.1: CMS R14.1 is connected to the mis1 link and the mis2 link for a second CMS. CMS can be connected with or without Avaya IQ.

Field	Description
	This release or later is required to activate the special application (SA) 9062 to allow CMS to be used, through a policy of permissive use, with Communication Manager Expanded Dial Plan (EDP: allowing extensions greater than 7 digits in the dial plan). If any extensions greater than 7 digits are received by CMS, the left most digits in excess of 7 are deleted, leaving the right most 7 digits for tracking and reporting. Avaya IQ will track and report on the full EDP extensions. • `R15`: CMS R15 is connected to the mis1 link (and optionally to the mis2 link for a second CMS). Unless SA9062 is active and CMS is R14.1 or later, CMS only supports a maximum of 7 digits in reports. If any entry on the dial plan is set to greater than 7 digits, this field must be blank. • `R16`: CMS R16 is connected to the mis1 link (and optionally to the mis2 link for a second CMS). R16 CMS and later with CM 5.2.1 and later supports full Expanded Dial Plan (EDP) without requiring the Special Application. • `R16.1`: CMS R16.1 is connected to the mis1 link (and optionally to the mis2 link for a second CMS). • Blank: A CMS system is not connected. This is the default. The following explains the usage of the valid entries for the Avaya IQ release field: • Enter the release of the Avaya IQ system that will be connected to the ccr1 link and to the ccr2 link for a second Avaya IQ. EAS and UCID must be active before this form can be submitted for Avaya IQ connection. • With Communication Manager 6.0 the IQ field can be set to: - `5.1` - `5.0` - `4.x` Reporting Adjuncts CMS, Avaya IQ, or both can be connected. Only CMS R13.1 or later is allowed with Avaya IQ. With Communication Manager 3.1, the IQ field does not appear and Avaya IQ is connected as the second CMS system with the CMS release field set to R13.1.To obtain backward compatibility the switch release on CMS or IQ must be set to the latest switch release supported by the earlier release reporting adjunct. If both CMS and IQ are to be connected to CM, the releases of the two reporting adjuncts and assignment of switch release on the adjuncts must be coordinated, using the correct settings to run the same link interface (SPI) language. For full support with Call Center Elite expanded capacities on Communication Manager 6.0 require at least CMS R16.1 or Avaya IQ 5.1. These combinations of Reporting Adjunct release settings on CM 6.0 are compatible:

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td></td><td>
<table>
<tr><th>CMS Release Setting</th><th>IQ Release Setting</th><th>SPI Language</th></tr>
<tr><td>R13.1</td><td>4.0</td><td>20</td></tr>
<tr><td>R14, R14.1</td><td>4.0</td><td>21</td></tr>
<tr><td>R13.1</td><td>5.0</td><td>20</td></tr>
<tr><td>R14, R14.1</td><td>5.0</td><td>21</td></tr>
<tr><td>R15, R16</td><td>5.0</td><td>22</td></tr>
<tr><td>R16.1</td><td>5.1</td><td>23</td></tr>
</table>
• Blank: Avaya IQ system is not connected. This is the default.
</td></tr>
<tr><td>Auto Reserve Agents</td><td>Enter <tt>all</tt> if a staffed (logged-in) agent is to be intentionally left idle (Available) in a skill if their work time in the skill has exceeded their target allocation for the skill. Enter <tt>secondary-only</tt> to activate this feature only for the agent's non-primary skills (skill levels 2 through 16).</td></tr>
<tr><td>Aux Work Reason Code Type</td><td>Enter <tt>none</tt> if you do not want a staffed agent to enter a reason code when entering AUX work. Enter <tt>requested</tt> if you want an agent to enter a reason code when entering AUX mode but do not want to force the agent to do so. Enter <tt>forced</tt> to force an agent to enter a reason code when entering AUX mode. To enter <tt>requested</tt> or <tt>forced</tt>, the Reason Codes and EAS fields on the System-Parameters Customer-Option screen must be <tt>y</tt>.</td></tr>
<tr><td>BCMS/VuStats Abandon Call Timer (seconds)</td><td>Enter <tt>none</tt> or 1-10 to specify the number of seconds for calls to be considered abandoned. Calls with talk time that is less than this number (and that are not held) are tracked by BCMS and displayed by VuStats as ABAND calls.</td></tr>
<tr><td>BCMS/VuStats LoginIDs?</td><td>This field is used to activate login IDs for use with BCMS and VuStats, and is displayed only if:
• EAS is not optioned for the system
• Either BCMS or VuStats is optioned for the system
If EAS is optioned for the system, this field is set to <tt>y</tt> and cannot be changed to <tt>n</tt>.
The default value is <tt>n</tt>. Set this field to <tt>y</tt> if you want to use BCMS or VuStats to monitor agent call activity. Starting with Communication Manager 4.0, the login ID can be up to 13 digits.</td></tr>
<tr><td>BCMS/VuStats Measurement Interval</td><td>You can enter <tt>half-hour</tt> or <tt>hour</tt> (default) for polling and reporting measurement data if the BCMS (Basic) and/or the VuStats on the System-Parameters Customer-Options screen is <tt>y</tt>. If neither of these features is optioned, and if you enter a value in the BCMS Measurement Interval field, the system displays the following error message:</td></tr>
</table>

Field	Description
	<value> cannot be used; assign either BCMS or VuStats first If you receive this message, see your Avaya representative to turn on **BCMS (Basic)** and/or **VuStats** on the System-Parameters Customer-Options screen. There are a maximum of 25 time slots available for measurement intervals. If hour is specified, an entire day of traffic information will be available for history reports; otherwise, only half a day will be available. This does not affect daily summaries as they always reflect traffic information for the entire day. The interval may be changed at any time, but will not go into effect until the current interval completes.
Call Selection Measurement	Valid entries are current-wait-time (default) and predicted-wait-time. This field determines how the Communication Manager's communication server selects an ACD call for a staffed (logged in) agent when the agent becomes available (idle) and there are calls in queue. Current Wait Time (CWT) any of the agent's skills. Predicted Wait Time selects the oldest call waiting for any of the agent's skills. Predicted Wait Time (PWT) is a feature of the Avaya Business Advocate software and is almost always the default setting if Business Advocate is active. Both CWT and PWT are mutually exclusive system wide applied settings and since Avaya Aura Call Center (the marketing term for Call Center Elite 6.0 now includes Business Advocate you should plan your designs around using PWT in place of CWT.
Clear VuStats Shift Data	Enter on-login to clear shift data for an agent when the agent logs in. Enter at-midnight to clear shift data for all agents at midnight.
Logout Reason Code Type	Enter none if you do not want a staffed agent to enter a reason code when logging out. Enter requested if you want an agent to enter a reason code when logging out but do not want to force the agent to do so. Enter forced to force an agent to enter a reason code when logging out. To enter requested or forced, the **Reason Codes** and **EAS** on the System-Parameters Customer-Option screen must be y.
MIA Across Splits or Skills?	Enter y to remove an agent from the Most Idle Agent (MIA) queue for all the splits/skills that the agent is available (idle) in when the staffed agent answers a call from any of his or her splits/skills. The default is n, which keeps the agent in the MIAqueue for the other splits/skills when answering a call from one of the assigned splits/skills.
Service Level Supervisor Call Selection Override?	Enter y (default) to enable a staffed agent to receive a lower priority call from an assigned skill in an over-threshold state before receiving a higher priority call from an assigned skill that is not in an over threshold state.
Validate BCMS/ VuStats login IDs	Enter n to allow entry of any ACD login of the proper length. Enter y to allow entry only of login-IDs that have been entered on the BCMS Login-ID screen.

Call Center Miscellaneous fields

Following are the Call Center Miscellaneous fields. For a detail of these fields, see *Avaya Aura™ Communication Manager Screen Reference* document.

Field
Callr-info Display Timer (sec)
Clear Callr-info
Allow Ringer-off with Auto-Answer?
Reporting for PC Non-Predictive Calls? For more information about this feature, see Proactive Contact (PC) outbound calling improved reporting.
Interruptible Aux Notification Timer (sec)
Zip Tone Burst for Callmaster Endpoints

Call Center System Parameters field descriptions

Following are the Call Center System Parameters fields on page 11 of the Feature-Related System Parameters screen.

For a detailed description about these fields, see *Avaya Aura™ Communication Manager Screen Reference*.

Field
Allow Two Observers in Same Call?
Available Agent Adjustments for BSR
Tie Strategy
Converse First Data Delay/Second Data Delay
Converse Signaling Tone/Pause
Direct Agent Announcement Extension/Delay
Expert Agent Selection (EAS) Enabled
Interflow-Qpos EWT Threshold
Message Waiting Lamp Indication
Minimum Agent-LoginID Password Length
Pause (msec)

Field
Prompting Timeout (secs)
Reverse Star/Pound Digit for Collect Step
Service Observing: Warning Tone/or Conference Tone
Service Observing Allowed with Exclusion
Store VDN Name in Station's Local Call Log

Forced Agent Logout Parameters field descriptions

Following are the Forced Agent Logout/Aux Parameters fields on page 15 of the Feature-Related System Parameters screen.

For a detailed description about these fields, see *Avaya Aura™ Communication Manager Screen Reference*.

Field
ACW Forced Logout Reason Code For more information about this feature, see Forced Agent Logout from ACW mode in *Programming Call Vectors in Avaya Aura™ Call Center*.
Clock Time Forced Logout Reason Code For more information about this feature, see Forced Agent Logout by Clock Time in *Programming Call Vectors in Avaya Aura™ Call Center*.
Forced Agent Logout by Location Reason Code
Forced Agent Logout by Skill Reason Code
Forced Agent Aux Work by Location Reason Code
Forced Agent Aux Work by Skill Reason Code

Call Vector screen

This screen programs a series of commands that specify how to handle calls directed to a Vector Directory Number (VDN).

Note:

For detailed information on vector programming, see *Programming Call Vectors in Avaya Aura™ Call Center*.

Related topics:

Call Vector administration commands on page 31
Field descriptions of Call Vector screen on page 31

Call Vector administration commands

Use the following commands to administer the Call Vector screen.

Action	Object	[5] Qualifier[5]
[6] **change**[6]	vector	1-MAX
display	vector	1-MAX ['print' or 'schedule']
list	vector	1-MAX ['count' 1-MAX] ['print' or 'schedule']

Field descriptions of Call Vector screen

Make assignments as required for the following fields on the screen:

Field	Description
3.0 Enhanced?	Display-only field. This value appears only if **Vectoring (3.0 Enhanced)** is set to y on the System Parameter Customer Options screen.
ANI/II-Digits?	Display-only field. Indicates whether you can use ANI (Automatic Number Identification) and II (Information Indicator) Digits Vector Routing Commands. ANI/II-Digits Routing requires that **G3V4 Enhanced** be set to y. CLID (Calling Line Identification) also follows ANI rules.
ASAI Routing?	Display-only field. Indicates whether or not the **CallVisor Adjunct/ Switch Applications Interface (ASAI) Routing** option is enabled on the System-Parameters Customer-Options screen. Valid values are y or n.
Attendant Vectoring	Appears only when Attendant Vectoring is optioned. Valid entries are y and n (default). The **Attendant Vectoring** field defaults to n and changes are allowed to the field. If **Basic Vectoring** and **Vector Prompting** are both set to n, then the **Attendant Vectoring** field defaults to y and no changes are allowed to the field.

[5] Brackets [ ] indicate the qualifier is optional. Single quotes (' ') indicate the text inside the quote must be entered exactly as shown or an abbreviated screen of the word may be entered. MAX is the maximum number available in your system configuration.

[6] Do not change a call vector while it is processing a call. It is recommended to add a new vector with the Call Vector screen, and then use the Vector Directory Number screen to point an existing VDN to the new vector.

Field	Description
	To associate VDNs and vectors for attendant vectoring, use the fields on both the VDN and the call vectoring forms to indicate attendant vectoring. When attendant vectoring is indicated for VDNs and vectors, all call center-associated fields (such as **Skills** and **BSR**) are removed.
Basic?	Display-only field. Indicates whether the **Vectoring (Basic)** option is enabled on the System-Parameters Customer-Options screen. Valid values are `y` or `n`.
BSR?	A `y` in this display-only field indicates that the Vectoring (Best Service Routing) option is enabled on the System-Parameters Customer-Options screen. Thus, you can use BSR commands and command elements in your vectors. An `n` indicates that the BSR option is not enabled.
CINFO?	Display-only field. Indicates whether the **Vectoring (CINFO)** option is enabled on the System-Parameters Customer-Options screen. Valid values are `y` or `n`. CINFO is the acronym for Customer Information Forwarding.
EAS?	Display-only field. Indicates whether the **Expert Agent Selection (EAS)** option is enabled on the System-Parameters Customer-Options screen. Valid values are `y` or `n`. When Expert Agent Selection (EAS) is enabled, the help messages and error messages associated with this screen will reflect a terminology change from Split to Skill. In addition, the vector commands entered also will be affected by this terminology change (for example, **`check backup split`** becomes **`check backup skill`** when EAS is enabled).
G3V4 Adv Route?	Display-only field. Indicates whether you can use the G3V4 Advanced Vector Routing commands.
G3V4 Enhanced?	Display-only field. Indicates whether you can use G3V4 Enhanced Vector Routing commands and features.
Holidays?	Display-only field. The value of y appears if **Holiday Vectoring** is set to `y` on the System Parameters Customer Options screen.
LAI?	Display-only field. Indicates whether Look-Ahead Interflow is enabled.
Lines 01 through 99	Enter vector commands as required (up to the maximum allowed in your configuration). Valid entries are `adjunct`, `announcement`, `busy`, `check`, `collect`, `consider`, `converse-on`, `disconnect`, `goto`, `messaging`, `queue-to`, `reply-best`, `route-to`, `stop`, `wait-time` as described in detail in the Programming Call Vectors document. Default is blank.
Lock?	This field controls access to the vector from the CMS or Visual Vectors. Valid entries are `y` and `n` (default). Enter `n` to give CMS and Visual Vectors users the ability to administer this vector from these client programs. Enter `y` if you do not want this vector to be accessible to these client

Field	Description
	programs. Locked vectors can only be displayed and administered through the Communication Manager's System Administration Terminal (SAT) or a terminal emulator. **Note:** Always lock vectors that contain secure information (for example, access codes).
Meet-me Conf?	Appears when the meet-me conference feature is enabled. Valid entries are y and n. For more information, see the*Avaya Aura™ Call Center Feature Reference* document.
Multimedia?	Indicates whether the vector should receive early answer treatment for multimedia calls. This only applies if Multimedia Call Handling is enabled. If you expect this vector to receive multimedia calls, set this field to y. Valid values are y or n (default). If this value is y, the call is considered to be answered at the start of vector processing, and billing for the call starts at that time.
Name	Enter up to 27 alphanumeric characters to represent the vector name. This is an optional field. Default is blank.
Number	Display-only field when the screen is accessed using a **change** or **display administration** command.
Prompting?	Display-only field. Indicates whether the **Vectoring (Prompting)** option is enabled on the System-Parameters Customer-Options screen. Valid values are y or n.
Variables?	Display-only field. The value appears only if **Vectoring (Variables)** is set toy on the System-Parameters Customer-Options screen.

Duplicate Vector screen

Use this screen to duplicate vectors from an existing vector and edit the duplicate vectors to create vectors that are similar to the existing vector. You can use this functionality to configure one vector as a template that can be reused when creating similar vectors.

The following fields are populated in the Duplicate Vector screen:

Note:

For more information on duplicating vectors, see the *Programming Call Vectors in Avaya Aura™ Call Center* document.

Field	Description
More VDN's	Displays "*" if there is at least one more VDN assigned to the same vector. For example, if 5555 displays in the**VDN Assigned to** field and an asterisk (*) appears in the**More VDN's** field, this means that the master vector you selected is already assigned to VDN 5555 as well as to other VDNs.
Name	Displays the vector name if any of the vectors have an assigned name. The duplicated vectors can already be assigned names but they must be vectors that contain no steps. You can edit the vector name for any of the duplicated vectors.
VDN Assigned to	Displays the VDN if a VDN was assigned to the master vector.
Vector	Displays the vector number of the master vector and of each of the new vectors that is being created from the master.

Holiday Table screen

This screen is used to establish the days/times for which Holiday Vectoring will apply. It is available to you only if Holiday Vectoring is set to `y` on the Customer Options screen.

Related topics:

Holiday table administration commands on page 34
Holiday Table screen field descriptions on page 35
Implementation notes for entering dates on page 35
About administering a holiday table on page 36

Holiday table administration commands

You can use the commands listed in the table below to administer Holiday Tables.

Action	Object	Qualifier
`change` **Note:** Use this command to change or add a holiday table.	holiday-table	1 through 999, or next
`display`	holiday-table	1 through 999, or next

Action	Object	Qualifier
remove	holiday-table	1 through 999, or next
list	holiday-table	none - all administered Holiday Tables appear

Holiday Table screen field descriptions

Make assignment as required for the following fields on the screen:

Field	Description
Description	Enter a description of the holiday defined on this line. Default is blank.
End	Enter the Month (1 through 12), the Day (1 through 31), Hour (optional, 00 through 23), and the Min (minute) (optional, 00 through 59) on which vector processing for this holiday should end. See the Implementation notes for entering dates on page 35 for additional information.
Name	Enter a 1 to 15-character alphanumeric table name. You may leave this field blank. Default is blank.
Number	This is the table number that you entered on the command line. It is a display only field.
Start	Enter the Month (1 through 12), the Day (optional, 1 through 31), Hour (optional, 00 through 59), and the Min (minute) (optional, 00 through 59) on which vector processing for this holiday should begin. See the Implementation notes for entering dates on page 35 for additional information.

Implementation notes for entering dates

Note:

When using a range of dates, the end date must be greater than the start date and valid ranges must be within the span of one calendar year.

The Holiday Table Screen can be used for entering individual holiday or for holiday ranges. The following rules apply to entering dates on this screen:

- If a day is entered, the corresponding month must be entered.
- If a month is entered, the corresponding day must be entered.
- If an hour is entered, the corresponding minute must be entered.
- If a minute is entered, the corresponding hour must be entered.

- If an hour/minute is entered, the corresponding month/day must be entered.
- If a month/day is entered, the corresponding hour/minute is not required.
- If an end month/day is entered, the corresponding start month/day must be entered.
- If a start month/day is entered, the corresponding end month/day is not required.
- To enter an individual holiday, enter a start month/day, but do not enter an end month/day.
- To enter a holiday range, enter both a start month/day and an end month/day.
- The start m/d/h/m must be less than or equal to the end m/d/h/m.

About administering a holiday table

Consider the following when administering a holiday table:

- There is no validation that verifies the consistency among the 15 holidays in any Holiday Table. If the same holiday is entered twice, the system stops checking with the first entry found.
- With holidays that are ranges of dates, the ranges could overlap. When a call is in vector processing, the holidays are checked from top to bottom on the table and the check stops if a match is found. Even though there might be multiple entries that would match, the check stops at the first match.
- There is a validation that the day of the month that is entered is valid with the given month. Specifically, if the month is April, June, September, or November, then the date must be 1 - 30. If the month is January, March, May, July, August, October, or December, then the date can be 1 - 31. If the month is February, then a range of 1 - 29 is allowed.

Note:

The year is not checked in holiday vector processing so as to allow the same holidays to be used year-to-year when the holiday is on a fixed date. For those holidays where the observance date changes from year-to-year, the holiday tables must be readministered.

Hunt group screen

The ACD software directs a high volume of calls to hunt groups that are designed as ACD splits. Each ACD split is created to receive calls for one or more services, such as Sales, Service, or Billing. The services that are defined are based on the needs of the people who are calling the call center.

Related topics:

[About the Hunt Group screen](#) on page 37
[Hunt Group screen field descriptions](#) on page 37
[Hunt Group administration commands](#) on page 49

About the Hunt Group screen

The Hunt Group screen is used to define how the communication server sends calls to extensions in ACD and non-ACD environments.

Complete one Hunt Group screen for each split or skill.

Hunt Group screen field descriptions

Field	Description
AAS?	Enter `y` if this hunt group is to serve as an Auto-Available Split.
ACD?	Indicates whether or not to use Automatic Call Distribution (ACD) for this hunt group. Available only if ACD is enabled for the system.
Administered Members (min/max)	The minimum and maximum member number administered for a hunt group. Available for all member pages.
AUDIX Extension	Displays when Message Center is *rem-audix*. Enter a valid 4- to 5-digit Uniform Dial Plan (UDP) extension that identifies the AUDIX hunt group on the host switch used as the Message Center for this hunt group [supports the AUDIX in a Distributed Communications Services (DCS) arrangement].
AUDIX name	The name of the AUDIX machine. Must be the same name as the IP Node name and administered after the IP Node is configured.
Calling Party Number to INTUITY AUDIX?	Enter `y` to send the calling party number to INTUITY AUDIX. Enter `n` if you do not wish to communicate the calling party number to INTUITY AUDIX.
Calls Warning Threshold	Enter the number of calls that can be queued before the system flashes the queue status (feature buttons assigned on agents telephones) and the optional Auxiliary Queue Call Warning Threshold lamp assigned to the split/skill. These lamps are lit steadily when at least one call is in queue and the threshold has not yet been reached. This value must be less than or equal to the queue length or left blank. This field must not be left blank if Calls Warning Port is administered.

Field	Description
Controlling Adjunct	Available only if ACD is enabled for the hunt group. ASAI Link Core Capabilities and Computer Telephony Adjunct Links must be enabled for a value other than none. • none: Members of the split/skill or hunt group are not controlled by an adjunct processor. • asai: All agent logins are controlled by an associated adjunct and logged-in agents can use only their data terminal keyboards to perform telephone functions (for example, change work state). An original scenario to using this is if the controlling adjunct was a CONVERSANT IVR. • adjlk: Computer Telephony Adjunct Links • asai-ip: ASAI links administered without hardware. • adj-ip: ASAI adjunct links administered without hardware.
(Calls Warning) **Port**	The seven-character port number assigned to connect the optional external Auxiliary Queue Call Warning Threshold lamp that flashes when the number (quantity) of calls in queue has exceeded the queue warning threshold (assigned in Calls Warning Threshold). Available only if a queue has been enabled for this hunt group. Valid entries: • 1 to 64: First and second characters are the cabinet number • A to E: Third character is the carrier • 0 to 20: Fourth and fifth character are the slot number • 01 to 04 (Analog TIE trunks) 01 to 31: Six and seventh characters are the circuit number This port is assigned to an Analog Line circuit pack or given an x designation if an extension is used.
COR	The class of restriction (COR) number that reflects the desired restriction for the hunt group. If this is a hunt group supporting voice messaging in a Distributed Communications System (DCS), the CORs on this screen for each server running Communication Manager must be the same.
Coverage Path	The coverage path for the hunt group. Available only if the hunt group is not vector controlled. Following are the valid entries: • 1 to 999: A Coverage Path number. • t1 to t999: Time of Day table.
Dynamic Percentage Adjustment	Enables or disables automatic adjustments to agents' target allocations as needed to help meet the administered service level targets. Available only if ACD is enabled for the hunt group and this is a Percent Allocation Distribution (PAD) hunt group. Requires that Business Advocate software be active.

Field	Description
Dynamic Queue Position	Enables or disables dynamic queue operation to the calls queued to the skill. Dynamic Queue Position is a Business Advocate feature that allows the queuing of calls from multiple VDNs to a single skill, while maintaining different service objectives for those VDNs. Available only if ACD, Expert Agent Selection (EAS), and Skill are enabled for the hunt group. Requires that Business Advocate software be active.
Dynamic Threshold Adjustment	Enables or disables automatic adjustments to overload thresholds to engage reserve agents a bit sooner or a bit later to meet the administered service levels. Available only if ACD and Service Level Supervisor are enabled for the hunt group. Requires that Business Advocate software be active.
Expected Call Handling Time (sec)	Available only if ACD is enabled for the system and if either Vectoring (Advanced Routing) or Business Advocate is enabled for the system. Valid entries are 1 to 9999 in increments of 1. The entry establishes the number of seconds for expected call handling. This value is used to initialize Expected Wait Time and is also used by the Business Advocate Percent Allocation feature.
First Announcement Extension	Displays when Queue is `y`. Not displayed if Vector is `y`. Enter a recorded announcement extension number or leave blank. This is the announcement the caller receives after being in the queue for the time interval specified in First Announcement Delay. If the call hasn't been answered after the announcement, the caller hears music (only after the first announcement) if Music-on-Hold is provided, or ringing for as long as it remains in the queue. Leaving this field blank indicates there will be no announcement. If this is the forced first announcement, the caller always hears ringback after the announcement; otherwise, the caller hears music (if provided).
(First Announcement)**Delay (sec)**	Displays only if Queue is `y` and Vector is `n`. Enter the number (quantity) of seconds (`0` through `99`) that a call remains in queue before the associated first (initial) announcement is given the calling party. The call retains its place in the queue while the caller is listening to the recorded announcement. If the call hasn't been answered after the announcement, the caller hears music (for first announcement only) if Music-on-Hold is provided or ringing for as long as the call remains in queue. When `0` is entered, the first announcement is provided immediately to the caller. This value is set automatically to `0` if there is no queue. This field must be blank if there is no first announcement.
Forced Entry of Stroke Counts or Call Work Codes?	Enables or disables the requirement that either a Stroke (Event) Count or Call Work Code must be entered for each call answered by an agent when in the Manual-In mode. Available only if ACD is enabled for the hunt group and if the hunt group does not have a Controlling Adjunct.

Field	Description
Group Extension	An unused extension number assigned to the hunt group. This field cannot be blank.
(Group Member Assignments) **Ext**	The assigned station or attendant console extension. This extension cannot be a Vector Directory Number (VDN). The data module cannot be a member of an ACD split/skill. Administers the assigned station or attendant console extension only if the controlling adjunct is administered as none. Displays the assigned station or attendant console extension if the controlling adjunct is administered as asai. **Note:** Avaya BRI stations support only ASCII characters. Non-ASCII characters, such as Eurofont or Kanafont, do not display correctly on a BRI station.
(Group Member Assignments) **Extension**	The assigned station or attendant console extension. This extension cannot be a Vector Directory Number (VDN). The data module cannot be a member of an ACD split/skill. Administers the assigned station or attendant console extension only if the controlling adjunct is administered as none. Displays the assigned station or attendant console extension if the controlling adjunct is administered as asai. **Note:** Avaya BRI stations support only ASCII characters. Non-ASCII characters, such as Eurofont or Kanafont, do not display correctly on a BRI station.
(Group Member Assignments) **Name**	The name assigned to the extension number when it is administered in the system.
(Group Member Assignments) **At End of Member List**	Displays the current page as also the last page.
Group Name	A character string that uniquely identifies the hunt group. Accepts up to 27 characters. **Note:** This field is supported by Unicode language display for the 4610SW, 4620SW, 4621SW, and 4622SW telephones.
Group Number	The hunt group number.
Group Type	The group types available depend on what is enabled for your system. Each option uses a different method to select an extension or agent for a call when two or more extensions or agents are available.
Inflow Threshold (sec)	The number of seconds that a call can remain in the queue before no more calls are accepted by the queue. If 0 is entered, a

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td></td><td>call is redirected to this split/skill only if there is an available agent. Valid entries are 0 to 999.
Available only if ACD and a queue are enabled for the system. Not available for a vector controlled hunt group.</td></tr>
<tr><td>Interruptible Aux Threshold</td><td>Valid entries are <code>service-level-target</code>, <code>calls-warning-threshold</code>, <code>time-warning-threshold</code>, and <code>none</code>.
In this field, specify which threshold triggers an event to interrupt agents interruptible for a skill and then specify the threshold value in the corresponding field.
For more information, see Interruptible Aux Thresholds in Avaya Aura™ Call Center Feature Reference.</td></tr>
<tr><td>Interruptible Aux Deactivation Threshold</td><td>Based on the Interruptible Aux Threshold policy and the associated threshold value, set up a deactivation threshold to turn off agent notification.
<table>
<tr><th>If Interruptible Aux Threshold is set as:</th><th>Interruptible Aux Deactivation threshold is:</th><th>Valid entry for the Interruptible Aux Deactivation Threshold field:</th></tr>
<tr><td>calls-warning-threshold</td><td>Fewer than X calls are in the hunt group queue</td><td>1-999</td></tr>
<tr><td>service-level-target</td><td>At least X% of calls are answered in Y seconds</td><td>1-99 for % of calls
1-999 for # of seconds</td></tr>
<tr><td>time-warning-threshold</td><td>The oldest call has been in queue for less than Y seconds</td><td>1-999</td></tr>
</table>
For more information, see Interruptible Aux Thresholds in Avaya Aura™ Call Center Feature Reference.</td></tr>
<tr><td>ISDN/SIP Caller Display</td><td>This field is required for ISDN-PRI or ISDN-BRI Trunks.</td></tr>
</table>

Field	Description
	Valid entries: • grp-name: The hunt group name is sent to the originating user. • mbr-name: The member name is sent to the originating user. • blank: ISDN-PRI or ISDN-BRI trunks are not enabled for the system. **Note:** Avaya BRI stations support only ASCII characters. Non-ASCII characters, such as Eurofont or Kanafont, do not display correctly on a BRI station.
Level 1 Threshold (sec)	The number of seconds for the first Expected Wait Time (EWT) threshold. Valid entries are 0 to 99. Available only if ACD and Service Level Supervisor are enabled for the hunt group.
Level 2 Threshold (sec)	The number of seconds for the second Expected Wait Time (EWT) threshold. Valid entries are 0 to 99. Available only if ACD and Service Level Supervisor are enabled for the hunt group.
Local Agent Preference	You can administer Local Preference Distribution to handle agent-surplus conditions, call-surplus conditions, or both. Use this field to administer agent-surplus conditions. To set up an algorithm for call-surplus conditions, set the **Local Call Preference** field on the Agent ID screen. Valid entries are y or n. The default is n. You can set this field to y only if the Call Center Release field is set to 3.0 or later and the Multiple Locations customer option is active. For more information, see Location Preference Distribution. For a full discussion of the rest of the fields on the Hunt Group screen, see Administering Avaya Aura ™ Communication Manager.
LWC Reception	Indicates where Leave Word Calling (LWC) messages are stored. Valid entries are: • audix: LWC messages are stored on the voice messaging system (audix). • none: LWC messages are not be stored. • spe: LWC messages are stored in the system or on the switch processor element (spe).
Maximum Auto Reserve Agents	The maximum number of Auto Reserve Agents available for this skill (hunt group). Any time an auto-reserve skill is in danger of falling below its target service level percent, some of this skill's

Field	Description
	agents are auto-reserved (kept idle in other skills) so that they are available when a new call arrives for this skill. Valid entries are 0 to 9. Default is 0.
Measured	Provides measurement data for the ACD split/skill to VuStats or BCMS. Available only if ACD is enabled for the hunt group and VuStats or BCMS is enabled for the system. Valid entries are: • internal: Provides measurements made by the Call Management System that are internal to the server running Communication Manager. • external: Provides measurements made by the Call Management System that are external to the server running Communication Manager. • both: Provides measurements collected both internally and externally. • none: Measurement reports for this hunt group are not required.
Member Range Allowed	The range of allowed members. These values vary depending on the system or configuration.
Message Center AUDIX Name	The name of the Message Center AUDIX. Available only if the messaging type is audix or remvm.
Message Center MSA Name	The name of the Message Center Messaging Server Adjunct (MSA). Available only if the messaging type is msa.
Message Center	The type of messaging adjunct for the hunt group. Only one hunt group in the system can be administered as audix, one as qsig-mwi, one as fp-mwi, one as rem-audix, and as many as six as qsig-mwi. Valid entries are: • audix: AUDIX located on this server running Communication Manager • fp-mwi: Public network allowing AUDIX to be located on another switch. Available only if ISDN Feature Plus is administered for the system. • msa: Messaging Server Adjunct • msa-vm: A voice-mail system integrated using Mode Codes or Digital Station Emulation • rem-vm: DCS feature allowing voice mail to be located on another server • qsig-mwi: QSIG network allowing voice mail to be located on another server

Field	Description
	• sip-adjunct: SIP message center server • none: The hunt group does not serve as a message hunt group.
Messaging Server Name	Name of the server as it appears in the User-Defined Adjunct Names form.
MM Early Answer?	Enables or disables MM Early Answer. The system begins to answer an H.320 call and establish an audio channel before offering the conversion call to the hunt group. This starts billing for the call when the call is first placed into queue. This field applies only for systems using Multimedia Call Handling.
Night Service Destination	Enter an assigned extension number as the destination where calls to this split redirect when the split is in the night service mode. This extension can be a VDN extension. Must be a local extension for all features to work correctly. Or Enter `attd` as an attendant group code. **Note:** Not available for vector-controlled hunt group.
Primary?	Enables or disables the specified AUDIX as the primary adjunct. Available only if the messaging type is audix or rem-audix.
Priority on Intraflow?	Enables or disables having calls intraflowing from this split to a covering split and given priority over other calls waiting in the covering split queue. Available only if ACD field is enabled for the hunt group. Not available for a vector-controlled hunt group.
Provide Ringback?	Appears only if **Message Center** on the Hunt Group screen is `fp-mwi` or `qsig-mwi`. Use this field if you are using an SBS trunk for the QSIG MWI (Message Waiting Indication) hunt group. If set to `y`, a call covering to the message center provides ringback to the caller during the coverage interval. When set to `y`, ringback is provided to the calling party until a Connect is received for the call to the Messaging system. Ringback is discontinued upon receipt of the Connect indication. Default is `n`.
Queue Limit	This field is visible only if the **Queue?** field is set to `y`. The **Queue?** field is also located on the Hunt Group screen. You can set the following values in the **Queue Limit** field: **unlimited**: The queue is allocated dynamically by the system. All calls to this hunt group are put in queue when an agent or a station is not available. This is the default value. **1-999**: The system limits the number of calls that queue to this hunt group to the value specified.

Field	Description
Queue?	Enables or disables a queue for the hunt group.
Redirect on IP/OPTIM Failure to VDN	If ROIF or ROOF occurs, calls are redirected to the VDN specified in this field. If this field is blank, calls are placed back in the queue.
(Redirect on IP/OPTIM Failure to VDN)**Retain Active VDN Context?**	When this field is set as y, the VDN context from the previous active VDN is retained and used after the call is redirected to the specified redirect VDN.
Redirect on No Answer (rings)	(Redirect on IP/OPTIM Failure to VDN)**Retain Active VDN Context?** When this field is set as y, the VDN context from the previous active VDN is retained and used after the call is redirected to the specified redirect VDN.
Redirect on No Answer to VDN	If RONA occurs, calls are redirected to the VDN specified in this field. If this field is blank, calls are placed back in the queue. **Note:** This field is present if **ACD?** is set to y on page 1 of the Hunt Group form.
(Redirect on No Answer to VDN)**Retain Active VDN Context?**	When this field is set as y, the VDN context from the previous active VDN is retained and used after the call is redirected to the specified redirect VDN.
Routing Digits (e.g. AAR/ARS Access Code)	A one- to four-digit AAR (qsig-mwi) or ARS (fp-mwi) access code. This access code is prepended to the AUDIX Complete Number to define a route to the Message Center switch hunt group containing the line ports to the AUDIX. Accepts characters * and #. This field is available only if the messaging type is qsig-mwi or fp-mwi.
Second Announcement Extension	Appears only when ACD and Queue both are y and Vector is n. Enter the extension number assigned to a recorded announcement or leave blank. Leaving the field blank indicates there is no second announcement.
(Second Announcement) **Delay (sec)**	Appears only when ACD and Queue both are y and Vector is n. Enter the time in seconds (1 through 99) before the call in the queue receives a second recorded announcement or that the second announcement is repeated. It is recommended that, if this split/skill or hunt group is a coverage point for another split/skill, this delay should not be more than 15 seconds. Leave blank if there is no second announcement.
Security Code	Enter a 4-digit security code (password) used for the Demand Print feature. Valid entries are a 4-digit security code or leave blank.

Field	Description
Send Reroute Request?	Allows or disallows rerouting getting invoked when a call covers through a qsig-mwi hunt group. Available only if the messaging type is qsig-mwi and Supplementary Services with Rerouting is enabled for the system.
Service Level Interval	The time interval when Actual Service Level (ASL) calculations run. ASL is one of the Service Level Maximizer (SLM) algorithms used for most situations, particularly for low staff or low traffic. The interval can be set to the same interval used when specifying the target objectives for the application. Available only if Actual is administered for the SLM algorithm feature and this is an SLM-type hunt group. Valid entries are: • hourly: ASL algorithm calculations for accepted call and total call components are set to 0 at hourly intervals. • daily: ASL algorithm calculations for accepted call and total call components are set to 0 at daily intervals. This is the default. • weekly: ASL algorithm calculations for accepted call and total call components are set to 0 at weekly intervals. The weekly interval starts as 00:00 hours on Sunday.
Service Level Supervisor	Enables or disables Service Level Supervisor for this skill. Service Level Supervisor is a Business Advocate feature that alleviates the need to move agents from skill to skill during emergencies or unanticipated peaks in call volume. Available only if ACD is enabled for the hunt group and this is an Expert Agent Selection (EAS) skill hunt group. Requires Business Advocate software.
Service Level Target (% in sec)	This field when the ACD field is set to y, the Measured field is not blank, and when one or more of the following features are active. • BCMS and/or VuStats Service Level (BCMS/VuStats Service Level customer option license is active and the hunt group `Measured` field is set to `internal` or `both`). The service level target seconds component is used as the acceptable level for reporting the percentage of calls answered within the specified time. The percentage can be left set to the default of `80%`. • Business Advocate (Business Advocate customer option license is active). The service level target in seconds is used for the Business Advocate Service Level Supervisor Objective. This service level target can also be used for the dynamic percentage adjustment when the **Dynamic Threshold Adjustment** field on the Hunt Group screen is `y` and for the dynamic percent adjustment when the **Group**

Field	Description
	Type field on the Hunt Group screen is pad and the **Dynamic Percent Adjustment** field on the Hunt Group screen is set to `y`. • Service Level Maximizer service level target (Appears when the **Group Type** field on the Hunt Group screen is `slm`, the Service Level Maximizer customer option license is active and the Business Advocate customer option license is not active. • Interruptible Aux Work service level target (**Interruptible Aux Threshold** field on the Hunt Group screen is set to `service-level-target`). The Interrupt Aux feature is triggered if the service level drops below the administered percent calls in the specified seconds.
Service Objective	Sets a service objective for a specific skill as the number (quantity) of elapsed seconds before the call gets answered. Valid entries are 1 to 9999. The default value is 20. **Note:** Available only if ACD is enabled for the hunt group and this is an Expert Agent Selection (EAS) skill hunt group. Requires Business Advocate software be active.
Skill	Enables or disables this hunt group as an Expert Agent Selection (EAS) skill. Available only if ACD is enabled for the hunt group and EAS is enabled for the system.
SLM Count Abandoned Calls	If set as `y` abandoned calls are included in the Actual Service Level (ASL) algorithm calculations for SLM. If set as `n` abandoned calls are not included in the ASL algorithm calculations for SLM. This option is best used when reporting for this application does not account for calls that are abandoned while in skill queues. **Note:** Available only if Actual is the administered Service Level Maximizer (SLM) algorithm for the feature and this is an SLM-type hunt group.
Supervisor Extension	The extension number of the ACD split/ skill supervisor that agents reach when using the Supervisor Assist feature. The extension number cannot be a Vector Directory Number (VDN). Available only if ACD field is enabled for the system.
Time Warning Threshold	The specified Time Warning Threshold activates Interruptible Aux if the oldest call has been in the queue for longer than the specified number of seconds. If Time Warning Threshold is set to 60, interruptible agents start getting interrupted as soon as the duration of the oldest call in the queue for a hunt group exceeds 60 seconds. An entry of 0 provides a warning whenever a call is queued.

Field	Description
	When Interruptible Aux is activated, the system flashes the Queue status lamps (feature buttons assigned members telephones) and the Auxiliary Queue Time Warning lamp assigned to the relevant skill. Valid entry: 0 to 999 Available only if a queue is enabled for the hunt group and if a port number is not administered for the call warning and time warning ports.
Timed ACW Interval (sec)	The number of seconds an agent in auto-in work mode remains in After Call Work (ACW) mode after a call drops. After this time interval expires, the agent automatically becomes available. Timed ACW cannot be administered if the hunt group is adjunct controlled or is an AUDIX Message Center. Valid entries are 1 to 9999. **Note:** This field can be overridden by the settings administered for a vector. Coordinate the settings when setting up delays. This field is available only if ACD is enabled for the hunt group and Timed ACW is enabled for the system.
(Timed ACW Interval (sec))**After Xfer or Held Call Drops?**	For incoming ACD or Direct Agent Calling (DAC) calls, an auto-in agent is placed into Timed After Call Work (TACW) mode, instead of immediately making the agent available (idle), if the caller drops a held call or the agent transfers the call. You can enable this feature for the agents in a hunt group or for calls delivered from a Vector Directory Number (VDN) when the **Timed ACW Interval** field is set to a non-0 value.
TN	The Tenant Partition number. Valid entry is 1–100.
Total Administered Members	The total number of members administered for the hunt group.
Vector?	Enables or disables this hunt group as vector controlled. Available only if Basic Vectoring is enabled for the system.
Voice Mail Handle	The SIP Enablement Services (SES) handle that can receive voice mail. Can be left blank if a Voice Mail Number has been assigned.
Voice Mail Number	The 1- to 17-digit voice mail dial-up number. The qsig-mwi selection shows the complete number of the AUDIX hunt group on the Message Center server for QSIG MWI. The fp-mwi selection shows the public network number of the AUDIX hunt group on the Message Center server. Available only if Basic Call Setup and Basic Supplementary Services are enabled for the system, and the messaging type is qsig-mwi or fp-mwi.
VuStats Objective	Enter a numerical objective for the call. An objective is a split or skill goal for the call. This could be an agent objective such as a specific number of calls handled or an average talk time. The

Field	Description
	objective could also be a percent within the service level. The objective appears on the VuStats display and allows agents and supervisors to compare the current performance against the value of the objective for the split or skill. This value applies to customized VuStats display formats. Valid entries are 0 to 99999. **Note:** Available only if ACD is enabled for the hunt group and VuStats is enabled for the system. Also, the hunt group must be administered to collect internal or both internal and external measurement data for VuStats.

Hunt Group administration commands

You can use the commands listed in the table below to administer the Hunt Group screen.

Action	Object	Qualifier
add	hunt-group	1-system limit, or next
change	hunt-group	1-system limit, or next
display	hunt-group	1-system limit, or next number - to-number count schedule
remove	hunt-group	1-system limit, or next
list	hunt-group	1-system limit number - to-number name type ext count schedule

Policy Routing Table screen

Use this screen to implement and monitor percentage allocation routing by assigning destination routes and target percentages.

For more details and application examples of Policy Routing Table and Percentage Allocation Routing, the see *Avaya Aura™ Call Center Feature Reference* document.

Related topics:

Policy Routing Table screen field descriptions on page 50
Policy routing table screen administration commands on page 51

Policy Routing Table screen field descriptions

Field	Description
Number	Displays the table number that you entered on the command line.
Name	Enter a string of up to 15 characters as the name of the Policy Routing Table (PRT) table. Any alpha-numeric character is valid. Default is blank.
Type	Specify the type of algorithm the PRT table supports. Currently, the only valid entry in this field is percentage, as only Policy Routing Tables for Percentage Allocation are initially supported .
Period	Specify the period for resetting the call counts and actual percentages. Following are the valid entries for this field: • **100_count (default)**: Resets the call counts (and displayed %) when total calls for the PRT reach 100, which is when the total calls match the target routing pattern percentages. This ensures that the routing points have equal distribution of calls all the time. • **max_count**: Call counts are maintained until calls delivered to at least one of the VDNs exceed 65,400. At that point calls are continued to be distributed over the VDNs but the call counts are reset when the actual percentages equal the targets for all of the VDNs at the same time. • **Half-hour**: Resets the call counts at the top of the hour and at the 30 minute point. • **hour**: Resets the call counts at the top of the hour. • **daily**: Resets the call counts at midnight, every night. • **weekly**: Resets the call counts at midnight on Saturday.
Index	Displays the sequential number of the row. You can enter upto 15 route to VDN entries in a PRT table.
Route-to VDN	Enter up to 13-digit long valid and assigned VDN extension to which calls are to be routed. Default is blank.
VDN Name	Displays the assigned name of the VDN specified in the **Route-to VDN field** or “name not assigned” if the VDN name is not assigned yet. The name must be assigned or changed on the VDN form.

Field	Description
Target %	Specifies the target percent of total calls to be routed to a VDN. Valid entries are 0 to 100. Use whole numbers only, no fractions.
Actual %	Displays the actual percentage of total calls routed to a VDN when this screen is requested. Actual % is calculated to 6 decimal places, but only the first decimal place is displayed.
Call Counts	This column displays the current number of calls routed to a VDN.
Totals	This field displays of values in the Target % and Call Counts for all the assigned VDNs in the policy routing table. The total for Target % must always add up to 100 for form submittal.

Policy routing table screen administration commands

You can use the commands listed in the table below to administer the Policy Routing Table screen.

Action	Object	Qualifier
Add	policy-routing-table	1 through 8000, or next
Change	policy-routing-table	1 through 8000, or next
Display	policy-routing-table	1 through 8000, or next
Remove	policy-routing-table	1 through 8000, or next
List	policy-routing-table	none, all PRT tables are displayed

Reason Code Names screen

Use the Reason Code Names screen to assign names to reason codes. You can assign a different name to each reason code for Aux Work and for Logout.

Related topics:

Administration commands for the Reason Code Names screen on page 52
Reason Code Names field descriptions on page 52

Administration commands for the Reason Code Names screen

Use the following administration commands to access the Reason Code Names screen.

Action	Object
display	reason-code-names
change	reason-code-names

Reason Code Names field descriptions

Make assignments as required for the following fields on the screen.

Field	Description
Aux Work	For each reason code enter the name to be associated with this reason code when the agent uses this reason code to enter an Aux Work mode. Names can be up to 16 characters long. Default is blank.
Logout	For each reason code enter the name to be associated with this reason code when the agent uses this reason code to log out. Names can be up to 16 characters long. Default is blank.
Interruptible?	For each reason code, enter /n or /y to specify whether or not the reason code is interruptible or not. /n signifies that the reason code is not interruptible and /y signifies that the reason code is interruptible.

Note:

Since the Default Reason Code cannot be made interruptible, so there is no Interruptible qualifier for that field. There are two more types of reason codes that cannot be made interruptible, IP Failure Aux Work Reason Code and Maximum Agent Occupancy Aux Work Reason Code. These two reason codes are assigned using the Reason Code page of the Feature Related System Parameter screen in the Call Center section.

Service Hours Table screen

This screen is used to specify office service hours using up to 999 different tables..

Related topics:

Service Hours Table administration commands on page 53

Service Hours Table field descriptions on page 53

Service Hours Table administration commands

Action	Object	Qualifier
add	service-hours-table	1 through 999
change	service-hours-table	1 through 999
display	service-hours-table	1 through 999
remove	service-hours-table	1 through 999
list	service-hours-table	none
list usage	service-hours-table	none

Service Hours Table field descriptions

The Service Hours Table has the following fields:

Field	Description
Number	Displays the table number that you entered on the command line.
Description	Provides a description for the table. You can enter a 1 to 27-character alphanumeric table name. The default is blank. Example: Call-ahead Reservations
Use time adjustments from location	Indicates the location number on the Locations screen that specifies how time zone offset and daylight savings time rule time adjustments are to be performed.
Start and End	Defines the range of service hours for each day of the week. Always make sure that the start time is earlier than the end time. • hour - 0-23 • minute - 0-59 The hour range must be within the specified day, from 00:00 (midnight) until 23:59. If a time range goes past midnight (for example, Friday 19:00 to Saturday 02:00), enter the time in two ranges. Set up the first range as Friday from 19:00 to 23:59 and the second range as Saturday from 00:00 to 01:59. A time is considered to be in the table from the first second of the start time (for example, 08:00:00). Also, it is still considered to be in the table until the last second of the end time (for example, 17:00:59).

Related topic

For more information about administering this feature, see the *Avaya Aura™ Call Center Feature Reference* and *Programming Call Vectors in Avaya Aura™ Call Center* documents.

Vector Directory Number screen

This screen is used to define vector directory numbers (VDNs) for the Call Vectoring feature. A VDN is an extension number used to access a call vector. Each VDN is mapped to one call vector.

VDNs are software extension numbers (that is, not assigned to physical equipment). A VDN is accessed using direct dial Central Office (CO) trunks mapped to the VDN (incoming destination or night service extension), DID (Direct Inward Dial) trunks, and LDN (Listed Directory Number) calls. The VDN may be Night Destination for the LDN.

Related topics:

VDN administration commands on page 54
Vector Directory Number field descriptions on page 55
Implementation notes for VDN on page 61

VDN administration commands

Use the following administration commands to administer the Vector Directory Number screen.

Action	Object	[7] Qualifier[7]
add	vdn	xxxxx (extension number of VDN to be added) or 'next'
change	vdn	xxxxx (extension number of VDN to be changed)
display	vdn	xxxxx (extension number of VDN to be displayed) ['print' or 'schedule']
list	vdn	xxxxx (extension number of VDN to be listed) ('count' 1-MAX) ['print' or 'schedule']
	vdn	bsr xxx (number of a BSR application plan)
remove	vdn	xxxxx (extension number of VDN to be removed)

[7] Brackets [ ] indicate the qualifier is optional. Single quotes (' ') indicate the text inside the quote must be entered exactly as shown or an abbreviated screen of the word can be entered. MAX is the maximum number available in your system configuration. For more information, see Avaya Aura™ Communication Manager Hardware Description and Reference.

Note:
The asterisks and the footnote are not visible if you have Meet-me Conferencing.

Vector Directory Number field descriptions

On your system, fields display only when certain features are enabled.

Field	Description
1st/2nd/3rd Skill	Only displayed when Expert Agent Selection is enabled on the System-Parameters Customer-Options screen. Enter the desired Skill numbers (or leave blank) in each field. Valid entries are 1-8000, or blank (default).
Allow VDN Override?	This field displays if the `Meet-me Conferencing` field is `n`. Valid entries are `y` and `n`. The default is `n`. This entry changes the active VDN for the call. • `n`: The active VDN is not replaced by the routed-to VDN. • `y`: The active VDN is replaced by the routed-to VDN. The routed-to VDN is then used for the parameters associated with the call. For more information about VDN Overrides and the parameters, see *Programming Call Vectors in Avaya Aura™ Call Center*.
Attendant Vectoring?	When Attendant Vectoring is optioned, a field on the VDN screen identifies if this is an Attendant Vectoring VDN. If this field is `n`, there are no changes on the VDN screen. If this field is `y`, the screen appearance changes (see below). When removing a VDN, validation verifies that this VDN is not being used on either the Console Parameters screen or the Tenant Partitioning forms.
AUDIX Name	If this VDN is associated with the AUDIX vector, enter the name of the AUDIX machine as it appears in the Adjunct Names screen.
BSR Application	To use multi-site Best Service Routing with this VDN, enter a 1- to 3-digit number to specify an application plan for the VDN. This field only appears if Look-Ahead Interflow (LAI) and Vectoring (Best Service Routing) are enabled on the System Parameters Customer-Options screen.
BSR Available Agent Strategy	The available agent strategy determines how Best Service Routing identifies the best split to service a call in an agent surplus situation. To use Best Service Routing with this VDN, enter an agent selection strategy in this field. Acceptable entries are 1st-found, Uniform Call Distribution - Least Occupied Agent, Uniform Call Distribution - Most Idle Agent, Expert Agent Distribution -Least Occupied Agent, and Expert Agent Distribution - Most Idle Agent.

Field	Description
	This field only appears if Vectoring (Best Service Routing) is enabled on the System Parameters Customer-Options screen and a value other than `1st-found` is set in the **BSR Tie Strategy** field.
BSR Local Treatment?:	In a multi-site BSR configuration, a call that arrives at a local communication server can be rerouted to a remote server located in a different part of the world. This feature allows you to provide local audio feedback for IP and ISDN calls while a call waits in queue on a remote server. For more information about this feature, see *Avaya Aura™ Call Center Feature Reference*.
BSR Tie Strategy	This field appears only if **Vectoring** (Best Service Routing) is set to `y` on the System Parameters Customer-Options screen. • system: The setting in the **BSR Tie Strategy** field on the Feature-Related System Parameters screen applies. This is the default setting. • 1st-found: BSR uses the previously selected best choice as the best skill or location. • alternate: Alternates the BSR selection algorithm when a tie in EWT or available agent criteria occurs. Every other time a tie occurs for calls from the same VDN, the consider step with the tie is selected to send the call instead of the first selected split, skill, or location. This helps balance the routing when the cost of routing remotely is not a concern. For more information about the Alternate Selection on BSR Ties feature, see Alternate Selection on BSR Ties.
COR	Enter a 1- to 3-digit number that specifies the class of restriction (COR) to be assigned the VDN. The default value is `1`. The field cannot be blank and must have an entry in the range from 0-995.
Daylight Savings Rule	This field is used with the **VDN Time-Zone Offset** field to define the daylight saving time rule. The daylight saving time rule and the time zone offset are applied to **`goto`** time-of-day commands in the vector that is assigned to the VDN. The time-of-day calculations are based on the local time of the receiving call's VDN. The assigned rule number applies start and stop rules that are administered on the system **Daylight Savings Rule** field for that rule number. **Tip:** Use the **`list usage vdn-time-zone-offset`** command to find VDNs containing an administered daylight saving time rule. Defines the options available for call centers that use daylight savings time. • System

Field	Description
	The system uses the same daylight saving time rule as the system clock shown in the **display/set time** field. • 0: No daylight saving rule is applied. If the system time has a daylight saving rule specified, this rule is removed before evaluating the goto if time-of-day conditional. • 1–15: Indicates the rule as defined on the Daylight Savings Rule field. When you use a number other than 0, the rule associated with the main server clock display time and the main server offset are not used. The offset and rule assigned to the active VDN for the call are applied to the operating system standard time so that local time for the VDN is used to test the time-of-day step.
Destination	Specify if the calls are routed using a Vector Number or Policy Routing Table. Valid entries are **`Vector Number`** and **`Policy Routing Table`** (for more information on Policy Routing Table, see Policy Routing Table screen on page 49).
Display VDN for Route-To DAC?	The Display VDN for Route-to Direct Agent Call (DAC) option is designed to address situations where one of the following conditions is in effect: • Either a **`route-to number`** or **`route-to digits`** vector command routes an EAS direct agent call, with the coverage option set to **`y`** • An adjunct routing step routes a direct agent call, with the coverage option set to **`y`** Valid entries are `y` and `n` (default). For more information, see *Programming Call Vectors in Avaya Aura™ Call Center*.
Extension	Enter the extension associated with the VDN when completing a paper screen. The extension is a number that starts with a valid first digit and length as defined by the System's dial plan. This is a display-only field when using an administration command such as add or change to access the screen.
Measured	Used to collect measurement data for this VDN. Valid entries are internal, external, both, or none. Data may be collected for reporting by Basic Call Management System (BCMS) or an Avaya Call Management System (CMS) and/or an Avaya IQ. Default is none. **Note:** The BCMS feature must be enabled on the System-Parameters Customer-Options screen for the Measured field to be set to internal or both. In addition, the appropriate CMS release must be administered on the Feature-Related System Parameters screen if the field is being changed to external or both.

Field	Description
Meet-me Conferencing?	This field is available only when the Meet-me Conference feature is enabled. Valid entries are y and n. The default is n. For more information on Meet-me Conference, see *Avaya Aura™ Call Center Feature Reference*.
Name	Enter up to a 27-character alphanumeric name that identifies the VDN. This is an optional field that need not contain any data. The name may be truncated on agents' displays depending on the application. When information is forwarded with an interflowed call, only the first 15 characters are sent. Default is blank.
Observe on Agent Answer?	Valid entries are y and n (default). This entry allows for a service observer to start observing of a call to the VDN when the call is delivered to the agent or the station.
Reporting for PC Predictive Calls?	Activates the Improved Integration with Proactive Contact Outbound Calling feature. Use this field if you have switch-classified outbound calling. Valid entries are y and n. The default is n. For more information about this feature, see Proactive Contact outbound calling improved reporting.
Return Destination	The VDN extension number to which an incoming trunk call will be routed if it returns to vector processing after the agent drops the call. Valid entries are the VDN extension, or blank (default).
Send VDN as Called Ringing Name Over QSIG?	Enter y to display the VDN name to the receiver when the telephone is ringing. Enter n to hide the VDN name from the receiver when the telephone is ringing. Default value is n.
Service Objective (sec)	Displayed in one of two cases: • When the **BCMS/VuStats Service Level** option is enabled on the System-Parameters Customer-Options screen and the **Measured** field is internal or both. Enter the number of seconds within which calls to this VDN should be answered. This will allow BCMS to print out a percentage of calls that were answered within the specified time. Valid entries are 0 through 9999 seconds. Default is blank. • When the **Dynamic Advocate customer** option is set on the System-Parameters Customer-Options screen. This field enables the Dynamic Queue Position feature which is sometimes referred to as Service Objective by Vector Directory Number (VDN). This feature allows you to queue calls from multiple VDNs to a single skill, while maintaining different service objectives for those VDNs. Enter the service level, in seconds, that you want to achieve for the VDN. Valid entries are 1 through 9999. The default value is 20.
TN	Enter the Tenant Partition number. Valid entries are 1-100. The default value is 1.

Field	Description
VDN of Origin Annc. Extension	Only displayed if VDN of Origin Announcements (VOA) is enabled on the System-Parameters Customer-Options screen. Enter the extension number of the VDN of Origin announcement. Default is blank.
VDN Timed ACW Interval	When a value is entered in this field, an agent in auto-in work mode who receives a call from this VDN is automatically placed into After Call Work (ACW) when the call drops. Enter the number of seconds the agent should remain in ACW following the call. When the administered time is over, the agent automatically becomes available. This field has priority over the **Timed ACW Interval** field on the Hunt Group screen.
(VDN Timed ACW Interval) **After Xfer or Held Call Drops?**	For incoming ACD or Direct Agent Calling (DAC) calls, an auto-in agent is placed into Timed After Call Work (TACW) mode, instead of immediately making the agent available, if the caller drops a held call or the agent transfers the call. You can enable this feature for the agents in a hunt group or for calls delivered from a VDN when the **Timed ACW Interval** field is set to a non-0 value.
VDN Override for ASAI Messages*	When Meet-me Conferencing is n, an asterisk (*) appears next to the field name, indicating that this field follows VDN override rules when the system changes the "active" VDN for a call. This field appears only if the following conditions are set on the Communication Manager license file: • On the System Parameters Customer-Options (Optional Features) screen, the **ASAI Link Core Capabilities** field is `y`. • On the System Parameters Customer-Options (Optional Features) screen, the **G3 Version** field is set to `V10` or later. Additionally, you can set this field to `ISDN Trunk` or `all` only when the **Allow VDN Override** field on this VDN screen is also set to `y`. When **Meet-me Conferencing** is `n`, an asterisk (*) appears next to the field name, indicating that this field follows VDN override rules when the system changes the "active" VDN for a call. The “active” VDN is the VDN receiving the call and will be changed to a routed to VDN if the VDN routing the call has the **Allow VDN Override** field set to `y`.

Valid entries	Usage
n	The "Called Number" information sent for the "Call Offered," "Alerting," "Queued," and "Connect" ASAI event notification messages and the adjunct-request message is always the called VDN extension in the Called Number IE (Information Element) sent in the incoming ISDN SETUP message or the local call’s called number and does not change

Field	Description
	<table><tr><th>Valid entries</th><th>Usage</th></tr><tr><td></td><td>after routing to the called VDN and subsequent routed to VDNs.</td></tr><tr><td>ISDN Trunk</td><td>When an incoming ISDN trunk call is routed to this VDN, the "Called Number" information sent in the ASAI event and "Adjunct Route Request" ASAI messages, is the "active VDN" extension that becomes associated with the call based on the VDN Override rules. This option does not apply to local/ internal calls.</td></tr><tr><td>all</td><td>Options the VDN Override feature for the ASAI messages as above so that the active VDN is used for the called number for all types of calls to the VDN including local/ internal calls as well as external incoming ISDN trunk calls.</td></tr></table>
VDN Time-Zone Offset	This field is applied against the communication server clock when a time of day vector command is executed. Daylight savings time changes are handled by the communication server clock using the existing operation. Based on a syntax of +HH:MM, the valid entries are: [+ or -] [0 - 23] : [0 - 59] The default is `+00:00`. When the default is set, the system communication server time is used without modification. Following are the valid entries in this field: • *+ or -*: Use the - sign if the VDN local time is earlier than the server local time. Use the + sign if the VDN local time is later than the server local time. For example, if the server local time is in Eastern Standard Time and the local time used for calls to the VDN is Mountain Standard Time, use - 2:00. • *0 - 23*: Time in hours • *0 - 59*: Time in minutes For more information about this feature, see VDN Time Zone Offset.
(VDN VARIABLES*) **Var**	The number assigned to the VDN variable.
(VDN VARIABLES*) **Description**	A description of the VDN variable. Accepts up to 15 characters.

Field	Description
(VDN VARIABLES*) **Assignment**	Enter an up to 16-digit un validated decimal number to each of the VDN variables V1 through V5. If blank, no decimal number is assigned to the VDN variable.

Implementation notes for VDN

- The BCMS feature must have been optioned if the **Measured** field is set to `internal` or `both`. In addition, the appropriate CMS release must be administered on the Feature-Related System Parameters screen if the field is being changed to `external` or `both`.
- The 1st/2nd/3rd Skill fields are only displayed when Expert Agent Selection is enabled on the System-Parameters Customer-Options screen.
- The **BCMS Acceptable Service Level (sec)** field is only displayed if the **BCMS Acceptable Service Level** option is enabled on the System-Parameters Customer-Options screen and the **Measured** field is `internal` or `both`.
- Data for the Orig Annc column appears only when VDN of Origin Announcement is enabled on the System-Parameters Customer-Options screen.
- To list all VDNs using the same BSR Application Plan, type the administration command **`list VDN BSR xxx`** (xxx is the number of the BSR Application Plan used by one or more VDNs).
- To associate VDNs and vectors for attendant vectoring, a field has been added to both the VDN and the Call Vectoring forms to indicate attendant vectoring. When attendant vectoring is indicated for VDNs and vectors, all call center-associated fields (such as Skills and BSR) are removed.

Vector Routing Table screen

This screen is used to store ANI or Digits that you refer to in goto vector steps. It is available to you only if the **Vectoring (G3V4 Enhanced)** field on the System-Parameters Customer-Options screen is set to y.

For more information, refer to Call Vectoring.

Related topics:

Vector Routing Table administration commands on page 62
Vector Routing Table field descriptions on page 62

Vector Routing Table administration commands

You can use the commands listed in the table below to administer Vector Routing Tables. In addition, you can use the **`List Usage`** command to see the vectors and digit fields used by a /.

Action	Object	Qualifier
`add`	vrt	1 through 999, or next
`change`	vrt	1 through 999, or next
`display`	vrt	1 through 999, or next
`remove`	vrt	1 through 999, or next
`list`	vrt	none - all Routing Tables will display

Vector Routing Table field descriptions

Make assignment as required for the following fields on the screen.

Field	Description
Name	Enter a 1 to 15-character alphanumeric table name. You may leave this field blank. Default is blank.
Number	This is the table number that you entered on the command line. It is a display only field.
Number (1–32)	Enter a number. Default is blank. Entries in this field also can include the + and/or ? wildcard. The + represents a group of digits. The ? represents a single digit. The field is limited to 16 characters and these characters are restricted as follows: • You may enter only a plus sign (+), a question mark (?), or the numbers 0 through 9. No other entries are valid. • You may enter one plus sign (+) as either the first or last character in the number field. However, you cannot use this character as the sixteenth character of the number field. • You may use as many question marks (?) as you wish, anywhere in the number field. • You may not embed blanks in the number field. • You may leave the field entirely blank. If you leave the field blank, the communication server will store the entry as a null value.

Field	Description
Sort	Enter y if you want the digit fields to be sorted. Default is n. If you elect not to sort the numbers, they will remain in the order that you entered them. If you elect to sort the number fields, they will be sorted as described below. Remember that leading zeros are significant. That means that 02 will sort ahead of a 2 followed by a space. • Any Plus signs (+) will sort first. • Any question marks (?) will sort second. • All numbers (0-9) will sort last.

VuStats Display Format screen

Use the VuStats Display Format screen to define the content and layout of information on VuStats telephone displays. The system has 50 different display formats; the first display is a predefined example format, which can be changed; displays 2 through 50 are blank. Each display format can contain up to ten data items. However, the amount of data to be displayed is limited to 40 characters, due to the physical limitations on display telephones.

Related topics:

VuStats Display Format administration commands on page 63
VuStats Display Format field descriptions on page 64

VuStats Display Format administration commands

Use the following administration commands to access the VuStats Display Format screen.

Action	Object	[8] Qualifier[8]
change	vustats-display-format	1-50
display	vustats-display-format	1-50
list	vustats-display-format	1-50 count ##

[8] Specify a number from 1 to 50 to indicate the number of the display format to be to changed or displayed. Count ## is the number of display formats to list.

VuStats Display Format field descriptions

Field name	Description
Data Field Character	The character that will be used in the Format Description field to identify the position and length of each data field (see the Format Description field description). The default is $. Enter another character if the $ is needed for fixed text in the Format Description field. Any character is valid except a space.
Display Interval	The interval, in seconds, for which data is displayed if no update is entered in the Update Interval field. Enter one of the following values: • 5 - Display clears after 5 seconds • 10 - Display clears after 10 seconds • 15 - Display clears after 15 seconds • 30 - Display clears after 30 seconds • not cleared - The display does not clear, and the data appears until the display is used for another operation or until you press the Normal button.
Format Description	The definition of the layout for the 40-character display. Specify the starting position and the length of the data items by entering, for each data field, an optional label for the field followed the appropriate number of data field characters (such as $s). Each $ represents one character in the display. For example, if the data will be a maximum of five characters long, enter $$$$$. Some data types have preset maximum field length limits based on the communication server administration. For example, the data type acceptable-service-level is taken from the BCMS Acceptable Service Level field on the Hunt Group and Vector Directory Number forms; on this screen, the field allows a maximum number of four characters. Therefore, for the acceptable-service-level, you should not create a VuStats display field that consists of more than four characters (that is, $$$$). Other data types have similar limits. Field lengths for data items that appear as time must match the value in the Format field, which is discussed below. Remember to account for possible colons when the display will be in a time format. Format descriptions can be all text (such as a message of the day) or they can be all data fields, in which case users will have to memorize the labels or use customer-provided overlays above or below the display. If the numeric data for a field is too large for the number of data field characters entered, the VuStats display will show asterisks instead of data. If name database items are too large for the number of data field characters, the VuStats display will truncate the data to fit the data field size. The split or skill objective, as entered on the Hunt Group screen, displays as asterisks if the information exceeds the data field size.

Field name	Description
	If the data for a field is too large for the number of data field characters entered, VuStats displays asterisks. If name database items are too large for the number of data field characters, VuStats truncates the data. VuStats also displays Split/Skill Objective (assigned on the Hunt Group screen) as asterisks if the information exceeds the data field size.
Format Number	The system generates a format number automatically when it creates a VuStats display. You cannot change this number. You can create 50 different display formats. Format Number 1 is a predefined sample format that you can modify.
Next Format Number	To link this display to another display, enter the number of the display format (between 1-50) that should appear when a VuStats user presses the next button, or enter none (default). In general, you only link displays with the same object type.
Number of Intervals	Specify the number of BCMS intervals used to collect data when you have specified interval as the period for a historical Data Type. You can enter a number between 1 and 25, or blank for current interval. The default is blank. If you enter 24, and the BCMS measurement interval on the Feature-Related System Parameters screen is set to 1 hour, you will receive information on the previous 24 hours. If the BCMS measurement interval is set to half-hour, you will receive information on the previous 12 hours. You can also leave this field blank. If you do, you will receive information on the current interval.
Object Type	The type of object for which data will be displayed. Enter one of the following values: agent (for staffed agents to view their own statistics), agent-extension (for other users to view agent statistics), split or skill (default), trunk-group, or vdn. • Agent - Provides agents with their own statistics, or statistics about the splits/skills they log into. • Agent-extension - Provides supervisors with statistics about agents or the splits/skills the agents log into. VuStats can automatically display statistics for a specific agent (if you administer agent login ID or BCMS/Vustats login ID). Or, supervisors can enter the ID of any agent they want to review. • Split/Skill - Displays statistics about a specific split or skill. You must administer the split or skill as Measured (internal or both) on the Hunt Group screen. • Trunk-group - Displays statistics about a specific trunk group. You must administer the trunk group as Measured (internal or both) on the Trunk Group screen. • VDN - Displays statistics about a specific VDN. You must administer the VDN as Measured (internal or both) on the Vector Directory Number screen.

Field name	Description
Update Interval	The interval, in seconds, between display updates. Enter one of the following values: • no-update - The display is not updated, and appears only for the interval specified in the Display Interval field • polled - Updates the display hourly or half-hourly, based on the value in BCMS Measurement Interval (System-Parameters Features screen) • 10 - Updates every 10 seconds • 20 - Updates every 20 seconds • 30 - Updates every 30 seconds • 60 - Updates every 60 seconds • 120 - Updates every 2 minutes

List VuStats Display Format screen

A second VuStats Display Format screen is available with the **`list`** command. The purpose of this screen is to present the format of all, or a selected number, of VuStats displays. The List VuStats Display Format screen displays the Format Number, Next Format Number, Number of Intervals, Object Type, Update Interval, and Format Description fields, and all designated data items, including the Data Type, Format, Threshold, and Ref (split or skill reference).

Use this screen to compare VuStats displays to each other. This list presentation is most helpful when trying to see how displays are linked to each other. The screen includes the **Next** field, which contains the number of the next display (if any) to which a display is linked.

Related topics:

VuStats Display Formats field descriptions on page 66

VuStats Display Formats field descriptions

Field	Description
Format Description	The definition of the display's layout. The first line of the Format Description contains the text that precedes the data on a display plus the length of each data field (indicated by $s). The succeeding lines of the Format Description identify the data items, in the order they are to appear. The data items are the actual measurements and other information that

Field	Description
	tell how your agents, splits/skills, vector directory numbers (VDNs), and trunk groups within the call center are performing. The data items are followed by the format (if any), which identifies how the data is to appear in the display, the period and threshold (if any), and the split or skill reference (if any).
Int	Number of Intervals. The number of measurement intervals.
Next	The number of the next display if the current display is linked to (followed by) another display format, or none if the current display format is not linked to another display format.
No	Number. The unique identifying number of each display format.
Object Type	The type of object for which data will be displayed.
Update	Update Interval. The time between display updates.

VuStats fields

Required and allowed fields for agent and agent-extension data types

The following table shows the required and allowed fields for the agent and agent-extension data types.

VuStats data type	Format	Period	Threshold	Reference
acd-calls	–	required	allowed	required
agent-extension	–	–	–	–
agent-name	–	–	–	–
agent-state	–	–	–	required
average-acd-call-time	required	required	allowed	–
average-acd-talk-time	required	required	allowed	required
average-extension-time	required	required	allowed	–
call-rate	–	required	allowed	–
current-reason-code	–	–	allowed	–
current-reason-code-name	–	–	allowed	–
elapsed-time-in-state	–	–	–	–
extension-calls	–	required	allowed	–

VuStats data type	Format	Period	Threshold	Reference
extension-incoming-calls	–	–	allowed	–
extension-outgoing-calls	–	–	allowed	–
percent-acd-call-time	–	required	allowed	–
shift-acd-calls	–	–	allowed	required
shift-aux-time-1	required	–	allowed	–
shift-aux-time-2	required	–	allowed	–
shift-aux-time-3	required	–	allowed	–
shift-aux-time-4	required	–	allowed	–
shift-aux-time-5	required	–	allowed	–
shift-aux-time-6	required	–	allowed	–
shift-aux-time-7	required	–	allowed	–
shift-aux-time-8	required	–	allowed	–
shift-aux-time-9	required	–	allowed	–
shift-aux-time-all	required	–	allowed	–
shift-aux-time-default	required	–	allowed	–
shift-aux-time-non-default	required	–	allowed	–
shift-aux-time-reason-code	required	–	allowed	–
shift-average-acd-talk-time	required	–	allowed	required
skill-level	–	–	–	required
split-acceptable-service-level	required	–	–	required
split-acd-calls	–	required	allowed	required
split-after-call-sessions	–	–	allowed	required
split-agents-available	–	–	allowed	required
split-agents-in-after-call	–	–	allowed	required
split-agents-in-aux-1	–	–	allowed	required
split-agents-in-aux-2	–	–	allowed	required
split-agents-in-aux-3	–	–	allowed	required
split-agents-in-aux-4	–	–	allowed	required
split-agents-in-aux-5	–	–	allowed	required
split-agents-in-aux-6	–	–	allowed	required
split-agents-in-aux-7	–	–	allowed	required

VuStats data type	Format	Period	Threshold	Reference
split-agents-in-aux-8	–	–	allowed	required
split-agents-in-aux-9	–	–	allowed	required
split-agents-in-aux-all	–	–	allowed	required
split-agents-in-aux-default	–	–	allowed	required
split-agents-in-aux-non-default	–	–	allowed	required
split-agents-in-other	–	–	allowed	required
split-agents-on-acd-calls	–	–	allowed	required
split-agents-on-extension-calls	–	–	allowed	required
split-agents-staffed	–	–	allowed	required
split-average-acd-talk-time	required	required	allowed	required
split-average-after-call-time	required	–	allowed	required
split-average-speed-of-answer	required	required	allowed	required
split-average-time-to-abandon	required	required	allowed	required
split-call-rate	–	–	allowed	required
split-calls-abandoned	–	required	allowed	required
split-calls-flowed-in	–	required	allowed	required
split-calls-flowed-out	–	required	allowed	required
split-calls-waiting	–	–	allowed	required
split-extension	–	–	–	required
split-name	–	–	–	required
split-number	–	–	–	required
split-objective	–	–	–	required
split-oldest-calling-waiting	required	–	allowed	required
split-percent-in-service-level	–	required	allowed	required
split-total-acd-talk-time	required	required	allowed	required
split-total-after-call-time	required	required	allowed	required
split-total-aux-time	required	required	allowed	required
time-agent-entered-state	–	–	–	required
total-acd-call-time	required	required	allowed	–
total-acd-talk-time	required	required	allowed	–
total-after-call-time	required	required	allowed	–

VuStats data type	Format	Period	Threshold	Reference
total-aux-time	required	required	allowed	–
total-available-time	required	required	allowed	–
total-hold-time	required	required	allowed	–
total-staffed-time	required	required	allowed	–

Required and allowed fields for split data types

The following table shows the required and allowed fields for split data types.

VuStats data type	Format	Period	Threshold
acceptable-service-level	required	–	–
acd-calls	–	required	allowed
after-call sessions	–	–	allowed
agents-available	–	–	allowed
agents-in-after-call	–	–	allowed
agents-in-aux-1	–	–	allowed
agents-in-aux-2	–	–	allowed
agents-in-aux-3	–	–	allowed
agents-in-aux-4	–	–	allowed
agents-in-aux-5	–	–	allowed
agents-in-aux-6	–	–	allowed
agents-in-aux-7	–	–	allowed
agents-in-aux-8	–	–	allowed
agents-in-aux-9	–	–	allowed
agents-in-aux-all	–	–	allowed
agents-in-aux-default	–	–	allowed
agents-in-aux-non-default	–	–	allowed
agents-in-other	–	–	allowed
agents-on-acd-calls	–	–	allowed
agents-on-extension-calls	–	–	allowed
agents-staffed	–	–	allowed
average-acd-talk-time	required	required	allowed

VuStats data type	Format	Period	Threshold
average-after-call-time	required	–	allowed
average-speed-of-answer	required	required	allowed
average-time-to-abandon	required	required	allowed
call-rate	–	–	allowed
calls-abandoned	–	required	allowed
calls-flowed-in	–	required	allowed
calls-flowed-out	–	required	allowed
calls-waiting	–	–	allowed
oldest-calling-waiting	required	–	allowed
percent-in-service-level	–	required	allowed
split-extension	–	–	–
split-name	–	–	–
split-number	–	–	–
split-objective	–	–	–
total-acd-talk-time	required	required	allowed
total-after-call-time	required	required	allowed
total-aux-time	required	required	allowed

Required and allowed fields for VDN data types

The following table shows the required and allowed fields for the VDN data types[9].

VuStats data type	Format	Period	Threshold
acceptable-service-level	required	–	–
acd-calls	–	required	allowed
average-acd-talk-time	required	required	allowed
average-speed-of-answer	required	required	allowed
average-time-to-abandon	required	required	allowed
calls-abandoned	–	required	allowed
calls-flowed-out	–	required	allowed
calls-forced-busy-or-disc	–	required	allowed
calls-offered	–	required	allowed

VuStats data type	Format	Period	Threshold
calls-waiting	–	–	allowed
non-acd-calls-connected	–	required	allowed
oldest-calling-waiting	required	–	allowed
percent-in-service-level	–	required	allowed
total-acd-talk-time	required	required	allowed
vdn-extension	–	–	–
vdn-name	–	–	–

[9]

Required and allowed fields for trunk group data types

The following table shows the required and allowed fields for trunk group data types[10].

VuStats data type	Format	Period	Threshold
average-incoming-call-time	required	required	allowed
average-outgoing-call-time	required	required	allowed
incoming-abandoned-calls	–	required	allowed
incoming-calls	–	required	allowed
incoming-usage	required	required	allowed
number-of-trunks	–	–	–
outgoing-calls	–	required	allowed
outgoing-completed-calls	–	required	allowed
outgoing-usage	required	required	allowed
percent-all-trunks-busy	–	required	allowed
percent-trunks-maint-busy	–	required	allowed
trunk-group-name	–	–	–
trunk-group-number	–	–	–
trunks-in-use	–	–	allowed
trunks-maint-busy	–	required	allowed

[10]

[9] For a description of VDN data types, see Description of VDN data types on page 83.

Description of agent and agent-extension data types

VuStats data type	Description	BCMS report: field name/column heading
acd-calls	Split/skill calls and direct agent calls answered by a staffed (logged-in) agent	**Split status/VDN Status/Agent Report: ACD CALLS**
agent-extension	The extension for a specific agent; if either BCMS/VuStats login IDs or EAS is optioned, then this shows the agent's login ID.	**Split Status: Login ID or EXT**
agent-name	The administered name for a specific agent.	**Split Status/Agent Report/Agent Summary Report: Agent**
agent-state	The agent's current work state (mode)	**Split Status: STATE**
average-acd-call- time	The average of hold-time plus talk-time.	None
average-acd-talk- time	The average time a specific agent has spent talking on completed ACD calls during a specified time period for all internally-measured splits/skills that the agent was logged into. This does not include the time a call was ringing or was on hold at an agent's terminal.	**Agent Report/Agent Summary Report: AVG TALK TIME**
average-extension-time	The average amount of time an agent spent on non-ACD calls while logged into at least one split/skill during the reported interval. This average does not include time when the agent was holding the EXTN call.	**Agent Report/Agent Summary Report: AVG EXTN TIME**
call-rate	The current rate of ACD calls handled per agent per hour for all split/skills.	None
current-reason-code	The number of the reason code associated with the agent's current AUX work mode, or with the agent's logout.	None
current-reason-code-name	The name of the reason code associated with the agent's current AUX work mode or with the agent's logout.	None

[10] For a description of trunk group data types, see Description of trunk group data types on page 85.

VuStats data type	Description	BCMS report: field name/column heading
elapsed-time-in-state	The amount of time a staffed agent has been in the current state.	None
extension-calls	The number of incoming and outgoing non-ACD calls that an agent completed while logged into at least one split/skill.	**Agent Report: EXTN CALLS**
extension-incoming-calls	The number of non-ACD calls that an agent receives while logged into at least one split/skill.	**Split Report: EXT IN CALLS**
extension-outgoing-calls	The number of non-ACD calls that an agent places while logged into at least one split/skill.	**Split Report: EXT OUT CALLS**
percent-acd-call-time	The current calculated occupancy for the staffed agent. This data type indicates the percentage of time the agent talks and holds ACD calls, and is calculated as: ACDtime + hold time (ACD calls only) / (staffed time in interval + 100) The calculation is listed in the **occupancy** field of the Station Status screen.	None
shift-acd-calls	The number of ACD calls answered by an agent during the administered period.	None
shift-aux-time-1	The amount of time an agent has spent in AUX work mode for reason code 1 during the administered period.	None
shift-aux-time-2	The amount of time an agent has spent in AUX work mode for reason code 2 during the administered period.	None
shift-aux-time-3	The amount of time an agent has spent in AUX work mode for reason code 3 during the administered period.	None
shift-aux-time-4	The amount of time an agent has spent in AUX work mode for reason code 4 during the administered period.	None
shift-aux-time-5	The amount of time an agent has spent in AUX work mode for reason code 5 during the administered period.	None
shift-aux-time-6	The amount of time an agent has spent in AUX work mode for reason code 6 during the administered period.	None

VuStats data type	Description	BCMS report: field name/column heading
shift-aux-time-7	The amount of time an agent has spent in AUX work mode for reason code 7 during the administered period.	None
shift-aux-time-8	The amount of time an agent has spent in AUX work mode for reason code 8 during the administered period.	None
shift-aux-time-9	The amount of time an agent has spent in AUX work mode for reason code 9 during the administered period.	None
shift-aux-time-all	The amount of time an agent has spent in AUX work mode for all reason codes during the administered period.	None
shift-aux-time-default	The amount of time an agent has spent in AUX work mode for the default reason code (code 0) during the administered period.	None
shift-aux-time-non-default	The amount of time an agent has spent in AUX work mode for reason codes 1 through 99 during the administered period.	None
shift-aux-time-reason-code	The amount of time an agent has spent in AUX work mode for the agent's current reason code during the administered period.	None
shift-average-acd- talk-time	The average talk time for ACD calls for a specific agent during the administered period.	None
skill-level	The skill level at which the skill was assigned to the agent.	None
split-acceptable-service-level	The number of seconds within which calls must be answered to be considered acceptable as identified on a per-hunt group basis with timing beginning when the ACD call enters the hunt group queue.	Split Status: Acceptable Service Level
split-acd-calls	Split/skill calls and direct agent calls answered by an agent.	**System Status/Split Report/Split Summary Report: ACD CALLS**

VuStats data type	Description	BCMS report: field name/column heading
split-after-call-sessions	The number of times all agents have entered After Call Work (ACW) for a specific split/skill.	None
split-agents-available	The number of staffed (logged-in) agents currently available to receive ACD calls for a specific split. This includes agents in auto-in or manual-in work mode.	**Split Status: Avail**
split-agents-in-after-call	For a specific split, the number of agents currently in After Call Work (ACW).	**Split Status: ACW**
split-agents-in-aux-1	For a specific skill, the number of agents currently in Aux work mode with reason code 1.	None
split-agents-in-aux-2	For a specific skill, the number of agents currently in Aux work mode with reason code 2.	None
split-agents-in-aux-3	For a specific skill, the number of agents currently in Aux work mode with reason code 3.	None
split-agents-in-aux-4	For a specific skill, the number of agents currently in Aux work mode with reason code 4.	None
split-agents-in-aux-5	For a specific skill, the number of agents currently in Aux work mode with reason code 5.	None
split-agents-in-aux-6	For a specific skill, the number of agents currently in Aux work mode with reason code 6.	None
split-agents-in-aux-7	For a specific skill, the number of agents currently in Aux work mode with reason code 7.	None
split-agents-in-aux-8	For a specific skill, the number of agents currently in Aux work mode with reason code 8.	None
split-agents-in-aux-9	For a specific skill, the number of agents currently in Aux work mode with reason code 9.	None
split-agents-in-aux-all	For a specific split/skill, the total number of agents currently in Aux work mode for all reason codes.	**Split Status: AUX**

VuStats data type	Description	BCMS report: field name/column heading
split-agents-in-aux-default	For a specific split/skill, the number of agents currently in Aux work mode with the default reason code (code 0).	None
split-agents-in-aux-non-default	For a specific skill, the number of agents currently in Aux work mode with reason codes 1 through 99.	None
split-agents-in-other	The number of agents currently who: are on a call for another split, are in ACW work mode for another split, have a call on hold but are not in another state, or have a call ringing at their terminals, or are dialing a number while in AI/MI.	**Split Status: Other**
split-agents-on-acd-calls	The number of agents currently on split/skill or direct agent ACD calls for a specific split.	**Split Status: ACD**
split-agents-on-extension-calls	The number of agents in a specific split who are currently on non-ACD calls.	**Split Status: Extn**
split-agents-staffed	The number of agents currently logged into a split.	**Split Status: Staffed**
split-average-acd- talk-time	The average talk time for ACD calls during a specific period/day for a specified split.	**System Status/Split Report/Split Summary Report: AVG TALK TIME**
split-average-after-call-time	The average time for call-related ACW completed by agents for this split (the same as average-after-call-time, but only available for agent and agent-extension object types). Call-related ACW time is recorded when an agent leaves the ACW state. If an agent is in call-related ACW when an interval completes, all the ACW time will be recorded for the interval in which the agent leaves ACW.	**System Status: AVG AFTER CALL**
split-average-speed-of-answer	The average speed for answering split and direct agent ACD calls that have completed for a specified split/skill.	**System Status/Split Report/Split Summary Report: AVG SPEED ANS**
split-average-time-to-abandon	The average time calls waited in queue and ringing before abandoning.	**System Status/Split Report/Split Summary Report: AVG ABAND TIME**

VuStats data type	Description	BCMS report: field name/column heading
split-call-rate	The current rate of ACD calls handled per agent per hour for a specific split or skill.	None
split-calls-abandoned	The number of calls that abandoned from queue (provided this is the first split/skill queued to) or abandoned from ringing.	System Status/Split Report/Split Summary Report: ABAND CALLS
split-calls-flowed-in	The total number of calls for a specific split/skill that were received as a coverage point (intraflowed) from another internally-measured split/skill, or were call-forwarded (interflowed) to the split/skill.	Split Report/Split Summary Report: FLOW IN
split-calls-flowed-out	The total number of calls for a specific split/skill that successfully extended to the split/skill's coverage point, were call-forwarded out, or were answered using call pick-up.	Split Report/Split Summary Report: FLOW OUT
split-calls-waiting	The number of calls that have encountered a split but have not been answered, abandoned, or outflowed.	System Status: CALLS WAIT
split-extension	The administered extension for a split.	None
split-name	The administered name for a split/skill.	Split Report/Split Status: Split Name System Status: SPLIT
split-number	The administered number for a split/skill.	Split Report/Split Status: Split Name System Status: SPLIT
split-objective	The administered objective for a split/skill.	None
split-oldest-call-waiting	The time the oldest call has been waiting for a specific split/skill.	System Status: OLDEST CALL
split-percent-in-service-level	For a specific split/skill, the percentage of calls answered within the administered service level on the hunt group screen.	**System Status/Split Report/Split Summary Report: % WITHIN SERVICE LEVEL**
split-total-acd-talk-time	For a specified split/skill, the total time agents spent talking on split/skill calls and direct agent calls for this split.	None

VuStats data type	Description	BCMS report: field name/column heading
split-total-after-call-time	The total time an agent spent in call-related ACW for this split/skill and non-call-related ACW for any split/skill during a specific time period, excluding time spent on incoming or outgoing extension calls while in ACW.	**Split Report/Split Summary Report: TOTAL AFTER CALL**
split-total-aux-time	The total time an agent spent in AUX mode for this split/skill.	**Split Report/Split Summary Report: TOTAL AUX/OTHER**
total-acd-call-time	The total talk time plus the total hold time for split/skill and Direct Agent ACD calls.	None
total-acd-talk-time	The total time agents spent talking on split/skill calls and direct agent calls.	None
total-after-call-time	The total time an agent spent in call-related or non-call-related ACW for any split during a specific time period, excluding time spent on incoming or outgoing extension calls while in ACW. (With EAS, all non-call related ACW time is associated with the first skill logged into.)	**Agent Report/Agent Summary Report: TOTAL AFTER CALL**
total-aux-time	The total time an agent spent in AUX work for all splits/skills (simultaneously) that the agent was logged into. If an agent entered AUX in one interval, but ended AUX in another, each of the intervals will reflect the appropriate amount of time spent in the interval (agent reports also include OTHER time).	**Agent Report/Agent Summary Report: TOTAL AUX/OTHER**
total-available-time	The time an agent was available in at least one split/skill.	**Agent Report: TOTAL AVAIL TIME**
total-hold-time	The total amount of time ACD calls were on hold at a specific agent's phone. This time is the caller's hold time and is independent of the agent's state. This time does not include hold time for non-ACD calls on hold.	**Agent Report: TOTAL HOLD TIME**
total-staffed-time	The total amount of time an agent was logged into one or more splits/skills during a specific period/day. An agent is clocked for staff time as long as he or she is logged into any split.	**Agent Report: TOTAL TIME STAFFED**

Description of split data types

The following table describes the split data types.

VuStats data type	Description	BCMS report: field name/column heading
acceptable-service-level	The number of seconds within which calls must be answered to be considered acceptable. Identified on a per-hunt group basis. Timing begins when the call enters the hunt group queue.	**Split Status/Split Report: Acceptable Service Level**
acd-calls	Split/skill calls and direct agent calls answered by an agent	**Split status/VDN Status/Agent Report: ACD CALLS**
after-call sessions	The number of times all agents have entered ACW.	None
agents-available	The number of agents currently available to receive ACD calls. This includes agents in auto-in or manual-in work mode.	**Split Status: Avail**
agents-in-after-call	The number of agents currently in ACW mode.	**Split Status: ACW**
agents-in-aux-1	The number of agents currently in Aux work mode for reason code 1 for the referenced skill.	None
agents-in-aux-2	The number of agents currently in Aux work mode for reason code 2 for the referenced skill.	None
agents-in-aux-3	The number of agents currently in Aux work mode for reason code 3 for the referenced skill.	None
agents-in-aux-4	The number of agents currently in Aux work mode for reason code 4 for the referenced skill.	None
agents-in-aux-5	The number of agents currently in Aux work mode for reason code 5 for the referenced skill.	None
agents-in-aux-6	The number of agents currently in Aux work mode for reason code 6 for the referenced skill.	None

VuStats data type	Description	BCMS report: field name/column heading
agents-in-aux-7	The number of agents currently in Aux work mode for reason code 7 for the referenced skill.	None
agents-in-aux-8	The number of agents currently in Aux work mode for reason code 8 for the referenced skill.	None
agents-in-aux-9	The number of agents currently in Aux work mode for reason code 9 for the referenced skill.	None
agents-in-aux-all	The number of agents currently in Aux work mode for all reason codes for the referenced split/skill.	**Split Status: AUX**
agents-in-aux-default	The number of agents currently in Aux work mode for the default reason code (code 0) for the referenced split/skill.	None
agents-in-aux-non-default	The number of agents currently in Aux work mode for reason codes 1 through 99 for the referenced skill.	None
agents-in-other	The number of agents who currently: are on a call for another split, are in ACW work mode for another split, have a call on hold but are not in another state, or have a call ringing at their terminal, or are dialing a number from AI/MI mode.	**Split Status: Other**
agents-on-acd-calls	The number of agents currently on split/skill or direct agent ACD calls for a specific split.	**Split Status: ACD**
agents-on-extension-calls	The number of agents in a specific split who are currently on non-ACD calls.	**Split Status: Extn**
agents-staffed	The number of agents currently logged into the specified split.	**Split Status: Staffed**
average-acd-talk-time	The average talk time for ACD calls during a specific period/day for a specified split.	**System Status/Split Report: AVG TALK TIME**
average-after-call-time	The average time for call-related After Call Work (ACW) completed by agents in this split. Call-related ACW time is recorded when an agent leaves the ACW state. If an agent is in call-related ACW when an interval	**System Status: AVG AFTER CALL**

VuStats data type	Description	BCMS report: field name/column heading
	completes, all the ACW time will be recorded for the interval in which the agent leaves ACW.	
average-speed-of-answer	The average speed for answering for split/skill and direct agent ACD calls that have completed for a specified split/skill during a specified time. This includes queue time and ringing time for this split.	**System Status/Split Report: AVG SPEED ANS**
average-time-to-abandon	The average time calls waited before abandoning.	**System Status/Split Report: AVG ABAND TIME**
call-rate	The current rate of ACD calls handled per agent per hour for all split/skills.	none
calls-abandoned	The number of calls that abandoned.	**System Status/Split Report: ABAND CALLS**
calls-flowed-in	The total number of calls for a specific split that were received as a coverage point (intraflowed) from another internally-measured split, or were call-forwarded (interflowed) to the split. This does not include calls that were interflowed from a remote communication server by the Look Ahead Interflow feature.	**Split Report/Split Summary Report: FLOW IN**
calls-flowed-out	The number of calls the split extended to its coverage point, calls that call-forward out or are answered by call pickup, calls that queued to this split as a primary split and were answered or abandoned from ringing in another split.	**Split Report/Split Summary Report: FLOW OUT**
calls-waiting	The number of calls that have encountered a split/skill but have not been answered, abandoned, or outflowed.	**System Status: CALLS WAIT**
oldest-call-waiting	The time the oldest call has been waiting in the split/skill. Timing begins when the call enters the split/skill.	**System Status: OLDEST CALL**
percent-in-service-level	The percentage of calls offered to the split that were answered within the	**System Status/Split Report/Split**

VuStats data type	Description	BCMS report: field name/column heading
	service level administered on the hunt group screen.	**Summary Report: % IN SERV LEVL**
split-extension	The administered extension for a split.	None
split-name	The administered name for a split.	**Split Report/Split Status: Split Name System Status: SPLIT**
split-number	The administered number for a split.	**Split Report/Split Status: Split Name System Status: SPLIT**
split-objective	The administered objective for a split.	None
total-acd-talk-time	The total time agents spent talking on split/skill calls and direct agent calls for this split.	None
total-after-call-time	The total time agents spent in call-related or non-call-related ACW for any split during a specific time period.	**Split Report/Split Summary Report: TOTAL AFTER CALL**
total-aux-time	The total time agents spent in AUX work mode for all reason codes for the referenced split/skill during the administered period.	**Split Report/Split Summary Report: TOTAL AUX/OTHER**

Description of VDN data types

The following table describes the VDN data types.

VuStats data type	Description	BCMS report: field name/column heading
acceptable-service-level	The number of seconds within which calls must be answered to be considered acceptable. Identified on a per-VDN basis. Timing begins when the call enters the vector.	**VDN Status/VDN Report: Acceptable Service Level**
acd-calls	Split/skill calls and direct agent calls answered by an agent	**VDN Status: ACD CALLS**

VuStats data type	Description	BCMS report: field name/column heading
average-acd-talk-time	The average talk time for ACD calls during a specific period/day for a specified VDN.	**VDN Status/Split Report: AVG TALK HOLD**
average-speed-of-answer	The average speed for answering ACD and CONNect calls that have completed for a specified VDN during a specified time. This includes time in vector processing.	**VDN Status/VDN Report/VDN Summary Report: AVG SPEED ANS**
average-time-to-abandon	The average time calls waited before abandoning.	**VDN Status/VDN Report: AVG ABAND TIME**
calls-abandoned	The number of calls that abandoned.	**VDN Status/VDN Report/VDN Summary Report: ABAND CALLS**
calls-flowed-out	The total number of calls for a specific VDN that successfully routed to another VDN or off the communication server.	**VDN Status/VDN Report/VDN Summary Report: FLOW OUT**
calls-forced-busy-or-disc	The number of calls given forced busy or forced disconnect.	**VDN Status/VDN Report/VDN Summary Report: CALLS BUSY/DISC**
calls-offered	All calls offered to a VDN, including ACD calls, connected calls, abandoned calls, busy calls (calls that received a busy signal), disconnected calls (calls disconnected by the communication server), and outflow calls (calls directed to another VDN or off-communication server destination).	**VDN Status/VDN Report/VDN Summary Report: CALLS OFFERED**
calls-waiting	The number of calls that have encountered a VDN, but have not been answered, abandoned, or outflowed.	**VDN Status: CALLS WAIT**
non-acd-calls-connected	The number of non-ACD calls routed from a specific VDN that were connected to an extension.	**VDN Status/VDN Report/VDN Summary Report: CONN CALLS**
oldest-calling-waiting	The time the oldest call has been waiting in the VDN. Timing begins when the call enters the vector.	**VDN Status: OLDEST CALL**

VuStats data type	Description	BCMS report: field name/column heading
percent-in-service-level	The percentage of calls offered to the VDN that were answered within the service level administered for the VDN.	**VDN Status/VDN Report/VDN Summary Report: % IN SERV LEVL**
total-acd-talk-time	The total time agents spent talking on split/skill calls and direct agent calls.	None
vdn-extension	The extension of a vector directory number (VDN).	**VDN Status/VDN Report: VDN EXT**
vdn-name	The name of a vector directory number (VDN).	**VDN Status/VDN Summary Report: VDN NAME**

Description of trunk group data types

VuStats data type	Description	BCMS report: field name/column heading
average-incoming- call-time	Average holding time for incoming trunk calls.	**Trunk Group: INCOMING TIME**
average-outgoing-call-time	Average holding time for outgoing trunk calls.	**Trunk Group: OUTGOING TIME**
incoming-abandoned-calls	Incoming calls abandoned during a specified time period for a specified trunk group.	**Trunk Group: INCOMING ABAND**
incoming-calls	Incoming calls carried by a specified trunk group.	**Trunk Group: INCOMING CALLS**
incoming-usage	The total trunk holding time for incoming calls in hundred call seconds.	**Trunk Group: INCOMING CCS**
number-of-trunks	The number of trunks in a specified trunk group.	**Trunk Group: Number of Trunks**
outgoing-calls	The number of outgoing calls carried by a specified trunk group.	**Trunk Group: OUTGOING CALLS**
outgoing-completed-calls	The number of outgoing calls that received answer supervision or answer timeout.	**Trunk Group: OUTGOING COMP**

VuStats data type	Description	BCMS report: field name/column heading
outgoing-usage	The total trunk holding time for outgoing calls in hundred call seconds.	**Trunk Group: OUTGOING CCS**
percent-all-trunks-busy	The percent of time all the trunks in a specified trunk group were busy during a specified period/day. Timing for a call begins when the last trunk is seized.	**Trunk Group: % ALL BUSY**
percent-trunks-maint-busy	The percent of time trunks were busied out for maintenance during a specified period/day.	**Trunk Group: % TIME MAINT**
trunk-group-name	The name administered for a specific trunk group.	**Trunk Group: Trunk Group Name**
trunk-group-number	The number administered for a specific trunk group.	**Trunk Group: Trunk Group Number**
trunks-in-use	The number of trunks currently in use (not idle).	None
trunks-maint-busy	The number of trunks currently busied out for maintenance.	None

Chapter 2: Administering ACD Call Center features

Administering AAS

1. Verify that the **ACD** field is set to y on the System Parameters Customer-Options screen.
   If this field is not set to y, contact your Avaya Services representative.
2. Verify that the **ACD field screen** is set to y on the Hunt Group.

Related topics:

Forms and fields used to administer AAS on page 87

Forms and fields used to administer AAS

Screen	Field
Hunt Group	**AAS**
Agent LoginID (EAS only)	**AAS**

Administering Agent/Caller Disconnect tones

Note:
This feature requires Call Center Release 6.0 or better in the license.

The following form is used to administer the Agent/Caller Disconnect tones.

Table 1: Agent/Caller Disconnect tones

Screen	Field
System-parameters Feature-related	**Agent/Caller Disconnect Tone?**

1. On page 13 of the change system-parameters features form, set the **Agent/Caller Disconnect Tones?** field to `y`.

Forms and fields used for administering abandoned call search

screen	Field
Trunk Group • CO • FX • WATS	**Abandoned Call Search**

You administer Abandoned Call Search on a per-trunk-group basis. Administer each ground-start CO (Central Office), Foreign eXchange (FX), and WATS (Wide Area Telecommunications Service) trunk group either having Abandoned Call Search or not having it. Abandoned Call Search is not supported for tie trunks.

Forms and fields used to administer ACD

The following forms and fields are required to administer a call center.

Screen	Items or fields
System-Parameter Customer-Options	Use the **`display system-parameters customer-options`** command to verify that the options are active for the ACD and any of the following: • **Features provided in the call center software package** • **Any purchased a la carte features**

Screen	Items or fields
Date and Time	Use the **`set time`** command. If you need to configure the rules, use the **`change daylight-savings rules`** command. For Linux systems, use the Integrated Management Maintenance Web Interface to configure time.
Dial Plan	• **Feature Access Codes** • Extensions for VDNs, hunt groups, agent stations and logins, announcements, and so on.
Feature-Related System-Parameters	• System options for general PBX features • **UCID (Uniform Call Identification)** • **ISDN and SIP system options for trunks** • **Path replace while in queue or vectoring** • **CPN/ANI/ICLID** • **Vector Disconnect Timer** • **Zip Tone options** • **Station display options** • EAS (Expert Agent Selection) activation and related options • Vectoring options • Call Prompting options • BSR (Best Service Routing) options • OCM - Outbound Call Management options • Agent and Call Selection options • CMS (Call Management System) release • BCMS options
Feature Access Codes (FACs)	• Announcement Access Code • Login Access Code • Logout Access Code • After Call Work Access Codes and other work mode codes • Service Observing codes • Add/remove agent skill • Remote logout of agent • ...and so on

Screen	Items or fields
Abbreviated Dialing	For login and logout buttons and other agent-related buttons only defined using Facility Access Codes (FACs).
Class of Service	Feature access capabilities for agent and supervisor stations (recording announcement using telephone required console permissions)
Trunk Groups	All In the **Group Number** field, assign consecutive Group Numbers to trunk groups when you are using two or more trunk groups to support ACD applications.
Stations	Feature buttons Agent answering options, and so on
Hunt Groups	All When the **ACD** field is set to y, complete the fields that apply. In the **AAS** field, enter y to enable Auto-Available Split/Skill. See Auto-Available Split/Skill for more information.
Agent Login ID (EAS only)	All
Media Gateway	**Administer gateway-announcement board**
Enable announcement-board	As required
Announcement/Audio Sources	All
VDNs	• **Vector numbers** • **VDN-related parameters**
Call Vectors	**Programming for call handling**

Forms and fields required for the Add/Remove Skills

screen	Field
Class of Restriction (COR)	**Add/Remove Agent Skills**
Feature Access Code (FAC)	**Add Agent Skills** **Remove Agent Skills**
Language Translations	41-44 on Page 5
Hunt Group	**Skill**
Class of Service	**Administer console permissions for supervisors**

Forms and fields used for administering Agent Call Handling

screen	Field
Feature Access Code (FAC)	**Feature Access Codes for ACD features**
Hunt Group	**Forced Stroke Count or Call Work Code** **Timed ACW Interval** **After Xfer or Held Call Drops?**
Vector Directory Number	**VDN Timed ACW Interval** **After Xfer or Held Call Drops?**
Station (multi-appearance)	Button/Feature Button Assignments: • **manual-in** • **auto-in** • **aux-work** • **after-call** • **assist** • **release** • **work-code** • **stroke-cnt** **Active Station Ringing (DCP, Hybrid)** **Idle/Active Ringing (Callmaster)** **VuStats**
Stations (all)	**Auto Answer**
Attendant Console	Feature Button Assignments • after-call • assist • auto-in • aux-work • manual-in • release • work-code • stroke-cnt

screen	Field
	Auto Answer
Agent LoginID (EAS only)	All

Administering Alternate Selection on BSR Ties

1. Enter `change system-parameters customer-options`.
2. On the System-Parameters Customer-Options screen, verify that **Vectoring (Prompting)** or **Vectoring (Basic)** is enabled.
3. On the Feature Related System Parameters screen enter one of the following values in the **BSR Tie Strategy** field:
   - `1st-found` (default - results in existing operation)
   - `alternate`
4. Enter `change vdn` <`vdn number`> or `add vdn` <`vdn number`>.
5. On the VDN screen, verify that the **Attendant Vectoring?** and **Meet-me Conferencing?** fields are both set to `n`.

   Note:
   You cannot see the **BSR Tie Strategy** field if either Attendant Vectoring or Meet-me Conferencing is enabled.
6. Enter one of the following values in the **BSR Tie Strategy** field:
   - `system` (default - use the Feature Related System Parameter setting)
   - `1st-found`
   - `alternate`

   For a description of the values used for the **BSR Tie Strategy** fields, see Call Center System Parameters field descriptions on page 29 and Vector Directory Number field descriptions on page 55.

Forms and fields used to administer Avaya Business Advocate

Based on the needs and challenges of your call center, you will determine which combination of call and agent selection will give you the best results and administer those methods on the communication server. See the Call and agent selection for information about these methods.

You need to make several decisions about how to implement Avaya Business Advocate. Some of these decisions affect your call center system wide, while others affect particular Vector Directory Numbers (VDNs), skills, or agents.

The following table lists the features that are available with Avaya Business Advocate and Dynamic Advocate, the level of impact for implementing those features, and where the features are administered on the communication server.

Feature	Decision level	Administered screen
Least Occupied Agent:		
LOA (Group Type)	Skill	Hunt Group screen
ACW Considered Idle	System	Feature-Related System Parameters screen
Percent Allocation		
Percent Allocation (call handling preference)	Agent	Agent LoginID screen
PAD (Percent Allocation Disribution group type)	Skill	Hunt Group screen
Expected Call Handling Time	Skill	Hunt Group screen
Dynamic Percentage Adjustment	Skill	Hunt Group screen
Service Level Target	Skill	Hunt Group screen
ACW Considered Idle?	System	Feature-Related System Parameters screen
Auto Reserve Agents	System	Feature-Related System Parameters screen
Dynamic Queue Position		
Dynamic Queue Position	Skill	Hunt Group screen
Service Objective	VDN	Vector Directory Number screen
Service Objective		

Feature	Decision level	Administered screen
Service Objective (activate for agent)	Agent	Agent LoginID screen
Service Objective (set target objective)	Skill	Hunt Group screen
Call Selection Measurement (CWT or PWT)	System	Feature-Related System Parameters screen
Service Level Supervisor		
Service Level Supervisor (administer for skill)	Skill	Hunt Group screen
Activate on Oldest Call Waiting	Skill	Hunt Group screen
Call Selection Override	System	Feature-Related System Parameters screen
	Skill	Hunt Group screen
Other		
Overload Thresholds	Skill	Hunt Group screen
Dynamic Threshold Adjustment	Skill	Hunt Group screen
Service Level Target	Skill	Hunt Group screen
Reserve Agents	Agent	Agent LoginID screen
Predicted Wait Time (PWT)	System	Feature-Related System Parameters screen
Call Handling Preference (call selection method: Greatest Need, Skill Level, and Percent Allocation)	Agent	Agent LoginID screen
Group Type (agent selection method: Uniform Call Distribution - Most Idle Agent, Expert Agent Distribution - Most Idle Agent, Uniform Call Distribution D-Least Occupied Agent, Expert Agent Distribution - Least Occupied Agent, Percent Allocation Distribution)	Skill	Hunt Group screen

Forms and fields used to administer BCMS

The following forms and fields are required to administer the Basic Call Management System feature.

Note:

All agents should log off before any changes are made to the BCMS/VuStats Login ID screen.

Measurements can be turned off for a split or skill while agents are logged in, but agents must be logged off to start measurements for a split or skill.

Screen	Field
System Parameters Customer-Options	Enable the following options: • **ACD** • **BCMS (Basic)** • **BCMS/Service Level** • **VuStats**
Agent LoginID	When BCMS is being used with EAS, complete all fields for each agent
BCMS/VuStats Login ID	When BCMS is being used without EAS, enter a login ID and name for each agent.
Feature-Related System Parameters	Administer the following options: • **Minimum Agent-Login Password Length** • **BCMS/VuStats Measurement Interval** • **BCMS/VuStats Abandon Call Timer** • **Validate BCMS/VuStats Login IDs** • **Remove Inactive BCMS/VuStats** • **System Printer Endpoint** • **Lines per Page** • **EIA Device Bit Rate**
Hunt Groups	**Measured** **Acceptable Service Level**
Trunk Groups	**Measured**
Vector Directory Number (VDN)	**Measured** **Acceptable Service Level**

Forms and fields used to administer Call Prompting

Screen	Field
System Parameters Customer-Options	**Vectoring (Prompting)** **Vectoring (CINFO)** **ISDN-PRI - for CINFO only** This screen describes other vectoring options that may be required depending upon the application.
Feature-Related System Parameters	**Prompting Timeout**
Vector Directory Number	All
Announcements/Audio Sources	Complete all fields for each extension that provides a Call Prompting announcement
Hunt Group	**Vector**
Call Vector	Complete a screen for each Call Prompting vector
Station (multi-appearance)	**Button/Feature Button Assignments - callr-info**
Attendant Console	**Feature Button Assignments -callr-info**

If Vectoring (Basic) is not enabled on the System-Parameters Customer-Options screen, the Call Prompting feature cannot queue calls or make conditional checks based on queue or agent status, time of day, or day of week.

CINFO requires the AT&T Intelligent Call Processing (ICP) service, ISDN-PRI, and Vectoring (Prompting) all be active.

You can administer any display-equipped phone or attendant console with a Caller Information CALLR-INFO button. The button displays digits collected for the last **`collect digits`** command.

You must have Call Vectoring software for CMS to use Call Prompting (with or without Call Vectoring) with CMS.

Forms and fields required to administer Call Vectoring

The following forms and fields are required to administer the Call Vectoring feature.

Note:

Do not change a vector while it is processing calls since calls already in the vector could experience problems. Instead, add a new vector and change the VDN to point to the new vector.

Screen	Field
System Parameters Customer-Options	• **Vectoring (Basic)** • **Vectoring (G3V4 Enhanced)** • **Vectoring (G3V4 Advanced Routing)** • **Vectoring (ANI/II-Digits Routing)** • **Vectoring (Attendant Vectoring)** • **Vectoring (Holiday Vectoring)** • **Vectoring (Variables)** • **Vectoring (3.0 Enhanced)**
Vector Directory Number	All
Announcements/Audio Sources	Complete all fields for each extension that provides a vectoring announcement
Hunt Group	• **Vector** • **ACD**
Call Vector	Complete a screen for each vector
Feature-Related System Parameters	• **Vector Disconnect Timer** • **Music/Tone on Hold** • **Port** • **Music (or Silence) on Transferred Trunk Calls**
Vector Routing Table	All
Holiday Table	All

Administering Call Vectoring

Fields that do not allow VDN extensions

You can not enter a VDN extension in the fields listed in the following table.

Screen	Field
Announcements/ Audio Sources	**Extension Number**
Call Coverage Answer Group	**Group Member Assignments**
Call Coverage Paths	**Coverage Point Assignments, other than the last coverage point in a coverage path**
Console Parameters	**CAS (Centralize Attendant Service) Back-up Extension**
Feature-Related System Parameters	• **ACA (Automatic Circuit Assurance) Long Holding Time Originating Extension** • **ACA Short Holding Time Originating Extension** • **Extensions With System wide Retrieval Permission** • **Controlled Outward Restriction Intercept Treatment** • **Controlled Termination Restriction (Do Not Disturb)** • **Controlled Station-to-Station Restriction**
Hospitality	• **Extension of PMS (Property Management System) Log Printer** • **Extension of Journal/Schedule Printer** • **Extension of PMS** • **Extension to Receive Failed Wakeup LWC Messages**
Hunt Group and Agent LoginID with EAS	• **Supervisor Extension** • **Member Extensions**
Intercom Group	**Member Extensions**
Listed Directory Numbers	**LDN Extensions**

Screen	Field
Loudspeaker Paging and Code Calling Access	**Extension Numbers Assigned to Codes**
Pickup Groups	**Member Extensions**
Remote Access	**Remote Access Extension**
Station Forms	**Hunt to Station**
Terminating Extension Group	**Member Extensions**

Fields that allow VDN extensions

Screen	Field
Abbreviated Dialing Lists	
Call Coverage Paths	**Allow it as the last coverage point only in coverage path**
Hunt Group	**Night Destination**
Listed Directory Numbers	**Night Destination**
Trunk Groups	• **Night Destination** • **Incoming Destination**

You cannot enter a VDN extension as auxiliary data for the following buttons:

- **Bridged Appearance (brdg-app)**
- **Data Call Setup (data-ext)**

You can enter a VDN extension as auxiliary data for the following buttons:

- **Remote Message Waiting Indicator (aut-msg-wt)**
- **Facility Busy Indication (busy-ind)**
- **Manual Message Waiting (man-msg-wt)**
- **Manual Signaling (signal)**

Call Vectoring interactions

Interaction	Description
AP Demand Print:	A VDN cannot be used as an argument to the feature access code for AP Demand Print.
Attendant Control of Trunk Group Access:	If a **route-to** step in a vector dials a controlled trunk group, vector processing continues at the next step.
Attendant Recall	Attendant Recall to a VDN is blocked.
AUDIX Interface	A **route-to** step in a vector may call the AUDIX extension. If a voice port can be seized to that adjunct, vector processing is terminated. The system sends a message to AUDIX requesting retrieval of messages for the originating extension (not the VDN). AUDIX may also be accessed by the **queue-to split** and **check split** commands. Also, the messaging step may use an AUDIX hunt group in its operation.
Authorization Codes	If authorization codes are enabled, and if a **route-to** command in a prompting vector accesses Automatic Alternate Routing or Automatic Route Selection and the VDN's Facility Restriction Level (FRL) does not have the permission to utilize the chosen routing preference, then no authorization code is prompted for and the **route-to** command fails.
Automatic Alternate Routing (AAR)/ Automatic Route Selection (ARS)	Any **route-to** command in a vector can dial an AAR/ARS FAC followed by other digits. It cannot dial only the Facility Access Code.
Automatic Callback	Automatic Callback cannot be used for calls placed to a VDN.
Bridged Call Appearance	VDN extensions cannot be assigned to bridged appearance buttons. A **route-to** command to an extension with bridged appearances updates bridged appearance button lamps.
Busy Verification - Terminals, Trunks	Busy verification of VDNs is denied and intercept tone is returned.
Call Coverage	A VDN may be administered as the last point in a coverage path.
Call Forwarding	Calls can be forwarded to a VDN. Calls placed by a **route-to** command to an extension that has call forwarding activated are forwarded. An attendant or phone with console permission cannot activate/ deactivate call forwarding for a VDN. An attendant or phone with console permission cannot activate/ deactivate call forwarding for a vector-controlled hunt group.

Interaction	Description
Call Detail Recording	You can administer the Feature Related System Parameters screen so that the VDN extension is used in place of the Hunt Group or Agent extension. This overrides the *Call to Hunt Group - Record* option of Call Detail Recording (CDR) for Call Vectoring calls. If a vector interacts with an extension or group that has Call Forwarding All Calls active, normal Call Forwarding/CDR interactions apply. For incoming calls to a VDN, the duration of the call is recorded from the time answer supervision is returned. If answer supervision is returned by the vector, and the call never goes to another extension, then the VDN extension is recorded as the called number in the CDR record. If the call terminates to a hunt group, then the VDN, hunt group, or agent extension is recorded as the called number as per the administration described above. If the call terminates to a trunk, then the following two CDR records are generated: • An incoming record with the VDN as the called number and the duration from the time answer supervision was provided to the incoming trunk. • An outgoing record containing the incoming trunk information as the calling number and the dialed digits and the outgoing trunk information as the called number. Outgoing vector calls generate ordinary outgoing CDR records with the originating extension as the calling number. No Ineffective Call Attempt records are generated for Call Vectoring **`route-to`** commands that are unsuccessful.
Call Detail Recording - Account Code Dialing	If a **`route-to number`** command in a vector specifies an CDR account code, vector processing continues at the next step.
Call Park	Calls cannot be parked on a VDN.
Call Waiting Termination	If an extension is busy and has call waiting termination administered, the **`route-to with cov n`** operation is considered unsuccessful and vector processing continues at the next step. **`Route-to with cov y`** is successful (call will wait) and vector processing terminates.
Class of Restriction	Each VDN in the system has a Class of Restriction (COR) associated with it. This VDN COR is used to determine the calling permissions/restrictions, the AAR/ARS PGN, and the priority queuing associated with a vector.
Code Calling Access	A VDN cannot be used as the argument to the code calling access feature access code. If a **`route-to number`** command in a vector specifies the code calling feature access code, vector processing continues at the next step.

Interaction	Description
Conference	A call to a VDN can be included as a party in a conference call only after vector processing terminates for that call.
Data Restriction	Music will play on calls from data restricted extensions when the call receives music as the result of a wait-time vector step.
Facilities Restriction Level	If a **route-to** command dials an external number using AAR/ARS, the FRL associated with the VDN COR is used to determine the accessibility of a routing preference in an AAR/ARS pattern.
Facility Busy Indication	The facility busy lamp indication for a VDN is always off. A facility busy button may be used to call a VDN.
Facility Test Calls	If a **route-to number** command in a vector specifies a Facility Test Call, vector processing continues at the next step.
Forced Entry of Account Codes	If a COR requiring entry of account codes is assigned to a VDN, the **route-to number** commands executed by the associated vector are unsuccessful and vector processing continues at the next step.
Individual Attendant Access	A call sent to an attendant by a **route-to number** command can wait in the attendant priority queue. The call is removed from vector processing.
Integrated Directory	VDN names and extensions are not available in the Integrated Directory feature.
Intercept Treatment	A VDN cannot be used for Intercept Treatment.
Inter-PBX Attendant Calls	A **route-to number** command in a vector can dial the Inter-PBX Attendant. If the call attempts to access a controlled trunk group, vector processing continues at the next step.
Intraflow and Interflow	The functionality of intraflow and interflow may be obtained using the **check** and **goto** Call Vectoring commands. Calls may intraflow from an ACD split or skill that is not vector-controlled into one that is vector-controlled.
Leave Word Calling	Leave Word Calling (LWC) messages cannot be stored, canceled, or retrieved for a VDN.
Night Service	A VDN can be administered as a night service destination. **Route-to** commands that route to destinations with night service activated redirect to the night service destinations.
Priority Calling	A VDN cannot be used with the priority calling access code. Intercept tone is supplied to the user. If a **route-to number** in a vector specifies the priority calling access code, vector processing continues at the next step.
Property Management System Interface	VDNs cannot be used with the following features and functions: Message Waiting Notification, Check-In, Check-Out, Room Status, and Automatic Wakeup.

Interaction	Description
Recorded Announcement	The first announcement extension, second announcement extension, first announcement delay, second announcement delay, and recurring second announcement do not exist for a vector-controlled hunt group.
Redirection on No Answer	If an ACD split or skill or direct agent call is not answered after an administered number of rings, RONA can redirect that call to a VDN for alternate treatment.
Ringback Queuing	External call attempts made using **route-to** commands with coverage no are not queued using Ringback Queuing when all trunks are busy. External call attempts made using **route-to** commands with coverage yes are.
Route Calls to Agent by skill level	Using the skill level preference parameters, you can request a preference to route calls to an available (idle) agent who has a specified skill level or is in a skill level range. This option is specified by using the skill level preference parameters on the **check** Vectoring command. In an agent surplus condition (available-agents > 0), you can request that the call is routed to an available agent who has a specific skill level or a skill level within a specified range. If you select pref-level, the system displays only the Skill Level1 field, where you can enter a skill value of 1-16. If you select pref-range, the system displays two fields, Skill Level1 and Skill Level2. Using these two fields, you can enter a range of preference levels, such as 5 (Skill Level1) to 13 (Skill Level2). The values in both these fields need to be between 1 and 16. The number in Skill Level2 field needs to be equal to or greater than the number you enter in the Skill Level1 field. • `Skill`: Skill level preference options are only available for the check skill version of the command, not for check split or check best. • `if available-agents > 0 or greater`: This option ensures that the skill level preference is applied only in agent surplus conditions. • `all-levels`: The system ignores the skill level of the agent. This is the default value. • `pref-level`: The system displays the Skill Level1 field in which you can enter a skill level value for the agent from 1 to 16. Preference level of 1 is the best while 16 is the least. • `pref-range`: The system displays two fields, Skill Level1 and Skill Level2. Using these two fields, you can enter a range of preference levels, such as 5 (Skill Level1) to 13 (Skill Level2). The values in both these fields need to be between 1 and 16. The number in Skill Level2 field needs to be equal to or greater than the number you enter in the Skill Level1 field.

Interaction	Description

	Following is a sample vector command:
	`check skill 5 pri h if available-agents > 0 pref-range 1 to 3`
	`queue-to skill 17 pri t`
	For example, in agent surplus conditions, this feature allows you to route high-value and critical calls to the best skilled agents for this skill and route the low valued calls to trainees or novice agents who have the assigned same skill.
	For more details on syntax and usage of Check skill command and skill level preference parameters, see *Programming Call Vectors in Avaya Aura™ Call Center*.

Send All Calls	If the destination of a **route-to with coverage no** command has the Send All Calls (SAC) feature active, calls are not redirected. If there is an idle appearance, the call terminates and vector processing stops. If not, vector processing continues at the next step. If the Send All Calls button is pressed after a vector call is terminated, button activation is denied.
Time of Day Routing	Since a **route-to number** command in a vector can specify the Automatic Alternate Routing (AAR) or Automatic Route Selection (ARS) access codes, the Time-of-Day (TOD) routing algorithm can be used to route the call.
Timed After Call Work (ACW)	A Timed After Call Work (TACW) interval can be assigned to a VDN.
(Timed After Call Work) After Xfer or Held Call Drops?	For incoming ACD or DAC calls, an auto-in agent is placed into Timed ACW mode, instead of immediately making the agent available, if the caller drops a held call or the agent transfers the call. You can enable this feature for the agents in a hunt group or for calls delivered from a VDN when the Timed ACW Interval field is set to a non-0 value.
Timed Reminder	The attendant Timed Reminder is not available for calls placed, transferred, or extended to a VDN. Vectoring causes all other timers to be ignored.
Transfer	Calls can be transferred to a VDN.
Traveling Class Mark	A TCM is sent when a **route-to** command dials a seven-digit Electronic Tandem Network (ETN) or 10-digit Direct Distanced Dialed number using AAR/ARS. This TCM is the FRL associated with the VDN Class of Restriction (COR).
VDN in a Coverage Path	A call covering to a VDN can be routed to any valid destination by the call vectoring command **route-to**. The coverage option for the **route-to digits** command is disabled for covered calls. In other words, the **route-to digits with coverage=y** functions like the **route-to digits with coverage=n**

Interaction	Description
	command when processing covered calls. When the **route-to** command terminates a covered call locally, information identifying the principal and the reason for redirection are retained with the call. This information can be displayed on display phones or passed to an AUDIX or Message Center system. The class of restriction assigned to a VDN determines the partition group number (PGN). The PGN in turn determines the AAR or ARS routing tables used by **route-to** commands. When a call covers to a VDN, VDN override has no effect on the display shown on an answering display telephone. This station will show the normal display for a covered call.

Forms and fields used to enable Avaya IQ measurements

Note:

Both Expert Agent Selection (EAS) and UCID must be active for Avaya IQ measurments. Also add to the IQ and the CMS table a row for administration of the Feature Related System Parameters screen, **Reporting Adjunct Release** field, and for the Processor Channel Assignment screen.

The following forms and fields are required to enable Avaya IQ measurements:

Screen	Field
Hunt Group	**Measured**
Trunk Group (All)	**Measured**
Vector Directory Number (VDN)	**Measured**

Forms and fields used to enable CMS measurements

Screen	Field
Hunt Group	**Measured**
Trunk Group (All)	**Measured**
Vector Directory Number (VDN)	**Measured**

Screens and fields used to administer DAA

Direct Agent Announcement (DAA) enhances Direct Agent Calling (DAC) capabilities for CallVisor Adjunct-Switch Application Interface (ASAI) and Expert Agent Selection (EAS). It plays an announcement to DAC waiting in a queue. The following screens should be administered for DAA.

You must also have enabled either Expert Agent Selection (EAS) or ASAI Adjunct Routing (or both).

Screen	Field
System-Parameters Customer-Options	• **ACD** • **Vectoring (Basic)** • **Expert Agent Selection (EAS)** • or • **ASAI Adjunct Routing**
Feature-Related System Parameters	• **Direct Agent Announcement Delay** • **Direct Agent Announcement Extension**
Announcements/Audio Sources	All

Related topics:

Forms and fields used to administer Direct Agent Announcement on page 106

Forms and fields used to administer Direct Agent Announcement

Direct Agent Announcement (DAA) enhances Direct Agent Calling (DAC) capabilities for CallVisor Adjunct-Switch Application Interface (ASAI) and Expert Agent Selection (EAS). It plays an announcement to DAC waiting in a queue. The following forms should be administered for Direct Agent Announcement.

You must also have enabled either Expert Agent Selection (EAS) or ASAI Adjunct Routing (or both).

Screen	Field
System-Parameters Customer-Options	• **ACD** • **Vectoring (Basic)** • **Expert Agent Selection (EAS)**

Screen	Field
	or **ASAI Adjunct Routing**
Feature-Related System Parameters	• **Direct Agent Announcement Delay** • **Direct Agent Announcement Extension**
Announcements/Audio Sources	All

Administering DAC

To administer DAC:

1. On the Agent LoginID screen, enter the agent's direct agent (DA) skill.
2. Use the Hunt Group screen to set up a skill for all DA calls.
   This skill will:
   - Tell the switch how to handle calls to the skill.
   - Show report users how much time each agent has spent on DA calls.

   Note:
   Any agent who will receive direct agent calls should have at least one non-reserve skill assigned to the agent loginID.
3. Add the skill to the agent's administered skills on the Hunt Group screen.
   Whenever an outside caller dials the agent's extension, the switch looks at the entry in that field to determine the skill for tracking call data.
4. On page 8 of the Feature-Related System Parameters screen, you may specify:
   - A Direct Agent Announcement Extension that plays an announcement to direct agent callers waiting in queue.
   - Amount of delay, in seconds, before the announcement.
5. Administer a Class of Restriction (COR) for DA calls.
6. Use the Trunk Group screen to administer Direct Inward Dialing (DID).
7. On the second page of the Hunt Group screen, you can administer Multiple Call Handling On-Request for this hunt group.
   This feature will enable agents to see that the incoming call is a DA call and put the current call on hold to answer the DA call.

8. If there is no answer after a certain number of rings, use Redirection on No Answer (RONA) to redirect the caller to a VDN that points to a vector.

   You can set up the vector to provide appropriate routing and treatment for the redirected call.

9. On page 3 of the Hunt Group screen, administer messaging for the DA hunt group.
10. Assign this hunt group to agents who need to receive DA calls.

Administering the Display UUI station button

Administrators can set it up so that agents can press the User-to-User Information (UUI) button to display call-related information, such as customer account numbers. This UUI information includes:

- Information that an adjunct provides to Communication Manager
- Information from a remote site, such as data forwarded with the call

The station displays up to 32 characters of Adjunct Switch Application Interface (ASAI) user data associated with the call or inserted by the ASAI/CTI (Computer Telephony Integration) application.

Reason to use: The ability to display the UUI data using a station set button provides another way to provide the agent with caller information.

Administration:

Do the following:

1. Administer the **uui-info** button as a feature button using the **`change station x`** or the **`change attendant x`** commands.

   For more information about how to set up feature buttons, see *Administering Avaya Aura™ Communication Manager* .

2. Use the **`display cor x`** command to get to the CLASS OF RESTRICTION screen. There is a new field on page 2 called **Station-Button Display of UUI IE Data?**.
3. Type `y` to allow the use of this feature.

   This Class of Restriction (COR) is then assigned to the agents equipped with the button.

Forms and fields used to administer EAS

Screen	Field
System Parameters Customer-Options	• **ACD** • **Expert Agent Selection (EAS)** • **EAS-PHD** • Vectoring (Basic)
Agent LoginID	All
Hunt Group	[11] • **Skill** • **ACD** • **Vector** • Set all three fields to y.[11] • **Group Type (ucd/ead)**
Vector Directory Number	**1st/2nd/3rd Skill (optional)**
Class of Restriction	**Direct Agent Calling**
CDR System Parameters	**Record Called Agent Login ID Instead of Group or Member**
Call Vector	All
Feature-Related System Parameters	• **Expert Agent Selection (EAS) Enabled** • **Minimum Agent-LoginId Password Length** • **Direct Agent Announcement Extension/Delay** • **Message Waiting Lamp Indicates Status For**

EAS (Expert Agent Selection) must be both optioned on the System Parameters Customer-Options screen, and enabled on the Feature-Related System Parameters screen. Once EAS is optioned, you can complete most of the EAS-related administration prior to enabling the feature.

[11] If the Message Center field is set to AUDIX on the Hunt Group screen, the Skill and ACD fields must be set to y, but the Vector field can be set to either y or n.

When EAS is optioned on the System-Parameters Customer-Options screen, Skill Hunt Groups replace splits. In addition, help messages, error messages and field titles change from “Split” to “Skill ”on various forms.

Any EAS agent login ID must be part of the station numbering plan.

Physical aspects of the phone, such as the set type and button layout, are associated with the phone and not the login ID. On the Station screen with the EAS feature optioned, when a work-mode button is selected, no Gp information can be entered. The **assist** and **queue status** buttons require that Group be entered.

Switch administration for the EAS feature

Screens and fields used to administer EAS

The following table lists the screens used to administer EAS.

Table 2: EAS administration screens

Screen	Use
System-Parameters Customer-Options	The Expert Agent Selection Enabled? field on this screen changes to “y” when EAS is installed. Since both EAS and EAS-PHD are part of Elite software when you go to activate Expert Agent Selection we recommend using EAS-PHD, the **Expert Agent Selection-Preference Handling Distribution (EAS-PHD) Enabled?** field changes to “y”.
Dial plan	Use this screen to change the dial plan. It is recommended that login IDs start with a unique digit in the dial plan (for example, 5111, 5123, 5432). It is preferable to dedicate a block of numbers for login IDs. If your login IDs do not have the same first digit and the login IDs are four digits long, consider changing to a 5-digit number for login IDs. This may require a modification to the CMS login ID if the current ID is not a valid extension number or cannot be made available in the switch dial plan. EAS Agent login IDs may range from 3-digits to 13-digits and must be in the dial plan but different from assigned telephone extensions.
VDN	Use this screen to add or change VDNs and to designate skill preferences.
Vector	Use this screen to change vectors.
Hunt Group	Use this screen to add or change skill hunt groups. The **Skill?**, **ACD?** and **Vector?** fields must be all `y` or all `n`. Hunt group types should be either UCD or EAD.

Screen	Use
	You cannot administer agents on this screen when EAS is enabled.
Agent Login ID	Use this screen to add or change agent login IDs and skill assignments. If you add or change skills on the switch, the agent must log out and then log in again before the changes take effect. You must use the Agent Login ID screen to select call-handling preferences for agent login IDs. The **Call Handling Preference** field must be set to either `skill level` or `greatest need`. The default is `skill level`. You also may enter a direct agent skill number in the **Direct Agent Skill** field. The skill entered in this field must be one of the agent's administered skills or the field is left blank. If no direct agent skill is administered and the agent receives a direct agent call, the call is delivered to the agent's first-administered, highest-level skill.
Station	Only a single set of work mode buttons is needed with EAS. Use this screen to remove additional sets of buttons if you are administering agents in multiple splits.

Other screens that support EAS Agent LoginID

The following table lists switch administration screens that can have an EAS Agent loginID administered on them.

Table 3: EAS loginID table

Feature	Accepts loginID?
Abbreviated Dialing Buttons	
7103A	Yes
Enhanced	Yes
Group	Yes
Personal	Yes
System	Yes
Agent-LoginID	
Port Extension	No
Announcements	No
Buttons	
abrdg_app	No
aut-msg-wt	Yes

Feature	Accepts loginID?
brdg_app	No
busy-ind	Yes
data_ext	No
man_msg_wt	No
q-calls	No
q-time	No
signal	No
Call Processing	
Auto-Callback	No
Call Forward from Agent Login ID	No
Call Forward to Agent Login ID	Yes
Call Park	Yes
Hundreds group	No
LWC Retriever gets lagt msgs	Yes
Service observ Agent Login ID	Yes
Call Detail Recording Parameters	
Primary Extension	No
Secondary Extension	No
Code-Calling	Yes
Communication Link screen	
Communication Link Digits	No
Console Parameters	
CAS-backup ext	No
IAS Att Access Code	No
Coverage Groups	
Answer Group Member	No
Path	Yes
Measured Principals	
Coverage Measurement	No
Feature-Related Parameters	
ACA-referral dest.	No

Feature	Accepts loginID?
ACA - long holding	No
ACA - short holding	No
Controlled out restriction	No
Controlled Terminal	No
Controlled Stn-to-Stn	No
DAA Extension	No
DID/Tie/ISDN announcement	No
Emergency Access Redirection	No
CDR output extension	No
SVN referral destination (announcement)	Yes
System LWC retriever	No
System Printer	No
Hospitality Parameters	
Journal Printer	No
LWC wakeup	No
PMS ext	No
PMS log	No
Routing on Voice Synthesis	No
Hunt Group screen	
Announcement extension	No
ASAI link	No
AUDIX extension	No
Calls Warning extension	No
Member	No
Night Service	No
Supervisor	Yes
Time Warning extension	No
Intercom Group Member	No
Intra-switch CDR	Yes
Listed Directory Number (LDN)	
Member	No

Feature	Accepts loginID?
Night Destination	Yes
Malicious Call Trace (MCT)	
MCT Member	No
Permanent Switched Calls	No
Personal CO (Central Office) Line	No
Pickup Group Member	No
Remote Access Extension	No
Term Extension Group Member	No
Trunk Group	
Night Service	Yes
Incoming Destination	Yes
Member Night Service	Yes
Vector Administration	
adjunct extension	No
announcement	No
messaging	Yes
route-to	Yes

Administering Forced Agent Logout by Clock Time

1. On the Feature-Related System Parameters screen (page 14), set the **Clock Time Forced Logout Reason Code** field to specify the logout reason and press Enter.

   This sets the logout reason code for all agents.

2. For each agent, enter `change agent-loginID xxxx`.

3. On the Agent Login ID screen, set the **Forced Agent Logout Time** field to the time of day when you want to log out the agent and press Enter.

   You can use the agent's local time. See the Multiple Locations Feature description under Forced Agent Logout from Clock Time interactions in *Avaya Aura™ Call Center Feature Reference* for details.

Note:

Changes do not apply until the agent logs out and logs back in again.

4. Enter `change system-parameters features`.
5. If you want to allow the agent to override this feature, administer a forced logout override button (logout-ovr) on the Station screen.

   For information about administering feature buttons, see Administering Avaya Aura™ Communication Manager.

Administering Forced Agent Logout/Aux Work by Location/Skill

Prerequisites

The COR (Class of Restriction) for the station which the Administrator is using to force an action must have the permission to do so, as indicated by the **Can Force a Work State Change?** field.

Each agent whose work state is being changed must have the COR (Class of Restriction) **Work State Can Be Forced?** field set appropriately.

Forced Logout/Aux by location or skill applies only to the active server on which the feature was invoked. If the system is fragmented into multiple servers (Main/LSP/ESS), then the command must be invoked separately on each individual server, as required.

The following forms are used to administer Forced Agent Logout/Aux work mode for a location or skill.

Screen	Field
Feature Access Code	**Forced Agent Logout by Location Access Code**
	Forced Agent Logout by Skill Access Code
	Forced Agent Aux Work by Location Access Code
	Forced Agent Aux Work by Skill Access Code
System-parameters Feature-related	**Forced Agent Logout by Location Reason Code**

Screen	Field
	Forced Agent Logout by Skill Reason Code
	Forced Agent Aux Work by Location Reason Code
	Forced Agent Aux Work by Skill Reason Code
Class of Restriction	**Can Force a Work State Change?**
	Work State Change Can Be Forced?

To administer Forced Agent Logout/Aux work mode for a location or skill:

1. On the Feature Access Code screen, enter feature access code you wish to use for the specific feature, in the following fields, as required:
   - **Forced Agent Logout by Location Access Code**
   - **Forced Agent Logout by Skill Access Code**
   - **Forced Agent Aux Work by Location Access Code**
   - **Forced Agent Aux Work by Skill Access Code**
2. To specify a reason code for the Forced Agent Logout/Aux Work, enter the appropriate reason code in one or more of the following fields on the System-parameters Feature-related screen:
   - **Forced Agent Logout by Location Access Code**
   - **Forced Agent Logout by Skill Access Code**
   - **Forced Agent Aux Work by Location Access Code**
   - **Forced Agent Aux Work by Skill Access Code**

   When an agent is forced logged out/into Aux work mode, the value in the **Forced Agent Logout by Location Reason Code** field is sent to the reporting adjuncts and to the ASAI connected adjunct with the logout event messages.
3. Set up the COR (Class of Restriction) for the relevant Workstation and the Agent:
   a. In the **Can Force a Work State Change?** field on Class of Restriction screen relevant to the workstation/phone that is to be used to force the change, enter `y`.
   b. In the **Work State Change Can Be Forced?** field on Class of Restriction screen relevant to the agent (or VDN/Trunk) for which to force the change, enter `y`.

   These two Classes of Restriction (COR) apply only to this feature and not to the other similar features, such as Forced Logout by Clock Time and Forced Logout

from ACW features. For more information on COR, see Class of Restriction in *Avaya Aura™ Call Center Feature Reference*.

Administering ICM

Display the System-Parameters Customer-Options and ensure that the ACD option is enabled. If you are using CallVisor ASAI or Call Vectoring, ensure appropriate ASAI Capability Groups options or the Vectoring (Basic) and/or Vectoring (Prompting) options are enabled.

Administer the system as defined in the table at Forms and fields used to administer ACD on page 88 .

Table 4: Required forms - ICM

Screen	Field
display System-Parameters Customer-Options - Verify options are active	• **ASAI Link Core Capabilities** • **ASAI Link Plus Capabilities**
Trunk Group (ISDN-PRI)	**Per Call CPN/BN**

Table 5: Additional forms - ICM

Screen	Purpose
Trunk Group screen	Administer the Per Call CPN/BN field for the appropriate ISDN-PRI trunk group. The corresponding information is sent with a call-offered event report to the adjunct.
Hunt Group screen	Complete a Hunt Group screen for each split or skill that the ICM adjunct will monitor.
Call Vector screen	If you are using Call Vectoring, an ASAI link interface extension number is required for adjunct routing vector commands. This extension is the same as the one you enter on the Station screen. See Automatic Call Distribution, Call Vectoring, Call Prompting, and CallVisor Adjunct-Switch Application Interface and any other features you are implementing for ICM for additional administration requirements.

Forms and fields used to administer Intraflow and Interflow

Screen	Field
Feature-Related System Parameters	**Coverage - Don't Answer Interval for Subsequent Redirection**
Feature Access Code (FAC)	• **Call Forwarding Activation** • **Call Forwarding Deactivation**
Hunt Group	• **Inflow Threshold** • **Priority on Intraflow** • **Calls Warning Threshold** • **Time Warning Threshold** • **Service Level Target (% in sec)**
Coverage Paths	• **Don't Answer** • **Busy** • **Number of Rings**

Forms and fields used to administer Interruptible Aux

Screen	Fields
Reason Code Names	**Use the Interruptible?** field to specify `y` or `n`.
Hunt Group	In the **Interruptible Aux Threshold** field, enter a value of calls-warning-threshold, service-level-target, or time-warning-threshold. In the **Interruptible Aux Deactivation Threshold** field, enter a value for deactivation of the Interruptible Aux Threshold.
Agent LoginID	In the **RL (Reserve Level)** field, enter `a`, `m`, or `n`. (a = auto-in-interrupt, m = manual-in-interrupt and n = notify-interrupt).
Feature-Related Sys-Param	In the Interruptible **Aux Notification Timer (sec)** field, enter the number of seconds that an agent is notified before being forced available. Set the notification display text in the **Interruptible Aux Notification Display** field

Forms and fields used to administer LAI

The following forms and fields are required to administer the LAI feature.

Screen	Field
System Parameters Customer-Options	• **Vectoring (Basic)** • **ISDN-PRI** • **Look Ahead Interflow**
Trunk Group (ISDN)	• **Outgoing Display** • **Codeset to Traveling Class Mark, Look Ahead** • **Supplementary Service Protocol** • **UUI Treatment**
Feature-Related System Parameters	**Interflow-Qpos EWT Threshold**
ISDN Numbering - Public/ Unknown	• **Ext Len** • **Ext Code** • **CPN Prefix**
Call Vector	Complete a screen for each Look-Ahead Interflow vector

See Call Vectoring for associated Call Vectoring administration.

- System-Parameters Customer-Options - For full functionality, options must be enabled at both the sending and receiving communication servers. If Look-Ahead Interflow is not optioned on the receiving communication server, interflow still results on a look-ahead basis. However, the forwarded Dialed Number Identification Service (DNIS) (sending communication server VDN name) information is ignored and tandem Look-Ahead Interflow is not provided.
- Trunk Group Screen (ISDN) - If you do not want the call originator's display to update on each Look-Ahead Interflow call attempt, look-ahead calls should be routed over trunk groups with the Outgoing Display field set to n.
- Feature-Related System Parameters Screen - Administer the **Interflow-Qpos EWT Threshold** field when working with enhanced Look-Ahead Interflow. Any calls that will be answered before this threshold will not be interflowed (therefore saving CPU resources on the Avaya Server that is driving the Avaya Communication Manager).
- ISDN Numbering - Public/Unknown Screen - Administer a CPN Prefix for each Vector Directory Number (VDN) that maps to a vector used to place Look-Ahead Interflow calls. If you do not, a Look-Ahead Interflow DNIS of all blanks appears on the answering agent's phone.

For private network non-QSIG connectivity with direct facilities between the communication servers, administer Look-Ahead Interflow DS1/E1 circuit packs with Country Protocol Option 1 independent of the country where the system is located.

Forms and fields used to administer Location Preference Distribution

The following forms are used to administer Location Preference Distribution. You can administer Local Preference Distribution to handle agent-surplus conditions, call-surplus conditions, or both.

Use the following screen	With the following field set to y	To set up an algorithm designed for
Hunt Group	**Local Agent Preference**	Agent-surplus conditions
Agent Login ID	**Local Call Preference**	Call-surplus conditions

Screens and fields used to administer local treatment

The following tables show the administration screens used to administer the local treatment feature.

Important:

The **BSR Local Treatment?** field must be set to `y` on both the local and remote Vector Directory Numbers (VDNs). If the local vdn is set to `n` and the remote vdn is set to `y`, the remote Communication Manager returns an ISDN_PROGRESS message with a progress indicator of in-band information. The local Communication Manager considers this type of progress message to be invalid unless the local treatment flag is set and all interflow attempts result in dropped calls.

Table 6: Local treatment administration - verify required features[12]

Administration command:	**`display system-parameters customer options`**	
Page name:	Call Center Optional Features	
Required field(s):	Call Center Release	12[13]

[12] Contact your Avaya account representative if this screen indicates that any of the required feature selections are not enabled.

[13] Call center release 12 or later.

	Lookahead Interflow (LAI)?	y
	Vectoring (Best Service Routing)?	y
	BSR Local Treatment for IP & ISDN	y

Table 7: Local treatment administration - enable VDN

Administration command:	`change vdn xxx`	
Page name:	Vector Directory Number	
Required field(s):	BSR Local Treatment?	y[14]

Forms and fields used to administer MCH

Screen	Field
Hunt Group	• **ACD** • **Multiple Call Handling**

Note:
The MCH column on the List Hunt Group screen contains the value that you enter in **Multiple Call Handling**.

Forms and fields used to administer multi-site BSR

The following forms and fields are required to administer the BSR feature in a multi-site configuration.

Screen	Field
System Parameters Customer-Options	• **G3 Version** • **Vectoring (Best Service Routing)**

[14] The **BSR Local Treatment?** field must be set to `y` on both the local and remote vdns, or else call interflow attempts may result in dropped calls.

Screen	Field
	• **Vectoring (G3V4 Advanced Routing)** • **Lookahead Interflow (LAI)**
Feature-Related System Parameters	**Adjunct CMS Release**
[15] Trunk Group (ISDN-BRI)[15]	• **Outgoing Display** • **Supplementary Service Protocol** • **UUI Treatment**
Trunk Group (ISDN-PRI)	• **Outgoing Display** • **Supplementary Service Protocol** • **UUI Treatment**
Trunk Group (SIP)	**UUI Treatment**
Best Service Routing Application Plan	Complete one screen for each BSR application
VDN	• **BSR Application** • **BSR Available Agent Strategy**
Call Vector	Complete a screen for each vector (primary, status poll and interflow vectors) in a BSR application

Multi-site BSR requires that Look-Ahead Interflow (LAI) be enabled. See Forms and fields used to administer LAI on page 119 for a list of required forms and fields. Since BSR can forward information such as VDN name, in-VDN time, and collected digits with interflowed calls, also see Administering User-to-User Information transport for ISDN trunks on page 154 and Administering User-to-User Information transport for SIP trunks on page 156 for instructions.

Network Call Redirection (NCR) administration

The following sections list NCR administration requirements. Some of the administration requirements will vary according to the specific method used to implement NCR.

Related topics:

Screens and fields used to perform basic NCR administration on page 123
Administering station or ASAI transfer or conference/release on page 125
Reserving trunk group B-channels for NCT-type redirection operations on page 126
Administering NCR with AT&T In-Band Transfer and Connect on page 128

[15] Settings in the fields Codeset to Send TCM, Lookahead and Send Codeset 6/7 LAI IE on the ISDN trunk forms do not affect BSR.

Screens and fields used to perform general administration for AT&T In-Band Transfer and Connect on page 129
Methods for setting up DTMF announcements for AT&T In-Band Transfer and Connect on page 130
Call vectoring methods used with AT&T In-Band Transfer and Connect service on page 131

Screens and fields used to perform basic NCR administration

Important:
The basic administration requirements described in this section do *not* apply if NCR is being used with the AT&T In-Band Transfer and Connect service to invoke NCR. To see administration requirements specific to the AT&T service, see Administering NCR with AT&T In-Band Transfer and Connect on page 128.

Table 8: NCR administration - verify customer options for NCR

Administration command:	`display system-parameters customer options`	
Page name:	Optional Features	
Required field(s):	G3 Version	V8 or later[16]
	ISDN/SIP Network Call Redirection	y

Table 9: NCR administration - BSR screen[17]

Administration command:	`change best-service-routing x`	
Page name:	Best Service Routing Application	
Required field(s):	Net Redir?	y

Table 10: NCR administration - trunk group screen

Administration command:	`change trunk-group x`	
Page name:	Trunk Group	
Required field(s):	Direction:	two-way
	Service Type:	cbc

[16] NCR NCT and NCD protocols requires V8 or later, NCR TBCT protocol requires V11 or later, and NCR ETSI ECT protocol requires V12 or later.
[17] Required only if the BSR feature is enabled.

Administration command:	change trunk-group x				
	Usage Alloc:	y			
	Disconnect Supervision In?	y			
	Disconnect Supervision Out?	y			
		(Settings specific to PSTN redirection options)			
		MCI NCT	TBCT	ETSI ECT	NCD
Required field(s):	Group Type:	ISDN	ISDN	ISDN	ISDN
	Supplementary Services Protocol:	g	a	c	c
Page name:	Trunk Features				
	Network Call Redirection:	y			

Table 11: NCR administration - signaling screen

Administration command:	change signaling group x				
Page name:	Signaling Group				
		Supported PSTN Redirection option			
		MCI NCT	TBCT	ETSI ECT	NCD
Required field(s):	Group Type:	ISDN			
	Network Call Transfer:	y	y	y	n

Table 12: NCR administration - DS1 screen

Administration command:	change ds1 [board location][18]	
Page name:	DS1 Circuit Pack	
		Supported PSTN Redirection option

[18] Board location parameter values are: [cabinet(1-1)];carrier(A-E);slot(0-20) OR [gateway(1-10)];module(V1-V9).

Administration command:	change ds1 [board location][18]				
		MCI NCT[19]	TBCT[20]	ETSI ECT[21]	NCD[22]
Required field(s):	Country Protocol:	Any, but typically 1a	1b or 1d	etsi	etsi

Administering station or ASAI transfer or conference/release

Use this section when using station or ASAI call transfer/conference with NCT-type NCR trunks.

The NCR feature is automatically activated for a station or ASAI call transfer/conference when:

1. The **Network Call Redirection** field is set to y on page 3 of the System Parameters Customer Options screen.
2. For the MCI NCT (Network Call Transfer) or TBCT (Two Bearer Channel Transport) NCR protocols, the second call leg of the call transfer for an incoming ISDN call must be made using the same trunk group with a B-channel that has the same D-channel as the incoming call.
3. For the NCR ETSI ECT protocol, the second leg of the call can be over a different trunk group with a different signaling group than the incoming call leg.

Result

In addition to this, you must do the following tasks to administer station or ASAI transfer:

1. In order for a NCT NCR-type operation to successfully completed, add the PSTN number that a station or ASAI user dials to transfer an incoming call to another PSTN endpoint to the ARS digit analysis screen. This entry must then be administered with an ARS routing pattern that routes the second call-leg to the same trunk group that is being used for the incoming call.
2. When using the NCR MCI NCT feature, for the Route-Pattern screen associated with the ARS digit analysis form entry, administer the Service/Feature and Number Format fields to be consistent with the service-type and dialing-plan configuration

[19] MCI NCT: Verizon® Network Call Transfer
[20] TBCT: Telecordia-Two B-Channel Transfer
[21] ETSI ECT: ETSI Explicit Call Transfer
[22] NCD: Network Call Transfer

of the PSTN trunk by administering the following settings in an entry line on the lower-right part of the route pattern screen:

- Service/Feature field = **sdn**
- Number Format = **lev0-pvt**

For the other NCT-type NCR protocols, no administration is required for the Route-Pattern screen associated with the ARS digit analysis screen entry. NCR call-processing will automatically cause the Service/Feature and Number Format for the NCR second-leg call to be **unknown/unknown**.

3. Contact the PSTN service provider to verify that the configuration of the PSTN switch used for the Network Call Transfer operation has been properly configured. The PSTN switch should be configured to accept the outgoing digits used by the station or ASAI application to set up the second leg of the call transfer/conference.

Reserving trunk group B-channels for NCT-type redirection operations

Trunk groups that are used for NCR NCT-type operations must be administered as Call-By-Call (CBC) trunk types. Since CBC trunk groups can carry both incoming and outgoing call traffic, situations may occur in which transient levels of incoming traffic occupy all available B-channels. When no B-channels are available for outgoing calls, attempts to set up the outgoing leg for a redirected call will fail and the call redirection will fail.

Important:

When the NCR feature is used with high volumes of incoming calls, Avaya recommends reservation of a minimum number of trunk members for the outgoing leg of redirected calls by using CBC Trunk Group Allocation administration. However, the optimum number of trunk members to reserve depends on traffic patterns that are specific to each call center. A call traffic analysis should be performed to determine if reservation of B-channels is necessary.

If a trunk group has multiple D-channel signaling groups, the CBC Trunk Group Allocation operation does not guarantee the reservation of outgoing trunks associated with a particular D-channel. Instead, it reserves outgoing trunks considering the entire trunk group. Therefore, when NCR invocation is attempted for a trunk group having multiple D-channels, the CBC Trunk Group Allocation operation may not always prevent the blockage of the NCR second call leg setup due to no available outgoing trunk B-channels.

To reduce the blockage of NCR NCT-type operations due to no available outbound trunk B-channels:

About network facility types

Before you can specify a minimum number of trunk group members to be allocated for the outgoing legs of NCR calls, you must administer one or more ISDN services or features for this purpose. The Network Facilities screen includes two pre-defined features and ten predefined services. These predefined entries are associated with either Network Specific

Facilities (NSF) Type 0 or Type 1. You can administer additional user-defined services or features on the Network Facilities screen. User-defined facilities can be Type 0, 1, 2, or 3. You must obtain support agreements with your PSTN service provider for Type 0 or Type 1 facilities.

Type 2 (incoming) and Type 3 (outgoing) facilities do not use NSF codings or require special support by the PSTN. These network facility types are offered because NSF information is not included with ISDN calls in some regions of the world.

Important:

If your PSTN does not support NSF, you must specify a Type 3 facility when you reserve trunk members for NCR operations, and the Usage Allocation Enhancements Optional Feature must be enabled before you can administer a Type 3 facility.

Example trunk allocation for PSTNs that supports NSF codings

The following example Network Facilities screens includes the basic default pre-defined services and features.

```
change isdn network-facilities                                  Page   1 of   2
                                NETWORK-FACILITIES
                        Facility                                 Facility
         Name          Type  Coding             Name            Type  Coding
    sub-operator        0    00110       mega800                 1    00010
    operator            0    00101       megacom                 1    00011
    outwats-bnd         1    00001       inwats                  1    00100
    sdn                 1    00001       wats-max-bnd            1    00101
    accunet             1    00110       lds                     1    00111
    i800                1    01000       multiquest              1    10000
    ___________         _    _____
    ___________         _    _____
    ___________         _    _____
    ___________         _    _____
    ___________         _    _____
    ___________         _    _____
```

Once network facilities are specified, trunk members can be allocated on the basis of specific facilities or features. The following example shows a CBC Trunk Group Allocation screen for a CBC trunk group for which at least one B-channel is always available for the outgoing legs of redirected calls when the mega800 service is used. The specific feature or service that you specify in this screen depends on the support provided by your PSTN.

```
change trunk-group 29
                                     CBC TRUNK GROUP ALLOCATION

Usage Allocation Plan 1       Usage Allocation Plan 2       Usage Allocation Plan 3

               Min# Max#                         Min# Max#                          Min# Max#
Service/Feature Chan Chan      Service/Feature Chan Chan      Service/Feature Chan
Chan
mega800            1   99
```

Example trunk allocation for PSTNs that do not supports NSF codings

The following example Network Facilities screens includes the basic default predefined services and features and an additional user-defined, Type 3 (outgoing) feature (bsr-redirect).

```
change isdn network-facilities                                  Page   1 of   2
```

```
                                NETWORK-FACILITIES
                        Facility                                    Facility
        Name            Type   Coding           Name                Type   Coding
    sub-operator         0     00110        mega800                  1     00010
    operator             0     00101        megacom                  1     00011
    outwats-bnd          1     00001        inwats                   1     00100
    sdn                  1     00001        wats-max-bnd             1     00101
    accunet              1     00110        lds                      1     00111
    i800                 1     01000        multiquest               1     10000
    bsr-redirect         3     _____
    ___________          _     _____
    ___________          _     _____
    ___________          _     _____
    ___________          _     _____
    ___________          _     _____
```

After the user-defined feature is administered, you can specify a minimum number of reserved trunk channels to remain available for the outgoing legs of redirected calls when the feature is used.

```
change trunk-group 42
                                     CBC TRUNK GROUP ALLOCATION

Usage Allocation Plan 1       Usage Allocation Plan 2       Usage Allocation Plan 3

              Min# Max#                     Min# Max#                     Min# Max#
Service/Feature Chan Chan      Service/Feature Chan Chan      Service/Feature Chan
Chan
bsr-redirect      5   25
```

Administering NCR with AT&T In-Band Transfer and Connect

The following sections describe general administration requirements, administration of DTMF announcement and BSR vectoring methods that are associated with use of the AT&T In-Band Transfer and Connect service.

Note:

For a description of NCR administration requirements when this AT&T service is **not** used to invoke NCR, see Network Call Redirection (NCR) administration on page 122.

This section includes the following topics:

- Screens and fields used to perform general administration for AT&T In-Band Transfer and Connect on page 129
- Methods for setting up DTMF announcements for AT&T In-Band Transfer and Connect on page 130
- Call vectoring methods used with AT&T In-Band Transfer and Connect service on page 131

Screens and fields used to perform general administration for AT&T In-Band Transfer and Connect

The following tables show basic administration requirements associated with the AT&T In-Band Transfer and Connect service.

Table 13: NCR administration - verify NCR customer option

Administration command:	`display system-parameters customer options`	
Page name:	Call Center Optional Features	
Required field(s):	Network Call Redirection	y

Table 14: NCR administration - BSR Application Plan entries for polling and interflow locations[23]

Administration command:	`change best-service-routing x`	
Page name:	Best Service Routing Application	
Required field(s):	Net Redir?	n

Table 15: NCR administration - trunk group screen

Administration command:	`change trunk-group x`	
Page name:	Trunk Group	
Required field(s):	Group Type:	ISDN
	Supplementary Services Protocol:	a
Page name:	Trunk Features	
Required field(s):	UU IE Treatment:	shared
	Network Call Redirection	none

Table 16: NCR administration - signaling screen

Administration command:	`change signaling group x`
Page name:	Signaling Group

[23] Required only if the BSR feature is enabled. For more information, see Call vectoring methods used with AT&T In-Band Transfer and Connect service on page 131.

Administration command:	change signaling group x	
Required field(s):	Network Call Transfer:	y

Table 17: NCR administration - DS1 screen

Administration command:	change ds1 [board location][24]	
Page name:	DS1 Circuit Pack	
Required field(s):	Country Protocol:	1b or 1d

Methods for setting up DTMF announcements for AT&T In-Band Transfer and Connect

You can create the announcement that provides the DTMF digits required for AT&T In-Band Transfer and Connect operations by either of the following methods:

Note:

For information about how DTMF (Dual Tone Multi-Frequency) announcements are used in vectors to implement NCR, see AT&T In-Band Transfer and Connect in *Avaya Aura™ Call Center Feature Reference*.

Also see Announcement recording tips for high traffic volume applications in *Programming Call Vectors in Avaya Aura™ Call Center*.

- Use an Communication Manager analog DTMF station to activate the record session for a specific announcement. When the record session starts, use the keypad to enter the Touch-Tone digits that correspond to the *T + PSTN endpoint number that is used to invoke AT&T In-Band Transfer and Connect operations. For example, if feature invocation is intended to redirect an incoming ISDN call to specified endpoint number 3035552104, then enter: *83035552104 when the announcement recording session begins.

  Note:

  You cannot use a digital phone (such as Callmaster, BRI, ISDN or IP) to record the announcement, since the station keypads on these sets do not generate audible DTMF tones during an announcement record session. If you record DTMF with these phones, use local arrangements to electronically connect an external keypad.

- Use a PC with VAL boards with an internal or external keypad or a commercially-available PC software tool.

[24] Board location parameter values are: [cabinet(1-1)];carrier(A-E);slot(0-20) OR [gateway(1-10)];module(V1-V9).

Note:

To achieve the best recording quality, use local arrangements to electronically connect the external keypad. Do not attempt to exclusively rely upon the results of having acoustically coupled the external keypad.

Call vectoring methods used with AT&T In-Band Transfer and Connect service

The AT&T in-band AT&T In-Band Transfer and Connect feature can be invoked by the Best Service Routing (BSR) feature. To do this, administer an Interflow VDN in the Best Service Routing Application table. This routes to a near-end switch VDN that causes a *T announcement vector step to be executed rather than setting this same Interflow VDN number to route directly to a VDN on a far-end Avaya switch.

When a BSR polling vector identifies a BSR best location to which to route an incoming call, the BSR location must be administered on the BSR Application Plan screen. The BSR Application Plan must meet the following requirements:

- The plan must include one or more interflow VDNs that are associated with vectors that include the vectors steps necessary for successful invocation of the AT&T In-Band Transfer and Connect feature.
- The **Net Redir?** field associated with a location where AT&T In-Band Transfer and Connect is used must be set to `n`.

Example BSR implementation: The following example shows how BSR can be used with AT&T In-Band Transfer and Connect to implement call redirection. In the example scenario, local rather than remote interflow VDN numbers are assigned to the BSR application plan screen.

The example application plan is shown below:

```
                  BEST SERVICE ROUTING APPLICATION

Number: 1    Name:        Maximum Suppression Time: 60      Lock? y

Num  Location Name   Switch Node     Status Poll VDN   Interflow VDN    Net Redir?
1    Omaha             320           95022011          4004                n
2    Paris             320           95022111          4005                n
3    Sydney            320           95032211          4006                n
```

The example application plan shown above lists VDN extension numbers that are local to the Communication Manager. Each of the VDNs are associated with vectors that are designed to invoke AT&T In-Band Transfer and Connect operations.

Each of the vectors associated with the interflow VDNs listed in the application plan includes the elements shown in the following example.

```
1. announcement 1234 [*8 plus PSTN number for remote site]
```

```
2. wait 2 seconds hearing silence
3. disconnect after announcement none
```

In the vector example shown above, step 1 provides the extension for an announcement that plays the DTMF digits, as described in Methods for setting up DTMF announcements for AT&T In-Band Transfer and Connect on page 130.

Step 2 provides a wait step that is included to give the PSTN switch sufficient time to process the in-band information (sent by the announcement in the preceding step) before the call is disconnected at step 3. The **disconnect** command in step 3 sends an ISDN DISCONNECT message that includes the Information Forwarding data for the call in a codeset 0 or 7 UUI IE element. For more information about Information Forwarding, see the *Avaya Aura™ Call Center Feature Reference* document.

Important:

The type of Information Forwarding data sent to the PSTN depends on how the **UUI IE Treatment** field on the TRUNK FEATURES page of the Trunk Group screen is administered:

If the **UUI IE Treatment** field is set to `Service Provider`, the ASAI user data is forwarded to the PSTN in the ISDN DISCONNECT message. If the **UUI IE Treatment** field is set `Shared`, the call center-related data described in NCR and Information Forwarding (See the *Avaya Aura™ Call Center Feature Reference* document.) is forwarded to the PSTN in the ISDN DISCONNECT message.

Note that the same above call vector example that invokes the AT&T In-Band Transfer and Connect feature using BSR VDN Interflow vector processing can also be used to invoke the AT&T In-Band Transfer and Connect feature with non-BSR vector programming. The same guidelines and notes related to the *T announcement format apply to executing this example vector in a non-BSR vector call-flow.

Screens and fields used to administer NCR for SIP

Table 18: NCR administration - verify customer options for NCR

Administration command:	display system-parameters customer options	
Page name:	Optional Features	
Required field(s):	G3 Version	V15 or later
	ISDN/SIP Network Call Redirection	y

Table 19: NCR administration - BSR screen[25]

Administration command:	`change best-service-routing x`	
Page name:	Best Service Routing Application	
Required field(s):	Net Redir?	y

Table 20: NCR administration - trunk group screen

Administration command:	`change trunk-group x`	
Page name:	Trunk Group	
Required field(s):	Direction:	two-way
	Group Type:	SIP
Page name:	Protocol Variations	
Required field(s):	Network Call Redirection?	y

Forms and fields used to administer Queue Status Indications

Screen	Field
Hunt Groups	• **Queue Limit** • **Calls Warning Threshold (per split or skill or attendant group)** • **Time Warning Threshold (per split or skill or attendant group)** • **Time Warning Port (per split or skill)** • **Calls Warning Port (per split or skill)**
Station (multi-appearance)	Button/Feature Button Assignments: • **q-calls** • **q-time**

[25] Required only if the BSR feature is enabled.

Screen	Field
Attendant Console	Feature Button Assignments: • **atd-qcalls** • **atd-qtime** • **q-calls** • **q-time**
System Capacity	**Queue Status Buttons**

Forms and fields for administering Reason Codes

Screen	Field
System Parameters Customer-Options	• **ACD** • **EAS** • **Reason Codes**
Attendant Console	**RC**
Agent LoginID	**RC**
Feature-Related System Parameters	• **EAS** • **Aux Work Reason Code Type** • **Logout Reason Code Type** • **CMS Release** (Release 5 and later configurations, or none) • **Clock Time Forced Logout Reason Code**
Feature Access Code (FAC) (optional)	• **Aux Work Reason Code Type** • **Logout Reason Code Type**
Language Translations	Line 49
Reason Code Names	All
Station	**RC** (for the Aux Work button)

Forms and fields used to administer Remote Logout of Agent

Screen	Field
Class of Service (COS)	**Console Permissions**- set to y
Class of Restriction (COR)	**Remote Logout of Agent** - set toy
Feature Access Code (FAC)	**Remote Logout of Agent Access Code** - set to the desired dial code

Reporting adjuncts

Reporting adjuncts are applications for businesses and organizations that use Communication Manager servers to process large volumes of telephone calls using the Automatic Call Distribution (ACD) feature and (optionally) the Avaya Proactive Contact outbound dialer. Reporting adjuncts include Avaya Call Management System (CMS) and/or Avaya IQ.

Reporting adjuncts support solutions for:

- Routing and agent selection tracking
- Multi-site contact centers
- Remote agents
- Reporting
- Interfaces to other systems
- Workforce management
- Desktop applications
- System recovery
- Quality monitoring

Related topics:

Considerations for interfacing with the reporting adjuncts on page 136
Administering reporting adjuncts on Communication Manager on page 136
Adding the reporting adjunct nodes on page 136

Administering both reporting adjuncts at the same time with Communication Manager 6.0 on page 139

Considerations for interfacing with the reporting adjuncts

You must consider the following factors when interfacing between the Communication Manager server and the reporting adjuncts:

- Display of IP or SIP trunk locations
- Reporting adjunct representation of IP or SIP trunk member port-IDs
- Display of physical (non-IP) member port-IDs

Administering reporting adjuncts on Communication Manager

If you are using Call Center Release 4.0 or later, there are two fields dedicated to each of the reporting adjuncts, CMS and Avaya IQ. Each field can be set to just `CMS` or just Avaya IQAvaya IQ, or both fields can be set to `CMS` or Avaya IQ. Configurations with both reporting adjuncts are supported for all compatible combinations with a particular CM release starting with CM R4.0, CMS R13.1, and R14 CMS and **Avaya IQ R4.0.** Avaya IQ. High availability configurations are also supported.

Adding the reporting adjunct nodes

1. Enter `change node-names ip`.
2. Enter the host name and IP address of each reporting adjunct.

   For Avaya IQ, enter the host name and IP address for the Data Collection Host that will be monitoring this communication server as a CCR adjunct.

Administering Avaya IQ

Administering the Communication Manager server-to-Avaya IQ interface

When using Avaya IQ as a reporting adjunct, Communication Manager must be running Expert Agent Selection (EAS). That is, EAS must be active and enabled on the Feature-Related System Parameters screen.

Also, you must administer the communication servers to create and send UCIDs.

To administer the communication server:

1. Enter `change system-parameters features`.
2. On page 5 of the Feature-Related System Parameters screen, set **Create Universal Call ID (UCID)?** to `y`.
3. On page 5 of the Feature-Related System Parameters screen, set the **UCID Network Node ID** to a 5-digit value from 1 to 32,767 that is unique among your communication servers.
4. On page 12 of the Feature-Related System Parameters screen, set **Send UCID to ASAI?** to `y`.

Note:
Detailed information on administering the interface between the communication server and Avaya IQ is available in the *Avaya IQ Administration*.

Enabling EAS

Avaya IQ can be used only when Expert Agent Selection (EAS) is administered. A non-EAS environment is not supported.

To enable EAS:

1. Enter change system-parameters features.
2. On page 11 of the Feature-Related System Parameters screen, set **Expert Agent Selection (EAS) Enabled?** to `y`.

Measured trunks versus unmeasured facilities

Unmeasured facilities are not actual trunks, but are tracking records on the Avaya Call Management System (CMS). See Administering CMS.

Avaya IQ does not require data allocation for these unmeasured facilities. Rather, the number of measured trunks is based on the capacity of the communication server that Avaya IQ is monitoring. Avaya IQ does not require data storage allocation for unmeasured facilities.

Administering CMS

Communication server-to-CMS interface

For detailed information on administering the interface between the communication server and the CMS, refer to Avaya CMS Switch Connections and Administration.

Administering measured extensions and multiple splits

On a non EAS configuration, set the Installation, Authorization, and Data Storage Allocation to the number of CMS agents assigned on the Hunt Group screen.

About measured trunks versus unmeasured facilities

CMS requires data allocation for unmeasured facilities trunk data. Unmeasured facilities are not actual trunks, but are tracking records on the CMS.

Unmeasured facilities on CMS are required for:

- Internal calls (intra-communication server) to a measured split or agent
- Internal calls to VDNs
- Calls made by agents to internal destinations or on an unmeasured facility group
- Transfers and conferences until the transfer/conference is complete.

Allocation of measured trunks and unmeasured facilities

Maximum values for measured trunks and unmeasured trunk facilities are specified for each ACD in the CMS **Data Storage Allocation** window. Prior to CMS R14, the unmeasured trunks

were counted along with the measured trunks toward the system and ACD allocated trunk limit of 40,000 across all ACDs. Also, the recommended assignment of unmeasured facilities per ACD was 25% of the total number of trunks allocated for the ACD.

CMS R14 (and later) treats the measured and unmeasured trunks separately, meaning that the unmeasured trunks are not subtracted from the maximum measured trunks. Data Storage Allocation Help suggests that unmeasured trunks be set at 50% of the measured trunks allocated. The unmeasured trunks system limit is now 20,000 (50% of the measured trunks system limit of 40,000) and the unmeasured limit for an ACD is 6,000 (50% of the measured trunk ACD limit).

Administering both reporting adjuncts at the same time with Communication Manager 6.0

1. Enter **change system-parameters features**
2. On page 12 of the Feature-Related System Parameters screen, enter the appropriate value for the fields under **Reporting Adjunct Release**.

If the CMS (appl mis) field is set to:	You can set the Avaya IQ(appl ccr) field to:
R12	Not supported - must be blank
R13	Not supported - must be blank
R13.1	4.0, 5.0 (for SPI L20),or 5.1
R14 or R14.1	4.0, 5.0 (for SPI L21), or 5.1
R15 or R16	5.0 or 5.1 (for SPI L22)
blank (This is the only allowed entry if the dial plan is set to more than 7-digits for any entity unless CMS is R16 or later or the expanded dial plan special application SA9062 is active and CMS is R14.1 or later.)	4.0, 5.0, or 5.1
R16.1	5.1

   Default: Both fields are blank.
3. Enter **change communication-interface processor-channels**
4. In the next available **Proc Chan** row, set **Enable** to y.

5. Set **Appl.**
   to `mis` (for the CMS system).
6. Set **Mode** to `s`.
7. Set **Link** to the data link that is administered to communicate with the adjunct.
8. Set **Chan** to an unused value in the range allotted to the link type being used for this channel.
9. Select the **Node** name from the drop down list.
10. Set **Port** to `0`.
11. Set both **Local/Remote** to `1`.
12. To administer the Avaya IQ system, repeat Steps 1 through 11, except in Step 5 set **Appl.**
    to `ccr`.

Forms and fields used to administer RONA

The following forms and fields are required to administer the Redirection on No Answer (RONA) feature.

Screen	Field
Hunt Group	• **ACD** • **AAS** • **Vector** • **Controlling Adjunct** • **Message Center** • **Redirect On No Answer (Rings)** • **Redirect On No Answer to VDN** • **Retain Active VDN Context**
Station (multifunction)	Button Assignments: **noans-alrt**

Note:
You must set **Controlling Adjunct** to `none`.

Forms and fields used to administer ROOF

Required forms for Redirection on OPTIM Failure (ROOF)

The following forms and fields are required to administer ROOF.

Screen	Field
System Parameters Features (Page 14 for Release 15	**IP Failure Aux Reason Code**
Trunk Group	**Redirect On OPTIM Failure**
Hunt Group	**Redirect on IP/OPTIM Failure to VDN**
	Retain Active VDN Context?

Note:

The same treatment applies for ROOF and ROIF for the same hunt group. The two fields controlling the redirection, **Redirect on IP/OPTIM Failure to VDN** and **Retain Active VDN Context?**, are the same for Redirection on OPTIM Failure (ROOF) as well as Redirection on IP Failure (ROIF).

About setting the Redirect On OPTIM Failure value

The range for the Redirect On OPTIM Failure field is 250 - 32000 milliseconds (ms).. The default and recommended value for this field is 5000 ms. If agents are erroneously being placed in Auxiliary Work mode when they actually are available (idle), this means that the Redirect On OPTIM (Off-Premises Telephony Integration and Mobility) Failure value is set too low and should be increased.

Forms and fields used to administer ROIF

Required forms for ROIF

The following forms and fields are required to administer ROIF.

Screen	Field
System Parameters Features (Page 14 for Release 15	**IP Failure Aux Reason Code**
Trunk Group	**Redirect On OPTIM Failure**
Hunt Group	**Redirect on IP/OPTIM Failure to VDN**
	Retain Active VDN Context?

Note:

The same treatment applies for ROOF and ROIF for the same hunt group. The two fields controlling the redirection, **Redirect on IP/OPTIM Failure to VDN** and **Retain Active VDN Context?**, are the same for Redirection on OPTIM Failure (ROOF) as well as Redirection on IP Failure (ROIF).

About setting the switch hook query timeout value

When you set the switch hook query timeout value, the degree of network congestion or delays determines the speed of the switch hook query response.

The range value for the switch hook timer is 500- 5000 milliseconds (ms). IP hardphones that are located geographically close to the communication server should respond to the timer within the 500-750 milliseconds range but IP Agent/one-X Agent endpoints on a Personal Computer (PC) will take longer to respond, requiring that the timer be set to 2000 milliseconds or greater. The above are just recommendations. In all cases the timeout should be set long enough to avoid false triggering. A longer timeout period will not delay the delivery of calls when connectivity is intact since the response to the query will be returned quickly.

Caution:

If the switch hook query timeout value is set too low, agents will be erroneously taken out of service when they are available (idle).

Forms and fields used to administer Service Observing

Screen	Field
System Parameters Customer-Options	• **Service Observing (Basic)** - for basic or Logical Agent ID observing • **Service Observing (Basic)** and **Service Observing (Remote/By FAC)** - for remote observing or observing using feature access code • **Service Observing (Basic)** and the **Service Observing (VDNs)** - for VDN observing • **Vectoring (Prompting)** - for vector-initiated observing
Class of Restriction	• **Can Be Service Observed** • **Can Be Service Observer** • **Service Observing COR Table**

Screen	Field
Feature-Related System Parameters	• **Service Observing Warning Tone** • **Expert Agent Selection (Logical Agent ID)** • **Service Observing Allowed with Exclusion**
Station (multiappearance)	Button/Feature Button Assignment (basic, VDN, Logical Agent ID): **serv-obsrv**
Feature Access Code (FAC)	• **Service Observing Listen Only Access Code** (remote by FAC, VDN, Logical Agent ID) • **Service Observing Listen/Talk Access Code** (remote by FAC, VDN, Logical Agent ID) • **Service Observing No Talk Access Code** (remote by FAC, VDN, Logical Agent ID)
Vector Directory Number (VDN)	**Observe on Agent Answer**
Class of Restriction forms	
Agent COR screen	**Can Be Service Observed** field set to `yes` (if extension is to be observed)
Observer COR screen	• **Can Be Service Observer** field set to `yes` (if extension is to act as observer) • In Service Observing COR table, enter `y` next to the CORs to be observed

Forms and fields used to administer Service Observing with Multiple Observers

1. Enter **`change system-parameters features`**.
2. On the Features-Related System Parameters screen (page 11), enter `y` in the **Allow Two Observers in Same Call?** field and press Enter.
3. If you are going to use a recording device, do the following steps:
    a. Enter **`change cor x`** .
    b. On the Class of Restriction screen (page 2), enter `y` in the **Service Observing by Recording Device?** field for the COR to be used for the recording device line appearance and press Enter.

Planning and administering Single-Site Best Service Routing (BSR)

This section presents information that is specific to BSR. Follow existing procedures to add or change other properties of VDNs and vectors that are not discussed in this section.

First, confirm that your server meets the requirements for single-site BSR if you have not already done so. For a listing of requirements, see Server and network requirements for BSR in the *Avaya Aura™ Call Center Feature Reference* document.

Related topics:

[Planning for Single-Site Best Service Routing](#) on page 144
[Administering Single-Site Best Service Routing](#) on page 145
[Forms and fields used to administer Single-Site BSR](#) on page 146
[Forms and fields used to administer Single-Site BSR](#) on page 146

Planning for Single-Site Best Service Routing

To work more efficiently, you may want to record goals, VDN extensions, vector numbers, and other information on paper before you begin your administration session. To do this, complete the following:

1. Select the group of callers for which you want to use single-site BSR, and identify the VDNs and vectors that you wish to support this group.
2. Define your business goals.

   For example, your business goals in using BSR might be to achieve a faster average speed of answer for a certain call type, or perhaps better service by routing calls to the most qualified agents.

   Different Vector Directory Numbers (VDNs) or vectors may have different goals.
3. Decide which agent selection strategy that you will assign to each VDN in order to best achieve the goals that are relevant to that VDN.
4. Decide whether you will allow VDN Override for each of the VDNs that are identified.

Administering Single-Site Best Service Routing

Use this procedure to administer single-site BSR, complete the following:

1. To go to the Vector Directory Number screen for the first VDN you identified in step 1 of Planning for Single-Site Best Service Routing on page 144, type **add vdn xxxxx** or **change vdn xxxxx** at the command line prompt and press Enter, where **xxxxx** is a valid VDN extension as defined in the system dial plan.
2. In the **Allow VDN Override?** field, enter y or n.

   If the call is directed to another VDN during vector processing:

   - **y** allows the settings on the subsequent VDN, including its **BSR Available Agent Strategy**, to replace the settings on this VDN.
   - **n** allows the settings on this VDN, including its **BSR Available Agent Strategy**, to replace, or override, the settings on the subsequent VDN.
3. In the **BSR Available Agent Strategy** field, enter the identifier for the agent selection method that you want this VDN to use.

   When this VDN is the active VDN for a vector that uses BSR, the VDN Available Agent strategy determines how calls are directed when one or more of the specified resources have available (idle) agents. If there is only one split/skill with available agents, calls are delivered to that resource.

If you enter…	Consider series in vectors will select the resource with…
1st-found	The first available (idle) agent. BSR does not consider any other resources as soon as it finds an available (idle) agent.
ucd-mia	The agent who has been idle the longest. BSR will compare all of the splits/skills that are specified in the vector before delivering the ACD call.
ead-mia	The agent with the highest (most primary) skill level who has been idle the longest. BSR compares all of the skills that are specified in the vector before delivering the ACD call.
ucd-loa	The least-occupied agent. BSR compares all of the skills that are specified in the vector before delivering the ACD call.
ead-loa	The agent with the highest (most primary) skill level who is the least occupied. BSR compares all of the splits/skills that are specified in the vector before delivering the call.

4. Press **Enter** to save your changes.

Result

You are now ready to write or modify the vector that is assigned to this VDN. For tips on using BSR commands in vectors, see Tips for writing BSR vectors in the *Avaya Aura™ Call Center Feature Reference* document.

Forms and fields used to administer Single-Site BSR

Screen	Field
System Parameters Customer-Options	• **G3 Version** • **Vectoring (G3V4 Advanced Routing)** • **Vectoring (Best Service Routing)**
Feature-Related System Parameters	**Adjunct CMS Release**
ISDN Numbering - Public/ Unknown	• **Ext Len** • **Ext Code** • **CPN Prefix**
VDN	**BSR Available Agent Strategy**
Call Vector	Complete a screen for each vector that uses BSR commands

Forms and fields used to administer Single-Site BSR

Screen	Field
System Parameters Customer-Options	• **G3 Version** • **Vectoring (G3V4 Advanced Routing)** • **Vectoring (Best Service Routing)**
Feature-Related System Parameters	**Adjunct CMS Release**
ISDN Numbering - Public/ Unknown	• **Ext Len** • **Ext Code** • **CPN Prefix**
VDN	**BSR Available Agent Strategy**

Screen	Field
Call Vector	Complete a screen for each vector that uses BSR commands

Screens and fields used to administer SLM

Administration of the Service Level Maximizer (SLM) feature is relatively simple. This section lists the administration screens and settings that are required for SLM administration.

Table 21: SLM administration - verify that SLM feature is enabled[26]

Administration command:	`display system-parameters customer options`	
Page name:	Call Center Optional Features	
Required fields:	Call Center Release	12[27]
	Business Advocate?	n[28]
	Service Level Maximizer?	y
	Expert Agent Selection?	y

Table 22: SLM administration - set skill Group Type, Service Level Target and Auto Reserve Agents

Administration command:	`change hunt-group`	
Page name:	**`Hunt Group`**	
Required fields:	Group Type:	slm
	Service Level Target (% in sec):	_ in _ [29]
	Maximum Auto Reserve Agents:	___[30]

[26] Contact your Avaya account representative if this screen indicates that any of the required feature selections are not enabled.
[27] Call center release 12 or later.
[28] SLM *cannot* be activated with Avaya Business Advocate.
[29] Default service level target values are set to 80% in 20 seconds.
[30] The default value for this field is set to 0. Valid entries range from 0 to 9.

Administering the UCID feature

Requirements for Universal Call Identification (UCID) applications

Before you start to administer the UCID feature, be aware that UCIDs are successfully transmitted only when all of the communication server network components meet the requirements (software and connections) specified below.

Some requirements vary, depending on how you want to use UCID. The following table lists requirements for different applications of UCID.

Operation	Requirement
UCID sent from communication server to communication server	ISDN (BRI/PRI) trunks with Shared User-to-User Information (UUI) or QSIG service protocol, or SIP trunks with Shared UUI
UCID sent from communication server to the IVR system	ASAI link to the IVR system
Communication server receives UCID from the IVR system	ISDN-PRI connection (with shared UUI) between communication server and the IVR system
Switch sends UCIDs to CMS	Ethernet connection from switch to CMS
Switch sends UCIDs to a CTI Application	ASAI link to adjunct

To maximize the benefits of UCID, it is recommended that you have an updated version of the Avaya communication server.

In the case of a communication server network component that cannot support UCIDs, it is recommended that the component (trunk group, ASAI connection, or CMS software) be administered to disallow the sending or receiving of UCID. For example, if an Avaya communication server is connected to a non-Avaya switch, then the connecting trunk must be administered to not send UCID over that trunk for outgoing calls.

For more information on UCID-related fields , see *Avaya Aura™ Communication Manager Screen Reference*.

Administering the Universal Call Identification (UCID) feature

These instructions assume you’re using the System Administration Terminal (SAT) screen or a terminal emulator to access the communication server's Communication Manager software.

There are three tasks involved in administering UCID on the communication server. Complete these tasks in the following order:

Task	Description
Task A	Check ASAI Interface before enabling UCID
Task B	Set the communication server to create and send UCIDs
Task C	Enable UCID Transmission on Trunk Groups

Related topics:

[Task A: Check ASAI interface before enabling UCID](#) on page 149
[Task B: Set the communication server to create and send UCIDs](#) on page 149
[Task C: Enable UCID transmission on trunk groups](#) on page 151

Task A: Check ASAI interface before enabling UCID

If this procedure is not performed, you may encounter the ASAI Interface feature not assigned error message in later steps.

Screen	Field	Why?	Optional?
Optional Features	`ASAI Interface`	Global setting to send UCIDs to ASAI	Y

To check the ASAI interface:

1. In the command line, enter `change system-parameters customer-options` and press RETURN.
2. On page 1, enter `y` in the **ASAI Interface** field.
3. Log out and log back in if this and any other fields in this screen have changed.

Task B: Set the communication server to create and send UCIDs

You must administer each communication server that you want to create UCIDs. If you do not administer a communication server, it will pass along an already-created UCID, but it will not create one if a call comes to it first.

Screen	Field	Why?	Optional?
Feature-Related System Parameters	**Create Universal Call ID (UCID)?**	To generate a UCID for each call when necessary.	N
	UCID Network Node ID	Important component of the UCID tag.	N
	Send UCID to ASAI?	So that ASAI receives UCIDs.	Y
	Adjunct CMS Release	So that CMS receives UCIDs.	Y

For the communication server to create and send UCIDs:

1. If your network includes CMS and you want CMS to track UCIDs, then enter **busyout mis** in the command line.

   If not, go to Step 2.
2. In the command line, enter `change system-parameters feature` and press RETURN.
3. The Feature-Related System Parameters screen appears.
4. Go to page 4 of the screen.
5. In the **Create Universal Call ID (UCID)?** field, enter `y`.
6. In the **UCID Network Node ID** field, enter the node ID number.

   Valid numbers are from 1 to 32,767.

   Caution:

   The UCID Network Node ID must be unique for every communication server and IVR in the system. If it is not unique the integrity of the UCID is compromised.
7. If your network includes ASAI, go to page 7 of the screen.

   If not, go to Step 8.
8. In the **Send UCID to ASAI?** field, enter `y`.
9. If you have performed the **busyout mis** command, go to Step 9.

   If not, you are done with this task (Task b), so press Enter to save your work and go to Task c.
10. Go to page 8 of the screen.
11. In the **Adjunct CMS Release** field, enter R3V6 or later CMS and/or Avaya IQ release.

12. Press Enter to save your work.
13. In the command line, enter release `mis`.

Task C: Enable UCID transmission on trunk groups

When you send UCIDs over ISDN trunks, it is administered on a trunk group basis. The following table provides the screen and field information that you need to perform this task.

Screen	Field	Why?	Optional?
Trunk Group	**Group Type**	Specify the group type as ISDN.	N
	Supplementary Service Protocol	Specify correct service type. b is for QSIG, others are for UUI.	N
	Send UCID?	Allows or blocks UCID transmission.	N

To enable UCID transmission on an ISDN trunk group:

1. In the command line, enter **`change trunk-group n`** and press RETURN.
   n is the number of the trunk group you want to administer.
2. The Trunk Group administration screen appears.
3. On page 1, enter `SIP` in the **Group Type** field.
4. Go to page 3 of the screen.
5. In the **UUI Treatment** field, enter `Shared`.
6. In the **`Send UCID?`** field, enter `y`.
7. Press **`Enter`** to save your changes.

Result

You also need to administer your trunk groups to send user data over your private and public networks. To administer the trunk groups, see Information Forwarding.

SIP trunk groups

When you send UCIDs over SIP trunks, it is administered on a trunk group basis. The following table provides the screen and field information that you need to perform this task.

Screen	Field	Why?	Optional?
Trunk Group	**Group Type**	Specify the group type as SIP.	N
	UUI Treatment	Must be set to Shared to send UCID.	
	Send UCID?	Allows or blocks UCID transmission. **Note:** This field appears only when the UUI Treatment field is set to Shared.	N

To enable UCID transmission on a SIP trunk group:

1. In the command line, enter **`change trunk-group n`** and press RETURN.
2. The Trunk Group administration screen displays. **`n`** is the number of the trunk group you want to administer.
3. On page 1, enter `SIP` in the **Group Type** field.
4. Go to page 2 of the screen.
5. In the **UUI Treatment** field, enter `Shared`.
6. In the **Send UCID?** field, enter `y`.
7. Press Enter to save your changes.

You also need to administer your trunk groups to send user data over your private and public networks. To administer the trunk groups, see Information Forwarding.

UCID considerations

UCID has been tested with several major carriers. To find out if these capabilities work with your carrier, check with your account team for the most current information. If testing has not been done to verify operation over the public networks involved with the preferred specific configuration, use of private trunking between the nodes should be assumed until successful testing has been completed.

Troubleshooting UCID

The following troubleshooting hints should be reviewed when UCIDs are not transmitted, even though you received no error messages while administering the UCID feature, and all software and connections meet the minimum requirements:

Proposed Solution

1. A tandem communication server has the **Send UCID?** option set to `y` for all trunk groups that AAR/ARS or station users may use to tandem an incoming call.
2. If DCS (Distributed Communication Services) is used, make sure all ISDN trunks between the communication servers used for DCS or remote AUDIX are configured in the D-channel mode.
3. For CMS tracking purposes, make sure all trunks, VDN, and skills/splits that handle calls for which UCIDs are tracked are administered as measured (either both or external).

Variables in Vectors

The VIV feature allows you to create variables that can be used in commands to:

- Improve the general efficiency of vector administration.
- Provide increased manager and application control over call treatments.
- Allow you to create more flexible vectors that better serve the needs of your customer and call center operations.

The vector variables are defined in a central variable administration table, but the values assigned to some types of variables can also be quickly changed by means of special vectors, VDNs and FACs (Feature Access Codes) that you create for that purpose.

Different types of variables are available to meet different types of call processing needs. Depending on the variable type, variables can use either call-specific data, or fixed values that are identical for all calls. In either case, an administered variable can be reused in many vectors.

For more information about VIV capabilities, administration requirements, and vector examples, see *Programming Call Vectors in Avaya Aura™ Call Center*.

Administering User-to-User Information transport for ISDN trunks

Note:

You do not need to complete this procedure if you do not intend to send user data over the network.

This section outlines the procedure to administer incoming and outgoing ISDN trunk groups to send user data over the network. Before administering trunk groups, review these guidelines. (For more information on UUI-related fields, see *Avaya Aura™ Communication Manager Screen Reference*)

1. If you are using shared UUI (any Supplementary Service other than b), then you must administer the UUI Treatment for the trunk groups (both outgoing and incoming at the remote end) as shared.

   Use this option when you want to forward information to the communication server in non-QSIG networks.

2. With QSIG (Supplementary Service b), you need to administer Shared UUI to include ASAI user information with MSI transport.

   If UUI Treatment is the default service-provider, the communication server forwards the ASAI user data (if provided) in a non-shared codeset 0 UUI IE while forwarding the other data as MSI.

Result

The following table lists the screen and fields needed to administer information transport on ISDN trunk groups.

Screen	Fields	Why is this field needed?	Optional field?
ISDN Trunk Group (BRI or PRI)	**UUI IE Treatment**	Set field to either: • `Shared` (for trunk groups connected to the communication server, if you want shared data). • `Service-provider` (for trunk groups connected to communication server releases prior to R6.3, or if you want service provider functionality).	Yes However, this field cannot be blank.

Screen	Fields	Why is this field needed?	Optional field?
	Maximum Size of UUI IE Contents	Set according to what the network supports. 128 (default) is recommended for private networking.	Yes
	Shared UUI Feature Priority fields	Set the priority for each type of user data such as UCID, ASAI, and other application information. Only needed for non-QSIG trunk groups.	Yes If blank, information not sent.

To administer Shared UUI information transport:

1. In the command line, enter:

   `change trunk-group n`

   where “q” is the number of the trunk group you want to administer.

   The Trunk Group administration screen is displayed.

2. Go to page 3 of the screen.

   Caution:

   If you want service provider functionality, do not enter `shared` in page 3 in the **UUI Treatment** field. Instead, leave the default `service-provider` in this field.

3. If the trunk group is not connected to an early version communication server, or if you otherwise do not want service provider functionality, enter `shared` in the **UUI Treatment** field.

   The **Maximum Size of UUI IE Contents** field appears.

   Note:

   If you enter shared and the Send Codeset 6/7 LAI trunk group option is on, you send the LAI information twice (unless the LAI Name and Other LAI data items’ priorities are blank with non-QSIG - with QSIG, both are always sent), and you may exceed the maximum ISDN message size.

4. If you want to change the default size of 128 in the **Maximum Size of UUI IE Contents** field, then enter the number for the maximum UUI size. If you want to keep the default size, go to Step 5.

   You must administer the trunk groups to send the appropriate amount of user information over the connected network. For example, if the public network only supports 32 bytes of user information, and you enter a number larger than 32, the network may reject the entire User-to-User Information - Information Element (UUI-IE).

   The communication server accepts a range from 32 bytes to 128 bytes.

5. Go to page 5 (the Shared UUI Feature Priorities page, which displays only when the **UUI IE Treatment** field is set to `shared`).

   Notice that all feature names (whether enabled or not) appear on this page. The default values were assigned when Shared UUI was enabled.

6. Either leave the default settings, or reassign numbers from 1 to 7(1 is the highest priority) to each feature. For more information about user needs, see Determining user information needs in the *Avaya Aura™ Call Center Feature Reference* document.

   Note:

   If you leave a feature field blank, information about that feature will not transport in the UUI IE. If the public network supports less than 128 bytes, you need to choose what feature information you want to send, and give that feature field a higher priority.

7. Press `Enter` to save your changes.

Administering User-to-User Information transport for SIP trunks

The following table lists the screen and fields needed to administer information transport on SIP trunk groups. (For more information on UUI-related fields, see *Avaya Aura™ Communication Manager Screen Reference*.)

Screen	Fields	Why is this field needed?	Optional field?
SIP Trunk Group	**UUI Treatment**	Set field to Shared.	Yes However, this field cannot be blank.
	Maximum Size of UUI Contents	Set according to what the network supports. 128 (default) is recommended for private networking.	Yes
	Shared UUI Feature Priority fields	Set the priority for each type of user data such as UCID, ASAI, and other application information.	Yes If blank, information not sent.

To administer Shared UUI information transport:

1. In the command line, enter:
   `change trunk-group n`
   where “n” is the number of the trunk group you want to administer.
   The Trunk Group administration screen is displayed.
2. Go to page 3 of the screen.
3. Enter `shared` in the **UUI Treatment** field.
   The **Maximum Size of UUI IE Contents** field appears.
4. If you want to change the default size of 128 in the **Maximum Size of UUI IE Contents** field, then enter the number for the maximum UUI size.
   If you want to keep the default size, go to Step 5.
   You must administer the trunk groups to send the appropriate amount of user information over the connected network. For example, if the public network only supports 32 bytes of user information, and you enter a number larger than 32, the network may reject the entire UUI.
   The communication server accepts a range from 32 to 128.
5. Go to page 4 (the Shared UUI Feature Priorities page, which displays only when the **UUI Treatment** field is set to `shared`).
   Notice that all feature names (whether enabled or not) appear on this page. The default values were assigned when Shared UUI was enabled.
6. Either leave the default settings, or reassign numbers from 1 to 6 (1 is the highest priority) to each feature.
   For more information about user needs, see Determining user information needs in the *Avaya Aura™ Call Center Feature Reference* document.

   Note:
   If you leave a feature field blank, information about that feature will not transport in the UUI. If the public network supports less than 128 bytes, you need to choose what feature information you want to send, and give that feature field a higher priority.
7. Press **Enter** to save your changes.

How to administer VDN Time Zone Offset

Administer this feature using the**VDN Time-Zone Offset** field on the VDN (Vector Directory Number) screen. For more information about this field, see Vector Directory Number field descriptions on page 55.

Related topics:

Administering the offset on page 158

Administering the offset

The offset is assigned on the VDN screen as follows:

[+ or -] [0 - 23] : [0 - 59]

0 - 23 = hours

0 - 59 = minutes

The offset changes the server local time used for the Time-of-Day (TOD) conditionals in the vectors processed for the VDN to the VDN local time.

- Use the - sign if the VDN local time is earlier than the server local time.
- Use the + sign if the VDN local time is later than the server local time.

For example, if the server local time is in Eastern Standard Time and the local time used for calls to the VDN is Mountain Standard Time, use - 2:00.

Forms and fields used to administer VICP

Screen	Field
Coverage Paths	All
Call Vector	All
Vector Directory Number	All

Call Coverage Path screen - Set one of the following to the extension of the VDN you want to use as a coverage point: Point 1, Point 2, Point 3, Point 4, Point 5, Point 6.

Forms and fields used to administer VDN of Origin Announcement (VOA)

Screen	Field
Attendant Console	Feature Button Assignments: **VOA Repeat**
Class of Restriction (COR)	**VDN of Origin Announcements**
Feature-Related System Parameters	**Hear Zip Tone Following VOA?**
Announcements/Audio Sources	All
Vector Directory Number	**VDN of Origin Annc. Extension**
Phones	Feature Button Assignments: **VOA Repeat**

Announcements/Audio Sources - Assign each VOA you want to use. You can administer aux-trunk types with queue, without queue, and with barge-in. You can administer integrated types with queue and without queue. Do not administer analog and integrated repeating announcement types as VOAs.

Note:
The VDN for which you are administering a VOA must be in a vector command line.

forms and fields used to administer VRI

Enable Call Prompting to allow the system to collect digits from the caller and an IVR system to return data. You must have Call Prompting to administer the Converse Data Return Code and use the digits keyword for the **<data_1>** or **<data_2>** fields on the **converse-on** command.

Screen	Field
System Parameters Customer-Options	**Call Prompting**
Feature Access Code (FAC)	**Converse Data Return Code**
qFeature-Related System Parameters	**Converse Delay Data1/Data2** **Converse Signaling Tone/Pause**

Screen	Field
Call Vector	All

Forms and fields used to administer VuStats

Screen	Field
System Parameter Customer-Options	**ACD** **BCMS/VuStats Login ID** **BCMS/VuStats Service Level** **VuStats or VuStats (G3V4 Enhanced)**
Feature-Related System Parameters	**ACD Login Identification Length** **BCMS/VuStats Measurement Interval** **BCMS/VuStats Abandoned Call Timer** **Validate BCMS/VuStats Login IDs** **Clear VuStats Shift Data**
Trunk Group	**Measured**
Attendant Console	**Feature Buttons**
BCMS/VuStats Login ID	**Login ID,** **Name**
Hunt Group	**ACD** **Acceptable Service Level** **Measured** **Objective**
Station	Feature Buttons
Vector Directory Number	**Acceptable Service Level** **Measured**
VuStats	All

Display the System-Parameter Customer-Options screen and ensure that **ACD**, **BCMS/VuStats Login IDs**, **BCMS/VuStats Service Level**, and **VuStats** or **VuStats (G3V4 Enhanced)** are set to y.

Administering Zip Tone Burst for Callmaster Endpoints

For a Callmaster endpoint, on page 13 of the FEATURE-RELATED SYSTEM PARAMETERS screen, administer the **Zip Tone Burst for Callmaster Endpoints** field as `single` or `double`.

Administering the **Zip Tone Burst for Callmaster Endpoints** field as `single` eliminates the 2nd burst of zip/ICI tone reducing time for agent to start conversation with the caller and possibility of the agent and the caller hearing “open mike” background noise between the first and second tones.

Forms and fields used to administer Zip Tone Burst for Callmaster Endpoints

Screen	Field
FEATURE-RELATED SYSTEM PARAMETERS	**Zip Tone Burst for Callmaster Endpoints**

Chapter 3: Implementing the Time of Day Clock Synchronization feature

The Avaya communication server includes a Time of Day (TOD) Clock Synchronization feature which allows you to maintain synchronous clock times across a multi-site call center network. Maintenance of accurate TOD settings is important for many functions, such as:

- Creation of time stamps for items like error logs, Malicious Call Trace records, Avaya BCMS and CMS data
- Scheduling of a large number of diverse task activities on the switch and its adjuncts

TOD synchronization methods

TOD clock synchronization capabilities are available for all Avaya switches running any software release that supports Multiple Locations and Daylight Savings rules. TOD clock synchronization is implemented by either of two methods. The method that you choose depends on the type of Avaya switch platform that you need to synchronize. The two methods are Using NTP/SNTP to enable direct switch synchronization and Scheduling Time Synchronization tasks through Avaya Site Administration.

Related topics:

Using NTP/SNTP to enable direct switch synchronization on page 163
Scheduling Time Synchronization tasks through Avaya Site Administration on page 164

Using NTP/SNTP to enable direct switch synchronization

In this method, which is available only for certain Avaya communication servers, individual communication servers use either the Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP) to synchronize their operating system (OS) clocks with highly accurate Coordinated Universal Time (UTC) from an Internet Time Server. The OS clock time is also used for the switch clock time.

This synchronization method is not described in detail in this document. An overview of the method, including information about the Avaya communication servers to which it applies, and where to find more detailed information, is provided in Using NTP/SNTP to enable direct switch synchronization.

Scheduling Time Synchronization tasks through Avaya Site Administration

In this method, which is available only for certain Avaya communication server types, the Avaya Site Administration tool, is used to set up a regularly scheduled synchronization task for switches on a call center network. The time used to synchronize the communication servers is obtained from the system clock of the client PC. The recommended practice is to run Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP) software on the client so that it can be synchronized with UTC time obtained from an Internet Time Server.

This method of time synchronization applies to the following communication servers:

- DEFINITY G3csi
- Avaya DEFINITY Server CSI
- DEFINITY G3si
- Avaya DEFINITY Server SI
- DEFINITY G3r
- Avaya DEFINITY Server R

Requirements, considerations and procedures associated with this method are described in detail in Using Avaya Site Administration to set up a TOD synchronization schedule.

Using NTP/SNTP to synchronize the Switch to UTC time

This method applies to certain Avaya switches on which the platform OS (Linux or Windows 2000) uses either the Network Time Protocol (NTP) or Simple Network Time Protocol (SNTP) to obtain highly accurate UTC data from an Internet Time Server. The time on the operating system clock, which is continuously adjusted to match polled UTC time, also provides the basis for the switch (Communication Manager) clock time. This synchronization method is accurate on the order of fractions of a second.

TOD clock synchronization is enabled on the following communication server when Communication Manager is installed:

Avaya S8800 Server

When a multi-site network includes switches that use this synchronization method, each of these switches maintains its own separate clock time. However, since all of the switches that use this method maintain settings based on UTC time, and thus essentially identical, clock synchronization is still achieved.

For requirements and procedures associated with this screen of clock synchronization, see Administering Avaya Aura™ Communication Manager.

For more information about NTP/SNTP software, see About NTP/SNTP and Internet Time Servers.

Using Avaya Site Administration to set up a TOD synchronization schedule

About Using Avaya Site Administration to set up a TOD synchronization schedule

This method for TOD clock synchronization, which applies to certain Avaya communication servers, uses the Avaya Site Administration tool installed on a client PC to set up a synchronization task schedule.

In the recommended configuration, Avaya Site Administration is installed on the client PC along with NTP or SNTP software. The client PC is also connected to an Internet Time Server that it polls continuously to obtain UTC time for its system clock. The client clock time is then used to synchronize the clock time of switches on the network through the Avaya Site Administration Time Synchronization feature.

On applicable communication servers that are installed with R10 or earlier, the synchronization command is ignored if the minute time specified for the incoming time is the same as that currently being counted at the switch. Consequently, this synchronization method is only accurate to within 59 seconds or less on communication servers that are installed with R10 or earlier.

On applicable communication servers that are installed with R11 or later, if the minute time specified for the incoming synchronization command is the same as that being counted at the switch, the minute count on the switch is set back to the 0-second mark for the minute. When potential network delays are factored in, this method is accurate to within 5 seconds or less for communication servers that are R11 or later.

Prerequisites for Using Avaya Site Administration to set up a TOD synchronization schedule

To implement a TOD clock synchronization schedule through Avaya Site Administration, the following prerequisite conditions must be met:

- Avaya Site Administration must be installed on the client, and it must also be running on the client when synchronization runs are scheduled to occur.
- The client PC must be able to establish a LAN (Local Area Network) or dialup connection to target communication servers when synchronization runs are scheduled to occur.

Important:

Before you set up TOD synchronization tasks in Avaya Site Administration, it is strongly recommended that you administer dedicated synchronization connections from Avaya Site Administration to each switch, as described in Creating dedicated switch connections on page 173.

- The client PC must have an appropriate SNTP/NTP software program installed, and be connected to an NTP Time Server over the internet. For more information, see About NTP/SNTP and Internet Time Servers.
- The client PC must be configured so that if Daylight Savings Time is in effect at the client location, the same rule also applies to the PC clock.

Things to know before you set up a synchronization schedule

You must understand the following details before you useAvaya Site Administration to set up a TOD clock synchronization schedule for switches on the network.

Specify offset values in Standard Time equivalents

When you set up a regular schedule for a timesynchronization task in Avaya Site Administration, you specify an offset value that reflects the difference in local time between the client PC and a target switch location. Because of the way that Avaya Site Administration handles time synchronization settings, the derivation of offset values requires careful consideration.

Avaya Site Administration uses the **`set time`** command to synchronize the switch clock time to the clock time of the Avaya Site Administration client. Avaya Site Administration always

sends the **set time** command in Standard Time. Depending on the switch software version, one of the following results occur:

- if the receiving switch is installed with R11 (or later), the switch checks the Daylight Savings Rule specified in the **set time** command (which is always Standard Time), and compares it to the existing rule in effect for the switch. If a Daylight Savings Rule other than Standard Time is in effect at the switch, the switch adjusts the incoming synchronization time as necessary.
- if the receiving switch is installed with R10 or earlier, the switch checks the Daylight Savings Rule specified in the **set time** command (which is always Standard Time), and compares it to the existing rule in effect for the switch. If a Daylight Savings Rule other than Standard Time is in effect at the switch, the switch sends an error message back to Avaya Site Administration. When Avaya Site Administration receives the error message from the switch, it automatically corrects the synchronization time to comply with the Daylight Savings Rule on the local PC, and resends the adjusted time back to the switch.

When you calculate offset values to use as input in the Avaya Site Administration Time Synchronization feature, you must do the following:

- If either the client or target switches are located in a time zone where Daylight Savings Time rules are in effect, convert local times to reflect what the time would be if the Standard Time rule was in effect. The best practice is to always normalize switch and client times to Standard Time before you calculate offset values.
- After you normalize the location times to their Standard Time equivalents (if necessary), calculate the offset time as the difference between the local Standard Time at the client and the local Standard Time at the switch. This value is the offset between the PC client and switch that you specify when you use the Avaya Site Administration Time Synchronization feature.

For an example scenario that illustrates the offset calculation method, see Designing a TOD clock synchronization schedule.

Possible lag times

For possible lag between synchronization start times on the client and actual run times at the switch, you can set up multiple TOD clock synchronization tasks to run simultaneously on the client PC. However, synchronization tasks are actually run in sequence. Actual synchronization run times at the switch may vary from the run time specified on the client by several minutes. However, the accuracy of the synchronization setting is not affected.

EPN locations do not require synchronization

Expansion port network (EPN) cabinets that are located in a different time zone from their connecting switch do not require separate TOD clock synchronization. EPNs obtain the

synchronized clock time from the switch, which is adjusted according to any settings that are specified in the LOCATIONS administration screen. You can use the **change multiple locations** command to access the LOCATIONS screen.

Note:

CMS data is synchronized to the switch time for the ACD from which CMS data is generated. Any Daylight Savings Time rules applied to the switch are also applied to the CMS data.

Run synchronization tasks during low-traffic periods

Avaya Site Administration uses the **set time** command to adjust the switch clock time. Since completion of the **set time** command can be delayed by heavy switch traffic, the clock synchronization task should be scheduled to run during a low-traffic period on each switch.

Run synchronization tasks in the middle of CMS archive intervals

Avaya CMS is designed to run archives at regular intervals of 15 minutes, 30 minutes, or 1 hour. Synchronization tasks should be scheduled so that they run near the middle of an archive interval. This approach minimizes potential redundancies in archive interval records for an ACD.

Consider a case for an archive interval that begins at 09:00. If a synchronization command is received at the switch and changes the switch clock time to 08:59, a second archive interval begins when the switch clock changes to 09:00 again. In this case, two archive intervals that have the same 09:00 time stamp are recorded. One interval extends from 09:00 to 09:01. The other interval also begins at 09:00, and extends for the normal duration that is specified for archive intervals on the ACD, which is either 15, 30, or 60 minutes.

To avoid situations such as that described above, always schedule synchronization tasks to be run near the middle the archive interval specified for each ACD.

To determine the CMS archive interval length specified for an ACD:

1. Start Avaya CMS Supervisor.
2. From the **main** menu, select:

   Tools > **System Setup**

   The **CMS System Setup** dialog appears.
3. Do the following:
   a. In the **Operations** list, select **Storage Intervals**

b. From the **ACD:** option box, select an ACD for which you want to obtain archive interval information.

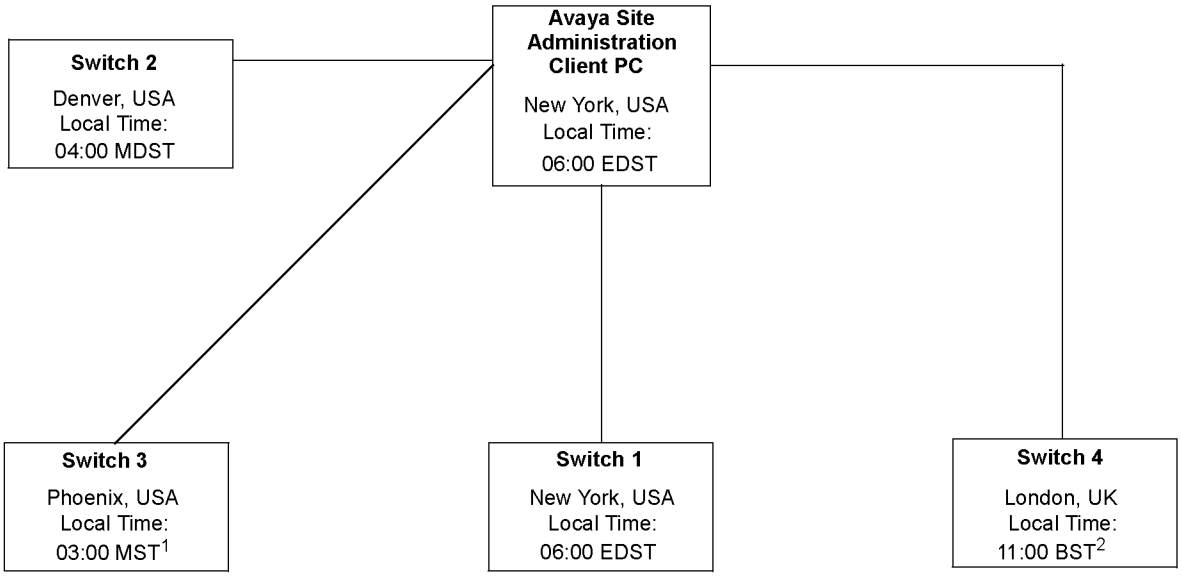
4. Select **OK**.

   Supervisor displays the Storage Intervals window, which includes the archive interval for the ACD.

Designing a TOD clock synchronization schedule

Example multi-site call center network

The following example scenario shows how to design an Avaya Site Administration Time Synchronization schedule for a multi-site call network that spans several time zones. The example sites and their respective time zones are shown in the following figure.



Notes:

1. Site is not on Daylight Savings Time

2. British Summer Time (BST) is UK Daylight Savings Time (GMT + 1)

The call center network example in this figure includes four switch locations that are located in different time zones. In this example, all switches and the client are on Daylight Savings Time, with the exception of Switch 2 (Phoenix).

Using Avaya Site Administration to create a TOD synchronization schedule requires careful planning and consideration. The steps described below for the example multi-site scenario represent the most error-free method you can use to design your synchronization schedule.

Determining location offset values

The Avaya Site Administration Time Synchronization feature sends synchronization messages to a switch that are specified in Standard Time using the **`set time`** command. To calculate offset values that represent the time difference between the Avaya Site Administration client PC and switch locations, all location times should be normalized to their Standard Time equivalents.

Important:

Always calculate offset values based on comparisons between Standard Time equivalents. Otherwise, if Daylight Savings Time rules are not the same for the Avaya Site Administration PC client location and a target switch location, significant synchronization errors can result.

The following table uses the switch locations described in the example scenario to derive correct offset values for the client PC and switch locations.

Note:

The local times listed in the table are arbitrary in nature, and are intended only to illustrate the time differences between locations. You can use any set of relative location times for this purpose.

Local Time / Normalized Standard Time				Calculated offset value
Avaya Site Administration Client PC (New York)		Switch 1 (New York)		
Local time:		Local time:		
	06:00 EDST		06:00 EDST	
Adjusted Standard Time:		Adjusted Standard Time:		
	05:00 EST		05:00 EST	0
Client PC (New York)		Switch 2 (Denver)		
Local time:		Local time:		
	06:00 EDST		04:00 MDST	
Adjusted Standard Time:		Adjusted Standard Time:		
	05:00 EST		03:00 EST	-2
Client PC (New York)		Switch 3 (Phoenix)		

Local Time / Normalized Standard Time				Calculated offset value
Local time:		Local time:		
	06:00 EDST		03:00 MST	
Adjusted Standard Time:		Adjusted Standard Time:		
	05:00 EST(New York)		03:00 MST	-2
Client PC (New York)		Switch 4 (London)		
Local time:		Local time:		
	06:00 EDST		11:00 BST	
Adjusted Standard Time:		Adjusted Standard Time:		
	05:00 EST		10:00 BST	+5

The table shown above demonstrates the importance of normalizing all local times to Standard Time when calculating time offsets. The unadjusted time difference between Denver and New York is 2 hours, and the calculated offset is minus 2 hours.

However, despite the fact that the unadjusted time difference between New York and Phoenix is 3 hours, the calculated offset is also minus 2 hours - the same offset value that is calculated for New York and Denver.

Determining synchronization run times

After you have calculated accurate offset values, you can determine when the synchronization task should be scheduled to run on the Avaya Site Administration client PC. Again, the most reliable method is to normalize all local times to Standard Time equivalents.

The following table shows how to obtain to obtain synchronization task run times from the switch locations used in this example. The task run times represent the values that would be entered in theSchedulerdialog in Avaya Site Administration.

Note:

You should always establish clock synchronization run times on the basis of low-traffic time intervals for the switch. In the following example, a single local switch time is used as the synchronization run time for all of the switches. In actual practice, low-traffic periods for switches in a multi-site network may not always be the same for each switch location.

[31] Local Time / Normalized Standard Time for synchronization at switch location[31]		[32] Client / Switch Offset [32]	[3334] Synchronization run time set on client PC[33,34]
Switch 1 (New York)			
Local synchronization run time:			
	03:07 EDST		
Adjusted Standard Time:			
	02:07 EST	0	2:07 AM
Switch 2 (Denver)			
Local synchronization run time:			
	03:00 MDST		
Adjusted Standard Time:			
	02:07 EST	-2	0:07 AM
Switch 3 (Phoenix)			
Local time:			
	03:07 MST		
Adjusted Standard Time:			
	03:07 MST	-2	1:07 AM
Switch 4 (London)			
Local time:			
	03:07 BST		
Adjusted Standard Time:			
	03:07 BST	+5	8:07 AM

Special considerations for synchronization start times

If the PC client and switch locations do not use the same Daylight Savings Time (DST) rules, actual synchronization run times will vary by an hour over the course of the year. Depending

[31] Synchronization run times should occur during low traffic periods at the switch. In this example, the simplifying assumption is made that a single low-traffic time (at the switch) is common to all switch locations. This assumption may not be true for all call center operations.

[32] Listed offset values are those that were derived in Determining synchronization run times.

[33] If the PC client clock is currently set to DST rules, add 1 hour to the synchronization start time that you specify in the Avaya Site Administration Schedule dialog. If the PC client and switch locations do not use the same DST rules, see Special considerations for synchronization start times on page 172.

on how DST rules between the switch (Communication Manager) and client PC vary, the actual synchronization run time at the switch will occur either one hour earlier or later than the time specified in Avaya Site Administration. The following basic rules apply:

Note:

The exceptions described below relate to synchronization start times, only. As long as offsets are calculated correctly, as described in Determining location offset values on page 170, the start time exceptions listed below have no effect on the accuracy of the synchronization.

- When DST is in effect at the switch, but not at the PC client, the actual synchronization run time at the switch will occur 1 hour later than the run time that is specified on the client PC.
- When DST is in effect at the PC client, but not at the switch, the actual synchronization run time at the switch will occur 1 hour earlier than the synchronization run time that is specified on the client PC.

Creating dedicated switch connections

Before you set up a TOD synchronization task, or any other kind of automated tasks, you should create dedicated connections from Avaya Site Administration to each target switch.

Setting up a TOD synchronization task schedule in Avaya Site Administration

To set up a TOD clock synchronization schedule for a switch on your call center network:

1. Start Avaya Site Administration on the client PC, and select a switch from the pull-down list on the main toolbar.
2. In the browser pane located to the right side of the main application window, select the Fault & Performance tab.
3. Select the **Time Synchronization** option.

   The Time Synchronization - Properties dialog is displayed.
4. In the Time Synchronization - Properties dialog:
   - If the target switch is located in a different time zone, check the Offset option, and specify the time offset between the client PC and the switch.

[34] Run times entered in theSchedule dialog of the Avaya Site Administration Time Synchronization feature must be specified in 12-hour, AM/PM time format.

Important:

When different Daylight Savings Time rules are in effect at the Avaya Site Administration client location and a target switch location, synchronization errors can result if you do not calculate offset values based on Standard Time equivalents. For a description of the method used to calculate accurate offset values, see Determining synchronization run times on page 171.

Note the offset factor that you specify, which is also used in Step 6.

- Click `Next`.

The Time Synchronization - Schedule dialog is displayed.

5. In the Time Synchronization - Schedule dialog:
   - Check the Schedule this task to run option.
   - Click the **Schedule** button.

   The Scheduler dialog is displayed.
6. Do the following in the Scheduler dialog:

   Important:

   The synchronization task should be scheduled to run during a low-traffic period at the switch. Execution of the synchronization command can be delayed by heavy switch traffic.

   a. In the **Date** field, click the arrow to pull down the calendar, and select a day on which the synchronization task will start.

   b. In the **Time** field, enter the time of day that you want the synchronization task to run.

      The time you specify in this field is the PC client time, and not the time at the target switch. To determine the correct time to enter in the **Time** field, do the following:

      i. Determine what the local time will be at the switch when the synchronization runs. If necessary, adjust this time to its Standard Time equivalent, as described in Determining synchronization run times on page 171.

      ii. Subtract the offset factor that you used in Step 4 from the switch run time that you derived in the preceding sub step. The time you calculate is the run time on the client expressed in Standard Time. If Daylight Savings Time is in effect at the client PC, increase the time by 1 hour to account for Daylight Savings Time. For more information, see Determining location offset values on page 170.

      Also, if the client PC and the target switch time use the same DST rules, see Special considerations for synchronization start times on page 172.

iii. Enter the calculated **Time** field.

c. Select a Recurrence Pattern option (Frequent, Weekly or Monthly) and provide the time parameters specified with that option.

Note:

If you select the Frequent option, the recommended practice is to set the task to run at 24 hour intervals.

d. Click **OK**.

The Time Synchronization - Schedule dialog is displayed again.

e. Verify the synchronization schedule information that you provided and click **Next**.

The Time Synchronization - Summary window is displayed.

f. Click **Finish**.

7. Repeat Steps 1 through 6 on page 174 for any other switches that need to be synchronized using this method.

About NTP/SNTP and Internet Time Servers

Description of NTP/SNTP and Internet Time Servers

The Network Time Protocol (NTP) synchronizes the system time on a computer to that of an Internet Time Server that has been synchronized to a reference source, such as radio, Global Positioning Service (GPS) receiver that provides Coordinated Universal Time (UTC). Communication with the Internet Time Server is maintained either by a dialup modem or direct LAN connection.

The Simple Network Time Protocol (SNTP) is a basic version of NTP that allows for a greater degree of error, but can still deliver time to an accuracy on the order of fractions of a second.

SNTP on switch platforms that support direct synchronization

The following Avaya switch platforms can use SNTP software on the platform operating system to directly synchronize the switch clock to UTC time that is obtained from an Internet Time Server:

- Avaya IP600
- DEFINITY One
- Avaya S8000 Media Server
- Avaya S8300 Media Server
- Avaya S8700 Media Server

The platforms listed above include either Red Hat Linux or Windows 2000 as the platform operating system. The following recommendations and conditions are in effect for SNTP configuration on these systems:

- For Linux platforms, Avaya recommends that the IP addresses for at least three different Internet Time Servers be configured. The following web site provides a list of time servers:

  http://www.eecis.udel.edu/~mills/ntp/servers.htm

- For Linux platforms, go to the following web sites for information about how to obtain NTP/SNTP software:

  http://www.ubr.com/clocks/timesw/timesw.html

  http://www.ntp.org/software/index.html

- Linux platforms support the authentication/encryption mode provided in NTP/SNTP version 3 or later support. This capability is not enabled by default.
- Windows 2000 platforms can use only one SNTP client (W32Time), which limits UTC polling to one Internet Time Server IP address at a time. For more information, see the Microsoft Windows 2000 documentation. Search for the keywords *Window Time Service*.
- Windows 2000 platforms use the W32Time service for SNTP functions. This service does not support an authentication/encryption mode for the SNTP protocol.
- W32Time service allows optional polling of a Microsoft network domain controller as the primary time server. Avaya does not support this configuration.

Platforms that synchronize through an Avaya Site Administration client PC

The following Avaya switch platforms must use the Avaya Site Administration Time Synchronization feature to maintain switch synchronization:

- DEFINITY G3csi
- DEFINITY G3si
- DEFINITY G3r
- Avaya S8100 Media Server
- Avaya S8200 Media Server
- Avaya S8500 Media Server

The following web site provides a list of time servers:

http://www.eecis.udel.edu/~mills/ntp/servers.htm

The following web sites provide information about how to obtain NTP/SNTP software for the Avaya Site Administration client PC:

http://www.ubr.com/clocks/timesw/timesw.html

http://www.ntp.org/software/index.html

Setting up ACD offset times for CMS reporting

About setting up ACD offset times for CMS reporting

The time stamp for CMS data is obtained from the local switch on which the data is generated. When a CMS system includes ACDs that are located in different time zones, time zone differences are reflected in CMS reports based on unadjusted data. However, you can use Avaya CMS Supervisor to adjust CMS data derived from remote ACDs in a way that allows you to view data from different time zones in a common time format. This provides you with a more convenient way to view and assess simultaneous call center activity across time zones.

To adjust CMS data to reflect a common time format, you must:

- Designate a master ACD
- Determine the appropriate offsets for each remote ACD, as necessary
- Set the switch time zone offset values for each ACD in the CMS Supervisor Storage Windows dialog.

Setting switch time zone offset values for CMS report times

To use Supervisor to set switch time zone offset values for CMS report times:

1. In the main Supervisor Controller window, select:
   Tools > **System Setup**
   The CMS System Setup Window is displayed.
2. In the CMS System Setup window, do the following:
   a. Select the Operations tab.
   b. From the displayed list, select **Storage Intervals**.
   c. In the **ACD** field, select an ACD.
   d. Select **OK**.
   The Storage Intervals window is displayed.
3. In the **Switch time zone offset (-23 to +23)** field, enter a an offset value that reflects the time difference between the target ACD and the designated master ACD.

   Note:
   For instructions on specifying the master ACD, see Avaya CMS Administration.
4. From the main menu, select: **Actions** > **Modify**.
5. Repeat the procedure for any other ACDs for which a switch time zone offset is required.

Chapter 4: Administering recorded announcements

The Recorded Announcement feature provides an announcement to callers under a variety of circumstances. For example, announcements let callers know that their call is in queue or that the lines are busy.

This chapter gives you extended information about using the recorded announcement feature of the communication server.

Note:

For information about administering announcements, see Administering Avaya Aura™ Communication Manager.

For information about adding, recording, saving, copying, restoring, and deleting announcements, see Avaya Aura™ Communication Manager Feature Description.

Forms and fields used to administer Recorded Announcements

Screen	Field
Announcements/Audio Sources (includes Integrated Announcement Translations)	All
Feature Access Code (FAC)	**Announcement Access Code**
Station	**COS**
Data Modules (for Save/Restore/Copy) Netcon Data Module System Port Data Module (SAP) Announcement Data Module	All
[35] Circuit Packs[35]	All
[36]	**DID/Tie/ISDN Intercept Treatment**

[35] You only need to complete the Circuit Pack screen if you administer the Board Location on the Announcements/Audio sources screen or Data Module screen and do not have the circuit pack plugged in.

Screen	Field
Feature-Related System Parameters[36]	**Controlled Outward Restriction Intercept Treatment** **Controlled Termination restriction (Do Not Disturb)** **Controlled Station-to-Station Restriction**
Hospitality[36]	**Announcement Type** **Length of Time to Remain Connected to Announcement**
Trunk Groups (All)[36]	**Incoming Destination**
Coverage Path[36]	**Coverage Points**
Hunt Group[36]	**First Announcement Extension** **Second Announcement Extension**
Call Vector[36]	All fields that require announcements

Recorded announcement types

The communication server supports several recorded announcement types. Each support announcement type is described in this section.

Related topics:

Analog line types on page 180
DS1 types on page 181
Auxiliary trunk types on page 182
Integrated types on page 183
When to use recorded announcements on page 184
About barge-in on page 185
Integrated announcements and announcements recorded on external devices on page 186

Analog line types

External announcement machines for recorded announcements can be interfaced using one of the analog line types. The external announcement machine can then be connected by an analog line port.

[36] You only need to complete this screen if you plan to use Recorded Announcements with the screen's associated feature. For example, if you want to use announcements with the Hospitality features, you need to complete the Hospitality screen.

Related topics:

Analog on page 181
Analog-fd on page 181
Analog-m on page 181

Analog

The analog announcement type provides an analog telephone interface using an analog line port for use with an announcement/audio source device that emulates analog telephones. The communication server starts playback by applying ringing; the device indicates playback has stopped by going on-hook (opening the loop). The communication server does not indicate to the device to stop playback. Use the analog type for announcements that play for a specific period and then go on-hook at the end. When the device goes on-hook to indicate that the playback ended, the caller listening to the announcement hears a click. (See ds1, aux-trk, or integrated types for alternative types).

Analog-fd

Like the analog type, analog-fd provides an analog line interface and ringing starts the playback. However, a forward disconnect signal (open loop for about one-half second) is sent to the device to stop playback when there are no callers left to hear it.

Analog-m

Like the analog type, analog-m provides an analog line interface. However, ringing is not applied to start playback. Use this type for continuous playing music or audio sources. The device stays in an off-hook state when active and goes on-hook when it is not playing, is turned off, or is disconnected. This announcement type is used when the **Q** field is set to `b` to provide barge-in repeating or continuous-play announcements.

DS1 types

The DS1 types provide analog-like interfaces with DS1 line ports, which are called Line Side DS1 or Line Side T1. Each of these types indicate to the announcement, music, or audio-source device to start playback using the Line Side T1 equivalent of ringing. The DS1 types also expect off-hook from the device to indicate that the playback is active and on-hook to indicate that the playback is not active.

The ds1-id and ds1-sa types provide a forward disconnect using transitions of the A signaling bit to the device, which indicates when playback should be stopped. Callers listening to announcements do not hear clicks when the device disconnects (goes on-hook).

Related topics:

ds1-fd on page 182
ds1-sa on page 182
ds1-ops on page 182

ds1-fd

The ds1-fd announcement type provides a TIA/EIA Foreign eXchange (FX) type DS1 interface. The forward disconnect signal is a toggle of the A bit from 0 to 1 and then back to 0 after 600 msecs. This type is used for Line Side T1 ports on the IVR system when they are used as an analog-like announcement device and is the recommended method for interfacing.

ds1-sa

The ds1-sa announcement type provides a TIA/EIA special-access type DS1 interface. The forward disconnect signal is a toggle of the A bit from 1 to 0 and then back to 1 after 600 msecs.

ds1-ops

The ds1-ops announcement type provides a TIA/EIA off-premises-station type DS1 interface that is used when the device does not support forward disconnect.

Auxiliary trunk types

The Auxiliary Trunk announcement type supports an external announcement machine connected using a 4-wire auxiliary trunk interface, such as a 15A announcement system. The communication server indicates to the device to start or stop the playback on the S lead; the device indicates that the playback is active on the S1 lead.

Related topics:

aux-trunk on page 183
aux-trk-m on page 183

aux-trunk

Use the aux-trunk (auxiliary trunk) announcement type with a 4-wire interface external device when the playback is to be stopped and started by way of the S1 lead and S1 is used by the device to indicate playback started.

aux-trk-m

Use the aux-trk-m (auxiliary trunk music) with a 4-wire interface device for continuously playing music or audio sources that do not indicate that playback is active on the S1 lead. This announcement type is used when the **Q** field is set to `b` to provide barge-in repeating or continuous-play announcements

Integrated types

The integrated announcement type stores announcements internally on the switch on an Integrated Announcement circuit pack or embedded gateway processor equivalent. This can include TN2501AP Voice Announcements with LAN (VAL), or an H.248 Media Gateway VAL source.

The TN2501AP circuit pack has 31 ports that are available for playing announcements. The G700 MG VAL source has 15 play ports while the G350 MG VAL source has 6. Integrated announcement sources are recommended for VDN of Origin Announcements and for other general and ACD announcement needs.

The following announcement boards or sources are obsolete and not supported in Communication Manager configurations:

- TN750, TN750B, or TN750C announcement boards
- Co-resident SSP sources (DEFINITY One or S8100)

Related topics:

integrated on page 184
integ-rep on page 184
integ-mus on page 184

integrated

Use the integrated announcement type for announcements that are stored on the switch (Communication Manager). This announcement type is recommended for general, ACD, and vectoring announcements and for VDN of Origin Announcements.

integ-rep

The integ-rep (integrated-repeating) announcement type is used to provide integrated, repeating automatic wakeup announcements and is implemented along with the multi-integ hospitality announcement type setting. This type can also be used for call center applications in vectoring where a continuous repeating announcement is required.

integ-mus

The integ-mus announcement type is the same as the integ-rep type except that the **Q** field is always set to `b` to provide a continuous repeating barge-in operation. This type is typically used to provide music on delay or on hold.

For more information, see Capabilities of locally-sourced music and announcements on page 192.

When to use recorded announcements

The most common applications for recorded announcement include:

- Direct Inward Dialed (DID) calls cannot be completed as dialed.
- Incoming private-network access calls cannot be completed as dialed.
- Calls enter a split or skill (first announcement).
- Direct Department Calling, Uniform Call Distribution, or Direct-Agent calls have been in queue for an assigned interval.
- ACD and Call Vectoring calls have been in queue for an assigned interval.
- A call's destination is a recorded-announcement extension.
- A call routes to a vector that contains an announcement step.
- An announcement extension is specified as a coverage point.
- An announcement is the incoming destination of a trunk group.

- A VDN of Origin Announcement (VOA) has occurred.
- A Security violation notification has occurred.
- The Hospitality Automatic Wakeup feature is in use.

About barge-in

Normally, the system connects multiple callers to the beginning of an announcement, regardless of announcement type. However, you can also administer auxiliary trunk announcements, DS1 announcements, and integrated announcement to allow callers to begin listening to an announcement after the system has begun playing its message. This capability is called barge-in.

Related topics:

Barge-in operational details on page 185
Non-barge-in operational details on page 185

Barge-in operational details

When you administer barge-in by setting the **Q** field to `b`, only one port plays the announcement at any one time. When the system routes a call to that announcement, the call immediately connects to the port and the caller hears the announcement as it is playing. Most administrators administer barge-in announcements to repeat continually while callers are connected to the port. In this way, the caller listens until the system plays the entire announcement.

Non-barge-in operational details

If an announcement port is available when a call arrives, the system connects the call to the announcement.

If an announcement port is not available and the announcement is administered with “no” as the queue option, the call does not enter the queue for the announcement and the caller hears busy or other feedback, depending upon how the announcement was accessed.

If an announcement port is not available and the announcement is administered with “yes” as the queue option, the call enters the announcement queue. When a port becomes available, the communication server connects the calls waiting in the queue to the beginning of the announcement. The system first connects the call that has been waiting in queue the longest and then connects as many calls as it can.

Integrated announcements and announcements recorded on external devices

Recorded Announcement allows you to administer either integrated announcements or announcements recorded on external devices. The external devices connect to the communication server using analog line circuit packs or auxiliary trunk interfaces, such as a TN2183 or a TN763.

The system stores an integrated announcement on a VAL source (TN2501AP or H.248 MG sources). The system can store multiple announcements on each circuit pack up to the system capacity.

Each TN2501AP integrated-announcement circuit pack allows up to 1 hour of uncompressed voice storage, has 31 playback ports (can play up to 31 simultaneous announcements) and 1 dedicated port for telephone access to be used for recording and playback. The recording time and playback ports for the H.248 MG VAL sources vary by Media Gateway. The TN2501AP and H.248 MG VAL sources are connected to the customer LAN to enable announcement file transfers to take place by way of FTP with a computer. Announcements are wave files that are recorded as CCITT u-law/a-law, 8kHz, 8-bit mono files using a utility such as Microsoft's Sound Recorder on a computer or using an Avaya switch telephone.

Any announcement stored on a circuit pack can play through any port on the circuit pack. Any announcement (not administered for barge-in) can be played through multiple ports. For instance, all 31 ports on the TN2501AP can play the same announcement at the same time, each started at a different time.

Table 23: VAL sources

Type	Storage time	Playback ports
TN2501AP	60 minutes	31
G700 MG	20 minutes	15
G350 MG	10 minutes	6
G450 MG	45 minutes with internal flash memory or 240 minutes with external compact flash card	63.
G430 MG	45 minutes with internal flash memory or 240 minutes with external compact flash card	15

You must set the **Q** field to y on the Announcements/Audio Sources screen for each extension that you want to queue for Integrated Announcements. Calls that hear integrated

announcements at extensions that have queue assigned only queue when all of the ports on the source that contains the announcement are busy. When a port becomes available, all callers queued to hear a specific announcement up to the maximum supported by the server platform are simultaneously connected to that port to hear the announcement from the beginning. The same queing pool is used over all integrated sources. The communication server controls the announcement queue length for integrated announcements, but you must set the queue length for analog or aux-trunk announcements.

Procedures for recording announcements

About procedures for recording announcements

You can transfer to and from a computer or delete announcement files over the LAN for the TN2501AP and H.248 MG VAL sources using the Voice Announcement Manager (VAM) software or using an FTP client in conjunction with System Administration Terminal (SAT) commands.

Announcements for the VAL (Voice Announcement over Local Area Network) sources can also be recorded with a telephone using the procedures discussed in this section. For additional information, see Feature Description and Implementation for Communication Manager.

Use these procedures to record announcements on the TN2501AP circuit packs, as well as for G700 and G350 Gateway embedded Media VAL announcements (referred to herein as virtual VAL or VVAL).

For more information and recording tips, see announcement command for Call Vectoring in the *Programming Call Vectors in Avaya Aura™ Call Center* document.

About announcement sessions

You can record, play back, or delete integrated announcements by initiating an announcement session. To do this, you must have console permissions assigned to your Class of Service (COS) for the internal station or Remote Access barrier code in order to initiate an announcement session.

Announcement recording

With the VAL announcement sources, recording by telephone always uses port 1, which is dedicated for telephone access with these sources. VAL announcement sources also support

recording announcements as .wav files either on a local PC or made by a professional recording studio. The files are moved onto the VAL source using FTP.

Note:

You cannot use a telephone to record an announcement with an audio group assignment. Using FTP, move each pre-recorded file to each of the sources defined for the audio group.

For more information, see Administering Avaya Aura™ Communication Manager.

The announcement session process

To begin an announcement session, the user must dial the administered feature access code (FAC) followed by the announcement extension. If an announcement session is already in progress, the user hears reorder tone (fast busy) and the system drops the call.

If the telephone session port to an integrated board is in use, then the user hears reorder tone followed by silence. This indicates that the port will be reserved for an announcement session. The user should redial the FAC and extension every 45 seconds to gain access to the port.

Note:

Multiple telephone sessions are allowed with one session associated with each active integrated announcement board.

Once a telephone user accesses an announcement session, the user can dial 1 to record an announcement, 2 to play an announcement, or 3 to delete an announcement. If the circuit pack memory is more than 90% full, then the communication server gives stutter dial tone when the user gains access to an announcement session. Even if the user hears stutter tone, the user can begin speaking to record the announcement.

Note:

Avaya recommends that you use a digital telephone. For more information, see Stop recording the announcement on page 189.

Recording the announcement

If you dial 1, the communication server attempts to start a recording session and you will receive one of the following outcomes:

1. If an announcement already exists and is protected (designated as protect = y), you will hear an intercept tone. Hang up and determine the correct announcement extension to use.
2. If the announcement is currently being played to callers, then you will hear the reorder tone.
3. If the communication server has started the recording session, then you will hear a record tone and can begin recording the announcement.

Stop recording the announcement

Depending on the type of phone you are using, use one of the following methods to stop the recording after the announcement is complete:

If you are using a hybrid, digital telephone, or IP telephone: Dial # to end the recording. Ending the recording with a # returns you to the dial tone, allowing a playback, delete, or record over operation to be requested. The # tones or a click sound produced when you hang up are not recorded. If the circuit pack memory becomes full during recording, you will hear a reorder tone, the system will drop you, and the announcement is not retained.

If you are using an analog telephone: Hang up. Otherwise, ending with a # puts the tone in the message. If you are using an analog telephone that is not connected with lineside T1 (DS1 type), the system records a click when you hang up. After hanging up, you must redial the FAC plus announcement extension to start a new recording session. If the circuit pack memory becomes full during recording, you will hear a reorder tone, the system will drop you, and the announcement is not retained.

Playing back the announcement

After you complete a recording and hang up, do not immediately dial the extension. The new announcement remains busy for approximately 15 seconds. The new announcement can be played back by dialing the FAC, the announcement extension, and 2 before the 15 second timer expires.

Upon completion of the recording session (drop), the communication server sets a 15-second timer. During this interval, the system restricts you to one of two tasks:

1. Listen to the announcement just recorded
2. Record another announcement

Result

If you want to listen to the announcement before it is available to others, then dial the FAC, the extension, and 2. The announcement plays and then generates dial tone. You can then perform another operation, such as record a message.

Note:

If a caller attempts to dial an announcement that does not exist, either because it has not been recorded or it has not been sent over FTP to the board, the caller hears silence.

Deleting the announcement

If you dial the FAC, the extension, and then 3, the communication server deletes the announcement and you hear a confirmation tone. If the announcement is protected or is currently being played, then the system does not delete the announcement and you will hear a reorder tone. Avaya recommends that you delete a recorded announcement before re-recording it with the dial 1 function.

Recorded announcements with features

Recorded announcements, the ACD, and other call center features

Recorded announcements are used extensively for ACD, Call Vectoring, Call Prompting, Expert Agent Selection, VDN of Origin Announcement, Direct Department Calling, and UCD features. See the individual features for interaction details.

Recorded announcements and automatic wakeup

Recorded announcements allow Automatic Wakeup to use the built-in integrated announcement circuit pack or sources in place of the Audichron adjunct.

If you use an integrated, multiple integrated, or external type of announcement for Automatic Wakeup, then you can also administer the announcement to repeat (with the integ-rep announcement type) and to allow barge-in as a queue type. The benefit of repeating announcements and barge-in queues is that you do not need to use a separate port for each wakeup announcement. When guests go off-hook to receive an announcement at a particular time, they use only one port and the message repeats on the port until the last guest goes off-hook and the message ends.

Locally-sourced music and announcements

Definitions

Term	Definition
VAL announcement source	A Voice Announcement with a TN2501AP board.
vVAL announcement source	A virtual VAL (vVAL) source integrated in a Media Gateway (G700, G250, G350, G450, and so on). The vVAL source is referred to as a virtual VAL source or an embedded VAL source.
announcement file	The recorded announcement file that is played for the specific announcement extension assigned to the audio group. The announcement file is file-transferred (FTP) with the same filename into each of the sources listed for the audio group.

About locally-sourced music and announcements

This feature allows call centers to use any or all of their VAL or vVAL sources in the gateways as sources for the same announcement. A locally-sourced music and announcements architecture:

- Improves the quality of the audio
- Reduces resource usage - for example, VoIP resources, by selecting the nearest available source when playing the announcement
- Provides backup for announcements because a working announcement source with the same announcement file can be selected from the sources if the primary announcement source is not available

About Audio Groups

The VAL or vVAL sources that contain a particular announcement file are assigned to an audio group - for example, G1. The audio group is then assigned to the announcement or audio extension port location as a group-sourced location instead of as a single-sourced location. When the announcement or audio is played to a caller, one of the sources assigned to the group - for example, 025V9 - that is more local to the incoming call trunk facility is selected to play the announcement file.

How the algorithm determines the most local source of an audio group

The algorithm that determines the most local source of an audio group works in the following priority order. The non-working sources are skipped so that a working source in the group can be found. The audio group algorithm:

1. Selects the local source. This is the source local to the trunk or user in the same Media Gateway or in the same group of TDM- or ATM-connected Port Network Gateways (PNGs).
2. Selects a source in a gateway in the same network region.
3. Selects one of the following sources in a gateway in the interconnected network region:
    - Adjacent with the most available bandwidth and highest quality codec
    - Non-adjacent based on the shortest number of hops
4. Selects an Inter-Gateway Alternate Routing (IGAR)-connected source on a gateway interconnected through a PSTN trunk. This selection is based on IGAR % usage.

If the announcement file extension is administered for queuing and the source selected to play that file has no available playback ports, the request to play that announcement is held in queue until a port on the source becomes available. With Call Vectoring, the caller hears the previously-started feedback - such as ringback - until the connection is made to the announcement. If queuing has not been assigned to that announcement file extension, the search continues using the above criteria.

Capabilities of locally-sourced music and announcements

This feature has the following capabilities:

Use single-sourced or group-sourced recorded announcement extensions as Music On Hold (MOH) sources

The integ-mus announcement type can be used to:

- Use single-sourced or group-sourced recorded announcements as MOH sources
- Assign the integ-mus announcement type to a system MOH source instead of to a port location as the system MOH source
- Use integ-mus announcements to play MOH and music in vectors. As with announcements with an audio-group assignment, when the music is played to a caller, the most local available source is used to play the music file. The integ-mus announcement type provides a repeating barge-in operation by combining the integrated repeating type with a forced assignment of barge-in. To assign MOH sources, use the

music sources screen or the system-parameters feature-related screen if you are not using tenant partitioning.

Create separate MOH groups with multiple analog or Auxiliary Trunk music source port locations

You can create separate MOH groups that can assign multiple analog or Auxiliary Trunk music source port locations. You can assign these MOH groups - for example, group 1, as system MOH sources instead of a single port location on the music sources screen. When the music is given to the caller, the most local music source of the assigned group is selected.

Use audio groups anywhere a single-sourced announcement or audio source extension is used

You can use an announcement or audio source extension with an assigned audio group anywhere a single-sourced announcement or audio source extension can be used. For example, you can use a group-sourced announcement extension of type **integrated** or **integ-mus** in any of the following Call Vectoring vector commands:

- **announcement xxxxxxx**
- **collect … after announcement xxxxxx**
- **disconnect after announcement xxxxxx**
- **wait-time <time> [secs, mins, hrs] hearing [audio source ext] then [music, ringback, silence, continue]**

Apply a partition-defined system music source as the system music

You can apply a partition-defined system music source with an MOH group or music audio group-sourced extension of type integ-mus as the system music using the following commands:

- **wait-time <time> [secs, mins or hrs] hearing music**
- **wait-time <time> [secs, mins or hrs] hearing [audio source ext] then music**

Related topics

For more information about administering this feature, see *Administering Avaya Aura™ Communication Manager* and *Avaya Aura™ Communication Manager Feature Description*.

Chapter 5: Administering VRUs/IVRs as station ports

When Voice Response Units (VRUs) or Interactive Voice Response (IVRs) systems are used in a call center as station ports in a hunt group or in an ACD split or skill, either as a non-vector controlled split or accessed using the **converse-on**, **queue-to**, or **route-to** command, the station ports must be administered on the station screen with the type required by the VRU/IVR ports. The types for VRU/IVR ports supported by Avaya communication servers are listed in the following table.

Type VRU/IVR ports	Forward disconnect?	[37] C&D tones[37] support ?	Station type	Description
analog T&R	NA	no	2500	[38] Standard station set interface[38].
analog T&R	NA	yes	VRU	Provides standard station set interface[38] with C&D tones support using the communication server DTMF Feedback Signals feature.
[39] lineside DS1/DS0 or lineside T1/E1[39]	no	no	ops	OPS is a DS1 type that provides a TIA/EIA off-premises station type DS1 interface used where the device does not require or support forward disconnect.
lineside DS1/DS0 or lineside T1/E1	yes	no	ds1fd	ds1fd provides a TIA/EIA Foreign eXchange (FX) type DS1 interface. The forward disconnect signal is a toggle of the A bit from 0 to 1 and then back to 0 after 600 msecs. This type is used for Line Side T1/E1 ports on the IVR system when used as an analog-like VRU device and is the recommended method for interfacing.
lineside DS1/DS0 or lineside T1/E1	yes	yes	VRUFD	VRUFD is the same as ds1fd, except C&D tone support is provided. This

[37] For more information about support and administration of C&D (Connect and Disconnect) Tones, see the C and D Tones support and administration on page 196 section that follows this table.
[38] Uses Analog Line Circuit Packs, such as TN2135.
[39] DS1 Circuit Packs (TN767E (or later) or TN464F (or later) must be equipped.

Type VRU/IVR ports	Forward disconnect?	C&D tones[37] support ?	Station type	Description
				type of administration is not used for an IVR system.
lineside DS1/DS0 or lineside T1/E1	yes	no	ds1sa	ds1sa provides a TIA/EIA special-access type DS1 interface. The forward disconnect signal is a toggle of the A bit from 1 to 0 and then back to 1 after 600 msecs.
lineside DS1/DS0 or lineside T1/E1	yes	yes	VRUSA	VRUSA is the same as ds1sa, except C&D tone support is provided.

C and D Tones support and administration

Connect (C) and Disconnect (D) Tones provides DTMF (touch tone) to a VRU/IVR port when the incoming caller is on soft hold to indicate the following transfer operation events:

- The VRU-placed call is being Connected to the transferred-to agent.
- The caller has Disconnected while on-hold.

To administer C and D Tones for a VRU port, complete the following administration steps:

1. For the VRU customer option, enable DTMF Feedback Signals.
2. On page 5 of the Feature-Related System Parameters screen, select values for the **Connection** and **Disconnect** fields. Possible values represent the buttons included in the 16-button DTMF array (0-9, *, #, A-D).

   The default Connection and Disconnection tones are C and D, respectively. These tones are applied for 350 millisecond On with a 100 millisecond pause period.
3. On page 1 of the Station screen for the VRU port, set the type to one of the following:

   `VRU (analog line)`

   - `VRUFD (Line Side DS1-FD)`
   - `VRUSA (Line Side DS1-SA)`

Chapter 6: Administering BSR Polling Over IP without the B Channel

About Best Service Routing polling

BSR polling can be configured so that the use of a (Bearer) B-channel is not required when a polling signal is sent over an H.323 IP trunk. This feature offers the following advantages:

- Improved trunk efficiency - This feature uses QSIG CISC/TSCs (Call Independent Signaling Connections / Temporary Signaling Connections) that send BSR polls over D-channel without associated seizure of a B-channel. This polling strategy allows more trunk bandwidth to be available for other forms of voice or data traffic.
- Reduced hardware requirements - If Voice over IP functionality is not required for the trunk, a IP Media Processor circuit pack (TN2302) is not required. In either case, a C-LAN circuit pack (TN799) is required to support D-channel signaling.

Note:
BSR polling over IP without the B-channel uses non-call associated TSCs.

BSR detailed description

To use Best Service Routing (BSR) on a single communication server, you simply use special commands and command elements that are part of the call vectoring language. As a result, BSR for a single location can be easily added to existing vectors without modifying other parts of the communication server.

Multi-site applications work similarly, but additional administration is required. Since steps in a multi-site BSR vector will contact one or more remote locations, you need to define these locations, tell the communication server how to contact each one, and set up VDNs and vectors to handle communications between the sending communication server and each remote communication server.

Three (3) VDN/vector pairs must be used in every multi-site BSR application. The Primary VDN/vector pair, on the sending communication server, contacts the specified remote communication server, collects information, compares the information, and delivers or queues the call to the resource that is likely to provide the best service. Two VDN/vector pairs are

needed on each remote communication server. A Status Poll VDN/vector pair provides information about the best resource at its location in response to inquiries from BSR applications on other communication servers. Finally, an Interflow VDN/vector pair is needed to receive and process the calls interflowed from BSR applications on other communication servers.

BSR polling prerequisites

The following prerequisite conditions must be satisfied to enable BSR polling over IP without the B-channel.

Software

All locations that use the BSR polling over IP without the B-channel feature must use Communication Manager R11 or later. The Call Center version must be V6 or later and multi-site BSR must be administered. For more information, see Forms and fields used to administer multi-site BSR on page 121.

Note:

If the remote communication server does not have R11 installed, the CISC (Call Independent Signaling Connection) SETUP does not start vector processing and the poll operation ends in a timeout, logging a vector event. The next step in the vector is then executed.

License file options

To use the BSR polling over IP without the B-channel feature, the IP Trunk, QSIG Basic Call Setup, and QSIG Basic Supplementary Services customer options must be enabled.

C-LAN connectivity

A C-LAN circuit pack (TN799) is required for this feature.

Completing the administration forms to enable BSR polling over IP without the B-channel

To enable BSR polling over IP without the B-channel, you must:

1. Set up the signaling group for H.323, QSIG, and NCA-TSCs
2. Set up the designated trunk group for ISDN and IP, with at least one trunk assigned.

Important:

If an IP Media Processor circuit pack is not installed, the Trunk Group Status screen indicates the trunk as **out-of-service**. However, status poll signaling over D-channel is not affected.

Result

The forms that you must administer to enable BSR polling over IP without the B-channel are described in the following sections:

- Completing the Pattern screen on page 199
- Completing the Signaling Group screen on page 201
- Completing the Trunk Group screen on page 203
- Completing the Feature-Related System Parameters screen (ISDN) on page 206

Completing the Pattern screen

Use the **display route-pattern xx** command (where **xx** is the route pattern used by the trunk group that supports the TSCs) to display the Pattern screen. Verify that your administration settings comply with the following requirement:

In the TSC column, set the value to y.

Result

An example route-pattern screen that is configured for BSR polling over IP without the B-channel is shown below.

```
display route-pattern 32                                        Page   1 of   3

                           Pattern Number: 32

    Grp FRL NPA Pfx Hop Toll No.  Inserted                              DCS/ IXC

    No          Mrk Lmt List Del  Digits                              QSIG

                              Dgts                                      Intw

1: 32   0                     3                                        n   user

2:                                                                     n   user

3:                                                                     n   user

4:                                                                     n   user

5:                                                                     n   user

6:                                                                     n   user

     BCC VALUE
TSC
 CA-TSC    ITC BCIE Service/Feature BAND  No. Numbering LAR

    0 1 2 3 4 W     Request                                 Dgts Format

                                                          Subaddress

1: y y y y y n
```

```
y
  as-needed rest                                      none

 2: y y y y y n  n           rest                                  none

 3: y y y y y n  n           rest                                  none

 4: y y y y y n  n           rest                                  none

 5: y y y y y n  n           rest                                  none

 6: y y y y y n  n           rest                                  none
```

Completing the Best Service Routing screen

Use the **display best-service-routing xx** command (where **xx** is a BSR application plan number) to display the Best Service Routing screen. Verify that your administration settings comply with the following requirement:

The **Status Poll VDN** field must specify an AAR or AAS pattern that routes over an IP trunk.

Important:

Do not specify a Trunk Access Code (TAC) in the **Status Poll VDN** field. If you do so, the poll will route through a B-channel, if one is available.

Completing the Signaling Group screen

Use the **display signaling-group xx** command (where **xx** is the signaling group number) to display the Signaling Group screen. Verify that your administration settings comply with the following requirements:

1. You must specify the TSC-related fields in the upper-right corner of the field.

   The relevant fields include:

   - Max number of NCA TSC:

- Trunk group for NCA TSC:

2. The Supplementary Services Protocol: field must be set to b.

Result

An example signaling-group screen configured for BSR polling over IP without the B-channel is shown as follows.

```
display signaling-group 32

                                SIGNALING GROUP

 Group Number: 32              Group Type: h.323

                            Remote Office? n
Max number of NCA TSC: 10

                                                      Max number of CA TSC: 10

                                                   Trunk Group for NCA TSC: 32

       Trunk Group for Channel Selection: 32


Supplementary Service Protocol: b
          Network Call Transfer? n

        Near-end Node Name: clan-01D12       Far-end Node Name: cland12-loop

      Near-end Listen Port: 1720           Far-end Listen Port: 1720

                                        Far-end Network Region:

              LRQ Required? n             Calls Share IP Signaling Connection?y

              RRQ Required? n

                                          Bypass If IP Threshold Exceeded?n

                                           Direct IP-IP Audio Connections?y

                                                     IP Audio Hairpinning?y

                                           Interworking Message: PROGress
```

Completing the Trunk Group screen

Use the **display trunk-group xx** command (where **xx** is the signaling group number) to display the Trunk Group screen. Verify that your administration settings comply with the requirements listed below each of the following example screen pages.

Examples for the key pages in the Pattern screen that must be configured for BSR polling over IP without the B-channel are shown as follows.

Trunk group - Page 1

```
display trunk-group 32                                          Page   1 of  22

                                TRUNK GROUP

Group Number: 32
Group Type: isdn
          CDR Reports: y

  Group Name: OUTSIDE CALL                COR: 1        TN: 1        TAC: 732

   Direction: two-way        Outgoing Display? n
Carrier Medium: IP

 Dial Access? y                Busy Threshold: 255       Night Service:

Queue Length: 0

Service Type: tie                    Auth Code? n            TestCall ITC: rest

                         Far End Test Line No:

TestCall BCC: 4

TRUNK PARAMETERS

         Codeset to Send Display: 6     Codeset to Send National IEs: 6

        Max Message Size to Send: 260   Charge Advice: none


Supplementary Service Protocol: b
     Digit Handling (in/out): enbloc/enbloc

            Trunk Hunt: cyclical
```

```
                                                  Digital Loss Group: 13

Calling Number - Delete:     Insert:                  Numbering Format:

             Bit Rate: 1200         Synchronization: async    Duplex: full

 Disconnect Supervision - In? y  Out? n

 Answer Supervision Timeout: 0
```

In the page example shown above, the administrations settings must conform to the following requirements:

1. The `Group Type:` field must be set to `isdn`
2. The `Carrier Medium:` field must be set to `IP`
3. The Supplementary Service Protocol: field must be set to b

```
display trunk-group 32                                        Page   2 of
22

TRUNK FEATURES

         ACA Assignment? n           Measured: none      Wideband Support?
n

                                  Internal Alert? n       Maintenance Tests?
y

                                   Data Restriction? n
```

```
NCA-TSC Trunk Member: 1

                                     Send Name: y      Send Calling Number:
y

            Used for DCS? n              Hop Dgt? n

   Suppress # Outpulsing? n    Numbering Format: public

 Outgoing Channel ID Encoding: preferred     UUI IE Treatment: service-
provider

Replace Restricted Numbers? n

                                                Replace Unavailable Numbers?
n

                                                       Send Connected Number:
n

               Send UCID? y

 Send Codeset 6/7 LAI IE? n

 Path Replacement with Retention? n

 Path Replacement Method: better-route

                          Network (Japan) Needs Connect Before Disconnect?
n
```

Result

In the page example shown above, the administrations settings must conform to the following requirements:

The `NCA-TSC Trunk Member:` field must specify a trunk group member.

```
display trunk-group 32                                        Page   x of  22

                                  TRUNK GROUP

                                       Administered Members (min/max):   1/4

GROUP MEMBER ASSIGNMENTS                    Total Administered Members:   4

      Port    Code Sfx Name        Night            Sig Grp

  1: T00089                                          32

  2: T00090                                          32

  3: T00091                                          32

  4: T00092                                          32

  5:

  6:
```

In the page shown above, the administrations settings must conform to the following requirements:

The group member used to make the BSR status polls (which is also specified in the `NCA-TSC Trunk Member:` field on page 2 of this screen) must be associated with the appropriate signaling group. The signaling group is specified in the `Sig Grp` column.

Completing the Feature-Related System Parameters screen (ISDN)

Use the **`change system-parameters feature`** command to display the Feature-Related System Parameters screen. Verify that your administration settings comply with the following requirements:

The**QSIG TSC Extension** field must specify an unassigned extension number that is valid for the dial plan.

Result

An example Feature-Related System Parameters screen configured for BSR polling over IP without the B-channel is shown below.

```
change system-parameters features                                Page 7 of  12

                         FEATURE-RELATED SYSTEM PARAMETERS

ISDN PARAMETERS

 Send Non-ISDN Trunk Group Name as Connected Name? n

 Display Connected Name/Number for ISDN DCS Calls? n

       Send ISDN Trunk Group Name on Tandem Calls? n

QSIG TSC Extension: 3999

 MWI - Number of Digits Per Voice Mail Subscriber: 5

                               National CPN Prefix:

                          International CPN Prefix:

                         Pass Prefixed CPN to ASAI? n

    Unknown Numbers Considered Internal for AUDIX? n

             USNI Calling Name for Outgoing Calls? n

               Path Replacement with Measurements? y

                   QSIG Path Replacement Extension: 2999

            Path Replace While in Queue/Vectoring? y
```

Operational elements

The Best Service Routing (BSR) polling over IP without the Bearer (B)-channel feature is associated with the following operational elements:

- The VDN for the BSR status poll contains a number [(AAR (Automatic Alternate Routing)/ ARS (Alternate Route Selection)] access code plus the remote poll VDN address that routes over a QSIG trunk group. A Trunk Access Code (TAC) can not be used for this purpose.
- When a consider location vector step routes a call over the IP trunk group with QSIG signaling, the following is true:
  - A TSC SETUP message is sent over emulated D-Channel
  - The reply-best data is returned with a TSC RELEASE message
- This feature works with tandem trunks, if all trunks in the tandem are configured to meet the requirements described in this section. However, tandem configurations are not recommended for the BSR polling over IP without the B-channel feature.

Interactions for BSR polling over IP without the B-channel feature

The BSR polling over IP without the B-channel feature is associated with the following interactions:

- CMS records will poll attempts, but not actual trunk measurements, since no B-Channel trunk facility is used.
- If sufficient trunks are assigned, the trunk group can also be used for H.323 IP voice calls, but an IP Media Processor must be installed.

Call surplus situations

Every BSR application compares a set of predetermined resources (skills) and selects the best resource to service the call. In a call surplus situation (no agents available), the best resource is the skill with the lowest Expected Wait Time (EWT). For purposes of calculating the best resource in a call surplus situation, BSR allows you to adjust the EWT figure for any skill. The actual EWT for calls in queue is not changed, of course; only the figure used in the calculations performed by the BSR feature is changed. You do not have to enter adjustments, but the ability

to adjust the EWT for skills allows you to program preferences in vectors. Because of agent expertise, for example, or the availability or cost of tie trunks, you might prefer that some resources not service a call unless doing so significantly decreases the call's time in queue.

It is possible for you to make adjustments to agent availability using the consider step.

Agent surplus situations

In an agent surplus situation (one or more agents available to take incoming calls), BSR will deliver a new call according to the BSR Available Agent Strategy specified on the VDN screen. The best resource will be the skill that meets the criteria defined by the strategy you've chosen for that VDN.

BSR can use any of the five strategies shown in the following table to select an agent when agents are available.

If BSR Available Agent Strategy is set to…	The call will be delivered to…
1st-found	The first available agent. BSR will not consider any other resources as soon as it finds an available agent.
ucd-mia	The resource with an agent who has been idle the longest. BSR will compare all the skills specified in the vector before delivering the call.
ead-mia	The resource with an agent with the highest skill level relevant to the call who has been idle the longest. BSR will compare all the skills specified in the vector before delivering the call.
ucd-loa	The resource with a least-occupied agent. BSR will compare all the skills specified in the vector before delivering the call.
ead-loa	The resource with an agent with the highest skill level relevant to the call who is the least occupied. BSR will compare all the skills specified in the vector before delivering the call.

When agents are available in one or more of the specified resources, BSR does not consider resources (local or remote) that return an EWT (call queue/call surplus situation) in selecting the best place to send the call.

Note:

The BSR Available Agent Strategy assigned to a VDN should match the agent selection method used in the skills considered by a BSR application.

The BSR adjust-by value can be used in the agent surplus (agents available) situation. This adjustment provides the ability to use the **consider** step adjustment value to prioritize (handicap) agent resources when agents are available.

When the adjustment is used, the **consider** step uses the following syntax:

```
consider split/location adjust-by x
```

The communication server applies the agent adjustment in the same manner as the calls in queue/call surplus (lowest EWT) situation.

To select an adjustment, think in terms of reducing the importance of a resource/site and in relative percentage - the higher the adjustment, the less desirable it is to pick that agent/site. So, if x = 30, then the agent/site is 30% less desirable.

The available agent adjustment applies to the UCD-MIA, UCD-LOA, EAD-MIA, and EAD-LOA call distribution methods. For the most idle agent distribution methods, the adjust-by lowers the idle time value returned by the agent/site. For the least occupied agent distribution methods, the adjust-by raises the returned occupancy level of the agent/site. In either case, with EAD, the MIA or LOA is used as a tie breaker if more than one site has an agent available with the same highest skill level.

The same adjust-by value in the **consider** step applies to both agent surplus and call surplus situations.

Chapter 7: Related documents

Other Call Center documents

These additional documents are issued for Avaya Call Center applications:

- *Avaya Aura™ Call Center Overview*: Provides a high-level overview of the new features available for the most-current release.
- *Planning an Avaya Aura™ Call Center Implementation*: Provides information on setting up a call center and converting a call center to Expert Agent Selection (EAS).
- *Avaya Aura™ Call Center Feature Reference*: Provides detailed information on the various Call Center features, including the relevant command and screens for each of the features
- *Programming Call Vectors in Avaya Aura™ Call Center*: Provides information on how to write, use, and troubleshoot vectors.
- *Communication Manager Call Center Software - Basic Call Management System (BCMS) Operations*: Provides information on the use of the BCMS feature for ACD reporting.
- *Avaya Business Advocate User Guide*: Provides a general understanding of how Avaya Business Advocate can be used for call and agent selection.
- *Avaya IQ Documentation DVD*: Provides information about Avaya's software-only reporting solution for its contact center portfolio.

Associated application documentation

The most recent application documentation for Communication Manager and Avaya Call Management System is available on the Avaya Support web site: http://www.avaya.com/support.

Chapter 8: Glossary

AAR	See Automatic Alternate Routing (AAR).
abandoned call	An incoming call in which the caller hangs up before the call is answered.
Abbreviated Dialing	A feature that allows callers to place calls by dialing just one or two digits.
ACA	See Automatic Circuit Assurance (ACA).
access code	A 1-, 2-, or 3-digit dial code used to activate or cancel a feature, or access an outgoing trunk.
access trunk	A trunk that connects a main communications system with a tandem communications system in an Electronic Tandem Network (ETN). An access trunk can also be used to connect a system or tandem to a serving office or service node. Also called an access tie trunk.
ACCUNET	A trademarked name for a family of digital services offered by AT&T in the United States.
ACD	See Automatic Call Distribution (ACD).
ACD agent	See agent.
ACD work mode	See work mode.
ACW	See After Call Work (ACW) mode.
adjunct	A processor that does one or more tasks for another processor and is optional in the configuration of the other processor. See also application.
Adjunct Routing	A means of evaluating calls before the calls are processed by requesting information from an adjunct. The communication server requests instructions from an associated adjunct and makes a routing decision based on agent availability or the caller information.
adjunct-controlled split	An Automatic Call Distribution (ACD) split that is administered to be controlled by another application. Agents logged into such splits must do all telephony work, ACD login/ logout, and changes of work mode through the adjunct (except for auto-available adjunct-controlled splits, whose agents may not log in/out or change work mode).

adjunct-monitored call An adjunct-controlled call, active-notification call, or call that provides event reporting over a domain-control association.

Adjunct-Switch Application Interface (ASAI) A recommendation for interfacing adjuncts and communications systems, based on the CCITT Q.932 specification for layer 3.

adjusted EWT A Best Service Routing (BSR) term for Expected Wait Time (EWT) plus a user adjustment set by a **consider** command.

administration terminal A terminal that is used to administer and maintain a system.

Administration Without Hardware (AWOH) A feature that allows administration of ports without associated terminals or other hardware.

Advocate See Avaya Business Advocate.

After Call Work (ACW) mode A mode in which agents are unavailable to receive ACD calls. Agents enter the ACW mode to perform ACD-related activities such as filling out a form after an ACD call. Also see, auto-in work mode, manual-in work mode, and aux-work mode.

agent A member of an ACD hunt group, ACD split, or skill. Depending on the ACD software, an agent can be a member of multiple splits/skills.

agent report A report that provides historical traffic information for internally measured agents.

ANI See Automatic Number Identification (ANI).

appearance A software process that is associated with an extension and whose purpose is to supervise a call. An extension can have multiple appearances. Also called call appearance, line appearance, and occurrence. See also call appearance.

application An adjunct that requests and receives ASAI services or capabilities. One or more applications can reside on a single adjunct. However, the communication server cannot distinguish among several applications residing on the same adjunct and treats the adjunct, and all resident applications, as a single application. The terms application and adjunct are used interchangeably throughout this document.

application plan A plan used only in multi-site Best Service Routing (BSR) applications. The application plan identifies the remote switches that may be compared in a consider series. The plan also specifies the information used to contact each communication server and to interflow calls to the communication server.

applications processor	A micro-computer based, program controlled computer providing application services for the switch. The processor is used with several user-controlled applications such as traffic analysis and electronic documentation.
ARS	See Automatic Route Selection (ARS).
ASAI	See Adjunct-Switch Application Interface (ASAI).
association	A communication channel between adjunct and switch for messaging purposes. An active association is one that applies to an existing call on the switch or to an extension on the call.
attendant	A person at a console who provides personalized service for incoming callers and voice-services users by performing switching and signaling operations. Also see attendant console.
attendant console	The workstation used by an attendant. The attendant console allows the attendant to originate a call, answer an incoming call, transfer a call to another extension or trunk, put a call on hold, and remove a call from hold. Attendants using the console can also manage and monitor some system operations. Also called console. Also see attendant.
Audio Information Exchange (AUDIX)	An Avaya messaging system. AUDIX has been replaced by Message Manager.
AUDIX	See Audio Information Exchange (AUDIX).
auto-in work mode	A mode in which an agent is ready to process another call as soon as the current call is completed. Auto-in work mode is one of four agent work modes. Also see, aux-work mode, manual-in work mode, and After Call Work (ACW) mode.
Automatic Alternate Routing (AAR)	A feature that routes calls to a different route than the first-choice route when facilities are unavailable.
Automatic Call Distribution (ACD)	A feature that answers calls, and then depending on administered instructions, delivers messages appropriate for the caller and routes the call to an agent when one becomes available.
Automatic Call Distribution (ACD) split	A method of routing calls of a similar type among agents in a call center. Also, a group of extensions that are staffed by agents trained to handle a certain type of incoming call.
Automatic Callback	A feature that enables internal callers, upon reaching a busy extension, to have the system automatically connect and ring both originating and receiving parties when the receiving party becomes available.

Automatic Circuit Assurance (ACA)	A feature that tracks calls of unusual duration to facilitate troubleshooting. A high number of very short calls or a low number of very long calls may signify a faulty trunk.
Automatic Number Identification (ANI)	A display of the calling number so that agents can access information about the caller.
Automatic Route Selection (ARS)	A feature that allows the system to automatically choose the least-expensive way to send a toll call.
automatic trunk	A trunk that does not require addressing information because the destination is predetermined. A request for service on the trunk, called a seizure, is sufficient to route the call. The normal destination of an automatic trunk is the communications-system attendant group. Also called automatic incoming trunk and automatic tie trunk.
auxiliary trunk	A trunk used to connect auxiliary equipment, such as radio-paging equipment, to a communications system.
aux-work mode	A mode in which agents are unavailable to receive Automatic Call Distribution (ACD) calls. Agents enter aux-work mode when involved in non-ACD activities such as taking a break, going to lunch, or placing an outgoing call. Also see, auto-in work mode, manual-in work mode, and After Call Work (ACW) mode.
available agent strategy	A strategy that determines how Best Service Routing (BSR) commands in a vector identify the best split or skill when several have available agents.
Avaya Business Advocate	A product that establishes different levels of service for different types of calls. For example, a company may decide that a premium customer gets faster service than other types of customers.
Avaya IQ	Avaya IQ is Avaya's next generation reporting platform.
AWOH	See Administration Without Hardware (AWOH).
barrier code	A security code used with remote access to prevent unauthorized access to the system.
Basic Call Management System (BCMS)	An application on the communication server that monitors the operations of an Automatic Call Distribution (ACD) application. BCMS collects data related to the calls on the communication server and organizes the data into reports that help manage ACD facilities and personnel.
BCC	See Bearer Capability Class (BCC).
BCMS	See Basic Call Management System (BCMS).

Bearer Capability Class (BCC)	A code that identifies the type of a call (for example, voice and different types of data).
best	The split, skill, or location that provides the most advantageous service for a caller as determined by Best Service Routing (BSR).
Best Service Routing (BSR)	An Avaya communication server feature based on call vectoring that routes Automatic Call Distribution (ACD) calls to the split, skill, or contact center best able to service each call. BSR can be used on a single communication server, or it can be used to integrate resources across a network of communication servers.
bridge (bridging)	The appearance of a telephone extension at one or more other telephones.
bridged appearance	A call appearance on a telephone that matches a call appearance on another telephone for the duration of a call.
Business Advocate	See Avaya Business Advocate.
call appearance	1. For the attendant console, the six buttons labeled a-f used to originate, receive, and hold calls. Two lights next to the button show the status of the call appearance. 2. For the telephone, a button labeled with an extension and used to place outgoing calls, receive incoming calls, or hold calls. Two lights next to the button show the status of the call appearance.
Call Detail Recording (CDR)	A feature that uses software and hardware to record call data.
Call Management System (CMS)	An application that enables customers to monitor and manage telemarketing centers by generating reports on the status of agents, splits, trunks, trunk groups, vectors, and VDNs. CMS enables customers to partially administer the Automatic Call Distribution (ACD) feature for a communications system.
call vector	A set of vector commands used to process an incoming or internal call.
call work code	A number entered by ACD agents to record the occurrence of customer-defined events (such as account codes, social security numbers, or phone numbers) on ACD calls.
callback call	A call that automatically returns to a voice-terminal user who activated the Automatic Callback feature.
cause value	A value that is returned in response to requests or in event reports when a denial or unexpected condition occurs.
CCS or hundred call seconds	A unit of call traffic. Call traffic for a facility is scanned every 100 seconds. If the facility is busy, it is assumed to have been busy for the entire scan interval. There are 3600 seconds per hour. The Roman numeral for 100 is the capital

	letter C. The abbreviation for call seconds is CS. Therefore, 100 call seconds is abbreviated CCS. If a facility is busy for an entire hour, it is said to have been busy for 36 CCS.
CDR	See Call Detail Recording (CDR).
Central Office (CO)	A switch owned by a local telephone company that provides local telephone service (dial-tone) and access to toll facilities for long-distance calling.
Central Office (CO) trunk	A telecommunications channel that provides access from the system to the public network through the local CO.
channel	1. A circuit-switched call. 2. A communications path for transmitting voice and data. 3. In wideband, all of the time slots (contiguous or noncontiguous) necessary to support a call. Example: an H0-channel uses six 64-kbps time slots. 4. A DS0 on a T1 or E1 facility not specifically associated with a logical circuit-switched call; analogous to a single trunk.
circuit	1. An arrangement of electrical elements through which electric current flows. 2. A channel or transmission path between two or more points.
circuit pack	A card with microprocessors, transistors, and other electrical circuits. A circuit pack is installed in a switch carrier or bay. Also called a circuit board or circuit card.
Class of Restriction (COR)	A feature that allows classes of call-origination and call-termination restrictions for telephones, telephone groups, data modules, and trunk groups. See also Class of Service (COS).
Class of Service (COS)	A feature that uses a number to specify if telephone users can activate the Automatic Callback, Call Forwarding All Calls, Data Privacy, or Priority Calling features. See also Class of Restriction (COR).
CO	See Central Office (CO).
communications server	A software-controlled processor complex that interprets dialing pulses, tones, and keyboard characters and makes the proper connections both within the system and external to the system. The communications system itself consists of a digital computer, software, storage device, and carriers with special hardware to perform the connections. A communications system provides voice and data communications services, including access to public and private networks, for telephones and data terminals on a customer's premises. Previously called a switch or a Private Branch eXchange (PBX).
confirmation tone	A telephone tone confirming that feature activation, deactivation, or cancellation has been accepted.
connectivity	A connection of disparate devices within a single system.

consider sequence A consider series plus a **queue-to best**, **check-best**, or **reply-best** step is called a consider sequence.

consider series A series of **consider** commands typically written in a set of two or more. A set of **consider** commands is called a consider series.

console See attendant console.

COR See Class of Restriction (COR).

COS See Class of Service (COS).

coverage answer group A group of up to eight telephones that ring simultaneously when a call is redirected to it by Call Coverage. Any one of the group can answer the call.

coverage call A call that is automatically redirected from the called party's extension to an alternate answering position when certain coverage criteria are met.

coverage path An order in which calls are redirected to alternate answering positions.

coverage point An extension or attendant group, VDN, or ACD split designated as an alternate answering position in a coverage path.

covering user A person at a coverage point who answers a redirected call.

CWC See call work code.

data link A configuration of physical facilities enabling end terminals to communicate directly with each other.

data terminal An input/output (I/O) device that has either switched or direct access to a host computer or to a processor interface.

dial-repeating tie trunk A tie trunk that transmits called-party addressing information between two communications systems.

dial-repeating trunks A PBX tie trunk that is capable of handling PBX station-signaling information without attendant assistance.

direct agent A feature, accessed only through ASAI that allows a call to be placed in a split queue but routed only to a specific agent in that split. The call receives normal ACD call treatment (for example, announcements) and is measured as an ACD call while ensuring that a particular agent answers.

Direct Inward Dialing (DID) trunk An incoming trunk used for dialing directly from the public network into a communications system without help from the attendant.

domain A group of VDNs, ACD splits, and stations.

Dynamic Percentage Adjustment	An Avaya Business Advocate feature that makes automatic adjustments to agents' target allocations as needed to help meet the administered service level targets.
Dynamic Queue Position	An Avaya Business Advocate feature that gives you the ability to queue calls from multiple VDNs to a single skill, while maintaining different service objectives for those VDNs.
Dynamic Threshold Adjustment	An Avaya Business Advocate Service Level Supervisor feature that automatically adjusts overload thresholds to engage reserve agents a bit sooner or a bit later to meet the administered service levels.
EAD-LOA	See Expert Agent Distribution-Least Occupied Agent (EAD-LOA).
EAD-MIA	See Expert Agent Distribution-Most Idle Agent (EAD-MIA).
Electronic Tandem Network (ETN)	A large private network that has automatic call-routing capabilities based on the number dialed and the most preferred route available. Each switch in the network is assigned a unique private network office code (RNX), and each telephone is assigned a unique extension.
EPN	See Expansion Port Network (EPN).
ETN	See Electronic Tandem Network (ETN),
EWT	See Expected Wait Time (EWT).
Exclusion	A feature that allows multi-appearance telephone users to keep other users with the same extension from bridging onto an existing call.
Expansion Port Network (EPN)	A port network that is connected to the Time Division Multiplex (TDM) bus and packet bus of a processor port network. Control is achieved by indirect connection of the EPN to the processor port network using a port-network link.
Expected Wait Time (EWT)	A prediction of how long a call waits in queue before the call is answered.
Expert Agent Distribution-Least Occupied Agent (EAD-LOA)	An agent selection method for delivery of calls. With EAD-LOA implemented, calls are delivered to the available agent with the highest skill level and the lowest percentage of work time since login (compared to other available agents with the same skill level). See also Expert Agent Distribution-Most Idle Agent (EAD-MIA), Uniform Call Distribution-Least Occupied Agent (UCD-LOA), and Uniform Call Distribution-Most Idle Agent (UCD-MIA).
Expert Agent Distribution-Most Idle Agent (EAD-MIA)	An agent selection method for delivery of calls. With EAD-MIA implemented, calls are delivered to the available agent with the highest skill level who has been idle the longest since their last ACD call (compared to other available agents with the same skill level). See also Expert Agent Distribution-Least

	Occupied Agent (EAD-LOA), Uniform Call Distribution-Least Occupied Agent (UCD-LOA), and Uniform Call Distribution-Most Idle Agent (UCD-MIA).
extension-in (EXT-IN)	A work state agents go into when they answer a non ACD call. If the agent is in Manual-In or Auto-In and receives an EXT-IN call, the call is recorded by the reporting adjunct as an AUX-IN call.
extension-out (EXT-OUT)	A work state that agents go into when they place a non-ACD call.
external call	A connection between a communications system user and a party on the public network, or on another communications system in a private network.
facility	A telecommunications transmission pathway and the associated equipment.
Forced Agent Logout from ACW mode	A feature used to automatically log out an Expert Agent Selection (EAS) agent who spends too much time in After Call Work (ACW) mode.
Forced Agent Logout by Clock Time	A feature used to automatically log out an Expert Agent Selection (EAS) agent at a pre-determined time. This feature is primarily used to automatically log off agents at the end of their shifts.
Forced Agent Logout \Aux Work by Location/Skill	The Forced Agent Logout/Aux Work by Location/Skill feature is used to force all agents in a location to logout, location into Aux Work, skill to logout, or skill into Aux Work. Using this feature, you can force all the agents in a given skill or location into the Aux work mode or to log out.
glare	A simultaneous seizure of a 2-way trunk by two communications systems resulting in a standoff.
ground-start trunk	A trunk on which, for outgoing calls, the system transmits a request for services to a distant switching system by grounding the trunk ring lead. To receive the digits of the called number, that system grounds the trunk tip lead. When the system detects this ground, the digits are sent.
holding time	A total length of time in minutes and seconds that a facility is used during a call.
intelligent polling	An automatic feature of Best Service Routing (BSR) that significantly reduces the number of status polls executed. When a remote location cannot be the best resource at a given moment in time, the intelligent polling feature temporarily suppresses polls to that location. Also see status poll.
intercept tone	A tone that indicates a dialing error or denial of the service requested.
interflow	An Automatic Call Distribution (ACD) term that refers to the ability to establish a connection to a second ACD and overflow a call from one ACD to the other.
internal call	A connection between two users within a system.

internal measurement A Basic Call Management System (BCMS) measurement that is made by the system.

intraflow An Automatic Call Distribution (ACD) term that refers to the ability for calls to redirect to other splits on the same communication server to backup the primary split.

in-use lamp A red light on a multiappearance telephone that lights to show which call appearance will be selected when the handset is lifted or which call appearance is active when a user is off-hook.

ISDN Gateway (IG) A feature allowing integration of the switch and a host-based telemarketing application using a link to a gateway adjunct. The gateway adjunct is a 3B-based product that notifies the host-based telemarketing application of call events.

ISDN trunk A trunk administered for use with ISDN-PRI. Also called ISDN facility.

line A transmission path between a communications system or Central Office (CO) switching system and a telephone.

line appearance See appearance.

line port A piece of hardware that provides the access point to a communications system for each circuit associated with a telephone or data terminal.

link A transmitter-receiver channel that connects two systems.

Location Preference Distribution A feature used to route incoming Automatic Call Distribution (ACD) calls to agents located at the same location where the trunk is located whenever possible.

maintenance Activities involved in keeping a telecommunications system in proper working condition: the detection and isolation of software and hardware faults, and automatic and manual recovery from these faults.

major alarm An indication of a failure that has caused critical degradation of service and requires immediate attention. Major alarms are automatically displayed on LEDs on the attendant console and maintenance or alarming circuit pack, logged to the alarm log, and reported to a remote maintenance facility, if applicable.

management terminal The terminal that is used by the system administrator to administer the switch. The terminal may also be used to access the Basic Call Management System (BCMS) feature.

manual-in work mode A mode in which an agent is ready to process another call manually. Also see, auto-in work mode, aux-work mode, and After Call Work (ACW) mode.

Maximum Agent Occupancy (MAO)	A feature used to set thresholds on the amount of time an agent spends on a call. MAO is used to prevent agent burnout. The MAO threshold is a system-administered value that places an agent in AUX mode when the agent exceeds the MAO threshold for calls.
message center	An answering service that supplies agents and stores messages for later retrieval.
message-center agent	A member of a message-center hunt group who takes and retrieves messages for telephone users.
messaging system	A generic name for a system that records, stores, plays, and distributes phone messages. Message Manager is the latest messaging system provided by Avaya.
minor alarm	An indication of a failure that could affect customer service. Minor alarms are automatically displayed on LEDs on the attendant console and maintenance or alarming circuit pack, sent to the alarm log, and reported to a remote maintenance facility, if applicable.
modular processor data module (MPDM)	A Processor Data Module (PDM) that can be configured to provide several kinds of interfaces (RS-232C, RS-449, and V.35) to customer-provided data terminal equipment (DTE).
Modular Trunk Data Module (MTDM)	A trunk-data module that can be configured to provide several kinds of interfaces (RS-232, RS-449, and V.35) to customer-provided data terminal equipment.
multiappearance telephone	A telephone equipped with several call-appearance buttons for the same extension, allowing the user to handle more than one call on that same extension at the same time.
Network Specific Facility (NSF)	An information element in an ISDN-PRI message that specifies which public-network service is used. NSF applies only when Call-by-Call Service Selection is used to access a public-network service.
NFAS	See Non-Facility Associated Signaling (NFAS).
Non-Facility Associated Signaling (NFAS)	A method that allows multiple T1 or E1 facilities to share a single D-channel to form an ISDN-PRI. If D-channel backup is not used, one facility is configured with a D-channel, and the other facilities that share the D-channel are configured without D-channels. If D-channel backup is used, two facilities are configured to have D-channels (one D-channel on each facility), and the other facilities that share the D-channels are configured without D-channels.
non switch-classified outbound calls	Proactive Contact outbound calls that are automatically launched by Communication Manager. See also, switch-classified outbound calls.

NSF	See Network Specific Facility (NSF).
occurrence	See appearance.
pickup group	A group of individuals authorized to answer any call directed to an extension within the group.
PMS	See Property Management System (PMS).
poll	See status poll.
poll suppression	An automatic feature of Best Service Routing (BSR) that significantly reduces the number of status polls executed. When a remote location cannot be the best resource at a given moment in time, the intelligent polling feature temporarily suppresses polls to that location. Also see status poll.
polling, intelligent	See intelligent polling.
PPN	See Processor Port Network (PPN).
primary extension	A main extension associated with the physical telephone or data terminal.
principal	A terminal that has its primary extension bridged on one or more other terminals.
principal (user)	A person to whom a telephone is assigned and who has message-center coverage.
private network	A network used exclusively for the telecommunications needs of a particular customer.
Processor Port Network (PPN)	A port network (PN) controlled by a switch-processing element that is directly connected to that Port Network's TDM bus and LAN bus.
Property Management System (PMS)	A stand-alone computer used by lodging and health-services organizations for services such as reservations, housekeeping, and billing.
public network	A network that can be openly accessed by all customers for local and long-distance calling.
queue	An ordered sequence of calls waiting to be processed.
queuing	A process of holding calls in order of their arrival to await connection to an attendant, to an answering group, or to an idle trunk. Calls are automatically connected in first-in, first-out sequence.
R2-MFC signaling	A signal consisting of two frequency components, such that when a signal is transmitted from a switch, another signal acknowledging the transmitted signal is received by the switch.

recall dial tone	A tone signaling that the system has completed a function (such as holding a call) and is ready to accept dialing.
redirection criteria	Information administered for each telephone's coverage path that determines when an incoming call is redirected to coverage.
Redirection on No Answer	An optional feature that redirects an unanswered ringing ACD call after an administered number of rings. The call is then redirected back to the agent.
reorder tone	A tone to signal that at least one of the facilities, such as a trunk or a digit transmitter, needed for the call was not available.
Service Level Maximizer (SLM)	An agent selection strategy that ensures that a defined service level of X% of calls are answered in Y seconds. When SLM is active, the software verifies that inbound calls are matched with agents in a way that makes sure that the administered service level is met. SLM is an optional Call Vectoring feature that is used with Expert Agent Selection (EAS), and without Business Advocate.
simulated bridged appearance	A feature that allows the terminal user (usually the principal) to bridge onto a call that had been answered by another party on his or her behalf. Also called a temporary bridged appearance.
SLM	See Service Level Maximizer (SLM).
split (agent) status report	A report that provides real-time status and measurement data for internally-measured agents and the split to which they are assigned.
split condition	A condition whereby a caller is temporarily separated from a connection with an attendant. A split condition automatically occurs when the attendant, active on a call, presses the start button.
split number	An identification of the split to the communication server and the Basic Call Management System (BCMS).
split report	A report that provides historical traffic information for internally measured splits.
staffed	An indication that an agent position is logged in. A staffed agent functions in one of four work modes: auto-in work mode, manual-in work mode, After Call Work (ACW) mode, or aux-work mode.
Station Message Detail Recording (SMDR)	An obsolete term now called Call Detail Recording (CDR).
status lamp	A green light that shows the status of a call appearance or a feature button by the state of the light (lit, flashing, fluttering, broken flutter, or unlit).
status poll	A call placed by a consider location vector command to obtain status data from a remote location in a multi-site Best Service Routing (BSR) application.

stroke counts A method used by ACD agents to record up to nine customer-defined events per call when a reporting adjunct is active.

switch-classified outbound calls Outbound calls placed by the Proactive Contact dialer and connected to the agents. See also, non switch-classified outbound calls.

system printer An optional printer that may be used to print scheduled reports using the report scheduler.

system report A report that provides historical traffic information for internally-measured splits.

system-status report A report that provides real-time status information for internally-measured splits.

trunk A dedicated telecommunications channel between two communications systems or Central Offices (COs).

trunk allocation The manner in which trunks are selected to form wideband channels.

trunk group Telecommunications channels assigned as a group for certain functions that can be used interchangeably between two communications systems or Central Offices (COs).

UDP See Uniform Dial Plan (UDP).

Uniform Call Distribution-Least Occupied Agent (UCD-LOA) An agent selection method for delivery of calls. With UCD-LOA implemented, calls are delivered to the available agent with the lowest percentage of work time since login. Also see Expert Agent Distribution-Least Occupied Agent (EAD-LOA), Expert Agent Distribution-Most Idle Agent (EAD-MIA), and Uniform Call Distribution-Most Idle Agent (UCD-MIA).

Uniform Call Distribution-Most Idle Agent (UCD-MIA) An agent selection method for delivery of calls. With UCD-MIA implemented, calls are delivered to the available agent who has been idle the longest since their last ACD call. See also EAD-LOA, EAD-MIA, and UCD-LOA.

Uniform Dial Plan (UDP) A feature that allows a unique number assignment for each terminal in a multiswitch configuration such as a Distributed Communications System (DCS) or main-satellite-tributary system.

VDN See Vector Directory Number (VDN).

Vector Directory Number (VDN) An extension that provides access to the vectoring feature on the switch. Vectoring allows a customer to specify the treatment of incoming calls based on the dialed number.

vector-controlled split A hunt group or ACD split administered with the vector field enabled. Access to such a split is possible only by dialing a VDN extension.

work mode A mode that an ACD agent can be in. Upon logging in, an agent enters aux-work mode. To become available to receive ACD calls, the agent enters auto-in work mode or manual-in work mode. To do work associated with a completed ACD call, an agent enters After Call Work (ACW) mode.

work state An ACD agent may be a member of up to three different splits. Each ACD agent continuously exhibits a work state for every split of which it is a member. Valid work states are Avail, Unstaffed, AUX-Work, ACW, ACD (answering an ACD call), ExtIn, ExtOut, and OtherSpl. An agent's work state for a particular split may change for a variety of reasons. For example, an agent's work state changes when a call is answered or abandoned, or the agent changes work modes. The Basic Call Management System (BCMS) feature monitors work states and uses this information to provide BCMS reports.

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