Troubleshooting Avaya Aura® Call Center Elite

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Chapter 1: Introduction

Purpose

This document describes how to use troubleshooting tools and utilities. The document also describes events and alarms, the procedures to contact Avaya Support, and the typical error messages and resolution techniques.

Intended audience

This document is intended for people who perform troubleshooting tasks.

Related resources

Documentation

See the following related documents.

Title	Use this document to:	Audience
Supporting		
Avaya Aura® Communication Manager Denial Events	Read about system denial events.	Implementation engineers, support engineers, and system administrators
Programming Call Vectoring Features in Avaya Aura® Call Center Elite	Write and edit call vectors.	Implementation engineers and system engineers

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Procedure

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Chapter 2: Troubleshooting features

Conference call drops

Conference calls drop abruptly, which can be because the field value in **Vector Disconnect Timer** has a short duration.

Solution

Procedure

1. At the command prompt, type `change system-parameters features` and press **Enter**.
2. On page 10 of the Feature-Related System Parameters screen, administer a value higher than the current value in the **Vector Disconnect Timer (min)** field.
3. Save your changes.

Remote agents experience call problems

Remote agents receive phantom calls

When you administer enhanced Look-ahead Interflow (LAI) vectors or the LAI Expected Wait Time (EWT) threshold incorrectly, remote agents can receive phantom calls.

Solution

Before you begin

Ensure that Look-ahead Interflow (LAI) is active on the System-Parameters Customer-Options screen.

Procedure

1. At the command prompt, type `change system-parameters features` and press **Enter**.
2. On page 11 of the Feature-Related System Parameters screen, administer a value higher than the current value in the **Interflow-qpos EWT Threshold** field.

3. Save your changes.

Remote agents experience delay in receiving ACD calls

Remote agents can experience some delay in receiving ACD calls because of the following reasons:

- The **Interflow-qpos EWT Threshold** field value is low. To administer a higher field value, perform the steps in *Remote agent receive phantom calls*.
- The sending Communication Manager server makes insufficient LAI attempts.
- The number of tie trunks are insufficient.

Solution

Procedure

Change the interflow-qpos conditional at the sending Communication Manager.

Remote agents receive no calls

Remote agents receive no calls when the sending Communication Manager server completes all vector steps before calls reach the head of a queue.

Solution

Procedure

Rewrite the relevant vector on the sending Communication Manager server.

Sound volume is too low

Sound volume levels are too low for some conference participants. A potential reason can be because these participants connect through international trunks in which the Central Office (CO) loss plans have substantial losses.

Solution

Procedure

1. At the command prompt, type `change location-parameters xxx`, and press **Enter**. Where *xxx* is the number of the location.
2. On the Loss Plans page of the Location Parameters screen, administer the **End-to-End total loss (db) in a n-party conference** field.
3. Save your changes.

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Tie trunks or queue slots reach maximum capacity frequently

Best Service Routing (BSR) cannot effectively balance calls across the network when tie-trunks or queue slots reach maximum capacity.

Review the design of the related BSR Application plan, and correct the following:

- BSR status poll vectors did not end with a **`reply-best`** step.
- Use of **`busy`** or **`disconnect`** command in vector steps.
- User adjustment, as a percentage, in the **`consider location`** vector step is too low.

Solution

Before you begin

To verify that Best Service Routing (BSR) vectors function correctly, type the **`list trace vdn`** or **`list trace vec`** command to observe call processing.

Procedure

1. At the command prompt, type the `display events` command for the relevant vector, especially if you recently implemented a new BSR Application plan.

   Vector events identify and indicate the source of common malfunctions and administration errors.

   Note:

   When you type the **`display events`** command, Communication Manager displays the most recent vector events.

2. At the command prompt, type `change vector xxx` and press **Enter**. Where *xxx* is the related BSR status poll vector.
   - If the vector event details indicate that a **`reply-best`** step is missing, add the **`reply-best`** step.
   - If the vector event details indicate that a **`busy`** or **`disconnect`** command is in the status poll vector, delete the command.
   - If the vector event details indicate that user adjustment, as a percentage, in the **`consider location`** step is low, increase the value of the *adjust-by* parameter.
3. Save your changes.

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Communication Manager does not forward UUI data

Sometimes Communication Manager does not forward User-to-User Information (UUI) data, even though you receive no error message when you administer the Shared UUI feature.

The following are some reasons:

- Network providers impose limitations on the user data length.
- QSIG signaling and networks do not have the required user data length limits.
- The **data item priority** field on the Shared UUI Feature Priorities page of the Trunk Group screen is left blank.

For more information about the rules that determine the capacity of user information, see *information forwarding* in *Avaya Aura® Call Center Elite Feature Reference*.

Solution

Before you begin

Use the **`display events`** command on a periodic basis to check if Communication Manager does not forward UUI data.

Procedure

1. For Distributed Communications System (DCS), configure all ISDN trunks between Communication Manager servers or the remote voice messaging system in the D-channel mode.
2. For each ISDN or SIP trunk with **shared UUI**, ensure that the UUI size does not exceed the network support limit.
3. Verify that the trunk group options are correct for each configuration.
4. If an application fails, check the administration screens to determine whether the application has the highest priority. Perform this step for tandem nodes and originating nodes.

   A tandem node can erase the UUI information from the originator. Passing UUI through a tandem node transparently does not apply to Communication Manager proprietary shared UUI procedures.

UCID not transmitted

Universal Call Identification (UCID) relay over ISDN or SIP trunks depends on the field settings on the System-Parameters Customer-Options screen. If Communication Manager does not relay UCID, check the following:

- The **ISDN-PRI** and **ISDN-BRI** fields on the System-Parameters Customer-Options screen is **n**. These field values must be **y**.

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- The **Send UCID** field on the Trunk Group screen of a tandem Communication Manager server is **n**. To relay UCIDs, this field value must be **y**.
- For Call Management System (CMS), call-associated trunks, VDNs, and skills are unmeasured. All call-associated resources must have the **Measured** field as **both** or **external**.
- For DCS, ISDN or SIP trunks must have the service protocol as **shared uui**.

Solution

Procedure

1. A tandem communication server has the **Send UCID** field set to **y** for all trunk groups that Automatic Alternate Routing (AAR) or Alternate Route Selection (ARS) or station users can use to tandem an incoming call.
2. For DCS, configure all ISDN trunks between the communication servers for DCS or remote AUDIX in the D-channel mode.
3. For CMS tracking purposes, administer the **Measured** field as **both** or **external** for all trunks, VDN, and skills for which Communication Manager tracks UCIDs.

NCR invocation attempts fail

Proposed solution 1

Procedure

1. Verify that no problems exist with BSR polling and interflow operations when Network Call Redirection (NCR) is not administered on the Best Service Routing Application Plan screen.
2. Ensure that the **Net Redir** field on the Best Service Routing Application Plan screen is **y** for all locations that use NCR.

Proposed solution 2

About this task

You can check the ISDN message trace information that Message Sequence Tool (MST) provides for the ISDN trunk D-channel that is associated with NCR invocation attempts.

Perform the following steps to configure MST:

Procedure

1. Type the `ch MST` Switch Administration Terminal command.

2. Administer **ISDN-PRI** as **y**, **Port Type** as **d-channel**, and **Port** as the DS1 D-channel switch location that is associated with the PRI trunk in use with NCR.
3. Use the **`enable mst`** and **`list mist cont`** Switch Administration Terminal commands to view NCR-related MST trace data.
4. When vector processing or manual call transfer, call conference, or call release starts an NCR NCT-type invocation, Communication Manager sends a D-channel message to the PSTN switch. This message initiates the merging of the two B-channels associated with the first and second call-legs of a trunk-to-trunk call.

   The following MST trace example is for a NCR Two B-Channel Transfer D-channel invocation message that has the same general format as for the MCI NCT, ETSI ECT, or NCD protocols:

   ```
   <msg #> 62 <time stamp> 40 01 18 0F 08 02 80 02 62 1C 09 91 A1

    06 02 01
                   04 02 01 06
   ```

   Search the 91 A1 data-byte sequence in the trace example to verify that Communication Manager sends an NCR invocation D-channel message.
5. If the NCR NCT-type invocation is successful, the PSTN switch returns a D-channel message to the Communication Manager that has the following general format:

   ```
   <msg #> 60 <time stamp> 00 00 4B 17 08 02 93 E5 62 1C 06
   03 02 01
                   01
   ```

   Search the 91 A2 data-byte sequence in the message to verify that the PSTN switch accepted the NCR invocation request. A D-channel message instead sent by the PSTN switch that has 91 A3 or 91 A4 data-byte sequence indicates the NCR invocation attempt was rejected. Use the **`display events`** System Administration Terminal command to view vector events that will explain why the NCR invocation failed.
6. For the NCR ETSI ECT protocol, a NCR `Request LinkID` D-channel message is first sent to the PSTN switch by Communication Manager to determine which D-channel to use for this NCR ETSI ECT invocation: This will result in the PSTN sending a `Returned LinkID` D-channel message to Communication Manager, where an example of an Ericsson AXE-10 single-byte LinkID MST message is as follows:

   ```
   <msg #> 60 <time stamp> 40 01 18 0F 08 02 00 57 62 1C 13 91 A2

   10 02 01
                  0B 30 0B 06 06 04 00 82 71 01 04 02 01 FE
   ```

7. Communication Manager sends an `Invoke Explicit ECT` D-channel message to the PSTN switch using the LinkID returned by the PSTN switch, where an example Ericsson AXE-10 single-byte LinkID MST message is as follows:

   ```
   <msg #> 62 <time stamp> 40 01 18 0F 08 02 01 92 62 1C 11 91 A1
   ```


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```
0E 02 01
               0C 06 06 04 00 82 71 01 01 02 01 FE
```

8. For any of the NCR NCT-type protocols, a successful invocation results in both legs of the trunk-to-trunk connection being dropped by the PSTN switch after the B-channels are merged.

   An example of the PSTN switch first dropping the second call-leg by sending a `Disconnect`, the Avaya switch sending back a `Release`, and the PSTN switch sending a `Release Complete` D-channel message is as follows:

```
<msg #> 60 <time stamp> D  40 01 18 0F 08 02 81 92 45 08 02 82 90 1C 23 91
                              D  A1 20 02 02 00 80 02 01 22 30 17 A1 0F 30 06 02
                              D  01 00 02 01 01 30 05 05 00 02 01 02 82 01 00 83
                              D  01 00 1C 06 91 A2 03 02 01 0C
<msg #> 62 <time stamp> 40 01 18 0F 08 02 01 92 4D
<msg #> 60 <time stamp> 40 01 18 0F 08 02 81 92 5A
```

   An example of the PSTN switch completing the NCR call-redirection operation by dropping the first call-leg by sending a `Disconnect`, Communication Manager sending a `Release`, and the PSTN switch sending a `Release Complete` D-channel message. To verify the called number information associated with the NCR setup of the second call-leg is correct and to see the trunk-related denial events that are generated if the NCR fails, use the **`list trace tac <trunk group number>`** Switch Administration Terminal command.

Proposed solution 3

Procedure

To view the behavior of a particular VDN or vector and to identify NCR errors, use the **`list trace vdn`** and **`list trace vector`** Switch Administration Terminal commands.

Proposed solution 4

About this task

You can check BSR processing to identify NCR errors.

Procedure

1. If you are logged in at the Switch Administration Terminal (SAT) using the init login, type `go tcm`.
2. At the `tcm1>` system prompt, type the `rdd:dp_mgr Bsr_applloc` command to see all NCR attempts, internal errors, network errors, successful redirections, and disconnects peg counts that are associated with BSR call interflows where NCR was invoked.

   Peg counts are free-running and are only reset when you use the **`ch best SAT`** command to gain access to the Best Service Routing Application Plan screen for a particular BSR application number.

Proposed solution 5

Procedure

If NCR vector invocation by Call Vectoring fails for previous calls, type the `display events` SAT command to obtain a real-time display of vector events that are logged for call redirection attempts.

The possible NCR vector events are as follows:

a. 68: Adjunct Route via NCT failed
b. 310 NCR: Invoke trunk not ISDN
c. 311 NCR: Bad NCR trunk admin
d. 312 NCR: No NCT PSTN service
e. 313 NCR: No NCT outgoing trk
f. 314 NCR: NCT outgo trk drop
g. 315 NCR: PSTN NCT invoke err
h. 316 NCR: PSTN NCT netwrk err
i. 317 NCR: Used NCT trk-to-trk
j. 318 NCR: No NCD PSTN service
k. 319 NCR: NCD invalid PSTN nmbr
l. 320 NCR: NCD call connect err
m. 321 NCR: PSTN NCD invoke err
n. 322 NCR: PSTN NCD netwrk err
o. 323 NCR: PSTN NCD max redirs
p. 324 NCR: PSTN NCD no disc
q. 325 NCR: Internal system err

SIP NCR invocation attempts fail

Proposed solution

Procedure

1. When an NCR NCT-type invocation is initiated by a vector processing operation or by a manual call-transfer or call-conference/release operation, Communication Manager sends a SIP REFER or 302 Moved Temporarily message to the SIP service provider to initiate the redirection operation.

   You can determine what User-to-User data was sent in the SIP REFER or 302 Moved Temporarily messages, but the absence of User-to-User Information (UUI) does not mean

that an invocation failed. Absence could mean that there was no UUI at the time during generation of a message.

The following examples are for SIP NCR invocation messages:

a. A successful SIP NCR invocation with a REFER message:

```
REFER sip:
30341@135.9.72.61
;transport=tcp SIP/2.0^M
From: "
3322"
 <sip:
3322@avaya.com
>;tag=0b6ce3afb70dc14f047524900^M
To: "
ISDN 2"
 <sip:
30341@avaya.com
>;tag=0b6ce3afb70dc19a0474ff5700^M
Call-ID: 0b6ce3afb70dc19b0474ff5700^M
CSeq: 1 REFER^M
Max-Forwards: 70^M
Route: <sip:
123.4.72.61;lr;transport=tcp>^M
Via: SIP/2.0/TCP 123.4.72.136:5062;branch=z9hG4bK8010313dfb70dc150047524900^M
User-Agent: Avaya Avaya Aura® CM/R015x.00.0.822.f^M
Contact: "
test vdn"
 <sip:
3322@135.9.72.136
:5062;transport=tcp>^M
Refer-To: <sip:
825030340@avaya.com
?User-to-User=00C8103132333435363738393031323
343536F7020007F803042143%3Bencoding%3Dhex>^M
Content-Length: 0^M
^M
```

A successful invocation is indicated by the UUI for the `Refer-To` header.

The REFER method of NCR invocation is used for the case where the call has already been answered in the vector or by an answering station.

Failure of the SIP NCR invocation with vector processing will result in continuation of vector processing at the following step.

b. A successful SIP NCR invocation with a 302 Moved Temporarily response:

```
SIP/2.0 302 Moved Temporarily^M
From: "
ISDN 2"
 <sip:
30341@avaya.com
>;tag=0f0a1affb70dc1ac0474ff5700^M
To: "
3322"
 <sip:
3322@avaya.com
>;tag=0f0a1affb70dc15e047524900^M
Call-ID: 0f0a1affb70dc1ad0474ff5700^M
CSeq: 1 INVITE^M
Via: SIP/2.0/TCP 123.4.72.61;branch=z9hG4bK0f0a1affb70dc1ae0474ff5700^M
```

```
Server: Avaya Avaya Aura® CM/R015x.00.0.822.f^M
Contact:
<sip:
825030340@avaya.com
?User-to-User=00C8103132333435363738393031323334353 6F7020002%
3Bencoding%3Dhex>^M
Content-Length: 0^M
^M
```

A successful invocation is indicated by the User-to-User information for the `Contact` header.

2. The 302 Moved Temporarily method of NCR invocation is used for the before-answer case that applies within vector processing.

   Failure of SIP NCR invocation in this case results in the stopping of vector processing.

3. To verify that the called number information associated with the NCR setup of the second call-leg is correct and to view the trunk-related denial events that are generated if the NCR fails, type the `list trace tac <trunk group number>` Switch Administration Terminal (SAT) command.

4. To view the behavior of a particular VDN or vector and to check NCR errors, type the list trace vdn and list trace vector SAT commands.

5. If NCR vector invocation by Call Vectoring has failed for previous calls, type the `display events` SAT command to obtain a real-time display of vector events that are logged for call redirection attempts.

   The possible NCR vector events are:

   a. 68: Adj Route via NCR failed
   b. 311: Bad NCR trunk admin
   c. 312: NCR: No NCT service
   d. 316: NCR: NCT netwrk err
   e. 318: NCR: No service
   f. 319: NCR: invalid num
   g. 322: NCR: netwrk err
   h. 325: NCR: Internal system err
   i. 327: NCR: Caller not SIP trk

Chapter 3: Troubleshooting vectors

Criteria for success/failure of Call Vectoring commands

The following table summarizes the success and failure criteria for various vector commands.

Note:

Skill replaces split if you enable Expert Agent Selection.

Call Vectoring command success/failure criteria	
`adjunct routing link`	
Fails if any of the following is true: • VDN's COR does not permit routing to the adjunct-supplied destination • TAC/ARS/AAR code is invalid • Specified agent is not logged into the specified split for a direct agent call • Local extension is not in the dialplan • Invalid number was dialed	Stop any wait-time or announcement step (if present). Continue vector processing with the next sequential step.
Otherwise, succeeds	Route the call and provide feedback
`announcement`	
Fails if specified announcement is not administered, not recorded, or busied out.	Continue vector processing with the next sequential step
Otherwise, succeeds	Play the announcement, and continue at the next sequential step
`busy`	
Always succeeds. Central Office (CO) without answer supervision trunk callers will not hear the busy tone.	Exit vector processing, then play the busy tone for 45 seconds before dropping the call. (Unanswered CO trunk calls receive 45 seconds of ringback.)
`check` *split*	
Fails if any of the following are true: • Vector conditional is false • Split's queue is full	Continue vector processing with the next sequential step

Call Vectoring command success/failure criteria	
• Split is not vector-controlled • Call is already queued at the specified priority to the specified split • Call is already queued to three different splits	
Otherwise:	
Succeeds, and the call is terminated to an agent.	Exit vector processing, and pass control to call processing
Succeeds, and the call is queued or requeued in the specified split at the specified priority.	Continue vector processing with the next sequential step
`collect` *digits*	
Fails if any of the following are true:	
Call originates from an outside caller who is not using a touch-tone telephone	Call Prompting timer takes effect, command times out, and vector processing continues at the next vector step.
No TTR is in the system, or the TTR queue is full	Continue vector processing at the next step
Caller enters fewer digits than the maximum specified	Call Prompting timer takes effect, command is terminated, and any digits collected prior to the time-out are available for subsequent processing.
Otherwise, succeeds	Continue vector processing at the next step
`consider` *locations*	
Fails if any of the following are true: • No BSR application administered in active VDN • Location not administered in BSR application • Status Poll VDN number not administered in BSR application • Status Poll VDN number is invalid • Status Poll fails because all trunks are busy	Continue vector processing with the next sequential step
Otherwise:	
Succeeds, but takes no action if polling of specified location is suppressed.	Continue vector processing with the next sequential step
Succeeds, and place status poll call to the status poll VDN.	Suspend vector processing until status poll response received
`consider` *split*	
Fails if any of the following are true: • VDN skill (1st, 2nd, 3rd) is used in consider step but not administered for active VDN.	Continue vector processing with the next sequential step

Call Vectoring command success/failure criteria	
Otherwise: Succeeds, and the status of the local split is evaluated.	
`converse-on` *split*	
Fails if any of the following are true: • Converse split queue is full • Converse split is not vector-controlled • Auto-available split is in effect, and all agents are logged out by Redirection on No Answer (RONA)	Continue vector processing with the next sequential step
Otherwise: Succeeds, call is delivered to the converse split, and (if administered) digits are outpulsed to the VRU. The caller is connected to the VRU, the voice response script is executed, and (if necessary) digits are outpulsed to Communication Manager.	Continue vector processing with the next sequential step
`disconnect`	
Always succeeds	Play the announcement (if specified). Then drop the call
`goto` *step* and **`goto`** *vector*	
Fails if the step condition is not met.	Continue vector processing with the next sequential step
Succeeds if the step condition is met.	goto step - continue vector processing with the destination step goto vector - continue vector processing with the first non-blank step of the destination vector
messaging split	
Fails if any of the following are true: • Specified split is not a messaging-system split • Specified extension is invalid • Messaging split queue is full • Messaging split is not vector controlled and has no working agents (none logged in or all in AUX work mode) • Communications link with the messaging-system adjunct is inaccessible	Continue vector processing with the next sequential step
Otherwise, succeeds.	Terminate vector processing
`queue-to` *split*	
Fails if any of the following are true: • Split's queue is full • Split is not vector-controlled • Call is already queued at the specified priority to the specified split • Call is already queued to three different splits	Continue vector processing with the next sequential step

Call Vectoring command success/failure criteria	
Otherwise:	
Succeeds, and the call is terminated to an agent.	Exit vector processing, and pass control to call processing
Succeeds, and the call is queued or requeued in the specified split at the specified priority.	Continue vector processing with the next sequential step
`reply` *best*	
Fails if any of the following are true: • Incoming call is not ISDN or SIP • Incoming trunk group is not administered for shared UUI or for QSIG Supplementary Service	Drop the call
Otherwise: Succeeds and returns status data of best resource found in consider series.	Drop the call
`return`	
Fails if there is no return destination data stored for the call	Continues vector processing on the subsequent vector step. If this is the last step, the step is treated as a stop step.
Succeeds when there is return destination data	Returns to the calling vector
`set`	
Always succeeds If there is an invalid assignment, a vector event is generated	Continues to the next step with an invalid assignment or not
`stop`	
Always succeeds	Exit vector processing. Control is passed to normal call processing. Any queuing or treatment in effect remains in effect. Call is dropped if not queued.
`wait` *time*	
Always succeeds	Connect the specified treatment and pass control to the delay timer. Any feedback is continued until other feedback is provided.

Unexpected feature operations

The following table indicates and explains unexpected operations within Call Vectoring that you can encounter.

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Customer observations	Causes
General Vector Processing	
Vector stuck	10,000 steps executed. No default treatment in the vector.
Audible feedback lasts longer than the delay interval	Last vector step. Queuing for an announcement. Queuing for a touch-tone receiver for a **`collect digits`** step.
Look-Ahead Interflow (LAI)	
Agent receiving phantom call	Agents on two different Communication Manager become available simultaneously. Include a short **`wait-time`** or **`announcement`** step at the beginning of the receiving Communication Manager. Use the interflow-qpos conditional.
Remote agent receiving phantom calls when vectoring uses qpos conditional	Interflow-qpos threshold is set too low.
No Look-Ahead Interflow attempts accepted	No trunks. Network failure. Insufficient FRL.
All Look-Ahead Interflow attempts accepted	LAI attempts are interworking off due to one of the following: Interworking off of the network. Receiving vector is not designed for conditional acceptance. **`Route-to`** command with coverage `y` is used to interflow. **Look-Ahead Interflow** is not enabled at the receiving Communication Manager.
Look-Ahead DNIS name not displayed or no collected digits received	LAI IE or VDN Name, that is `shared UUI`, is not forwarding with call. Trunk group settings are not administered to support this data.

Unexpected command operations

The following table indicates and explains the unexpected operations the customer can encounter when using the Call Vectoring commands.

Customer observation	Cause
`adjunct routing link`	
Step skipped	• Invalid link extension • No trunks available • COR/FRL restricted

Customer observation	Cause
	• Time out. Application does not respond within the time specified in the **`wait-time`** command or within the time length of the recorded announcement. • Digit string inconsistent with networking translation • ASAI link down • Invalid route destination returned from adjunct
Busy tone	Busy local destination has no available coverage points
Network reorder or intercept	• The digit string supplied by the adjunct is inconsistent with public network translation • The digit string is inconsistent with the networking translation
Intercept or reorder tone is heard	Vector processing succeeded routing off Communication Manager, but a problem has occurred before routing to the final destination
All trunks are busy on a quiet system	Two Communication Manager treating each other as a backup Communication Manager
Step skipped	The Port Network (PN) link is down
	A variable represents an invalid number such as out of range or null. The variable is assigned the pound (#) sign character and an event is generated.
`announcement`	
Announcement not heard	• The announcement board is not present • The announcement is not administered • The announcement is not recorded • The announcement is being rerecorded • All ports are busied out • The announcement restore is in progress • The link to the announcement circuit pack is down
Extra delay before hearing announcement	• The announcement queue is full • All of the integrated announcement ports are busy • The analog announcement is busy
Vector processing stops	The analog announcement does not answer
Listening to silence after announcement	The announcement is the last step
Incomplete announcement	• The agent becomes available • The previous **`adjunct routing link`** step succeeds
`busy`	
Ringback heard instead of busy tone	Unanswered CO trunk

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Customer observation	Cause
`check`	
Call does not enter queue or terminate to agent	Step condition not met
`check` and **`queue-to`**	
Call does not enter queue or terminate to agent	• Queue length specified on the Hunt Group screen has been exceeded • Invalid split • Split not vector-controlled • Already queued to three different splits • No queue • Queue or check status indicates space when queue is full due to direct agent calls • Best keyword is used but consider series is not defining best data
Call apparently answered in wrong order	• Call being re-queued at different priority • Call superseded by higher priority call, including direct agent call
Call is not routed to remote best location	No trunk available
`collect digits`	
Announcement not heard while waiting for digits, but network billing indicates that the call was answered	• Announcement board not present • Announcement not administered • Announcement not recorded • Announcement being rerecorded • All ports busied out • Announcement restore in progress • Dial ahead digit exists
Collect step and announcement skipped	• TTR not in system • Link to PN that has TTR is down • TTR queue full
Delay before hearing announcement	• All TTR ports busy, but space in queue • Announcement queue full • All integrated announcement ports busy • Analog announcement busy
Vector stuck	Analog announcement does not answer
Dial-ahead digits not recognized	• Dial-ahead digits entered prior to first collection step • Call transferred • LAI attempt made

Customer observation	Cause
	• TTR released • 24 digits already provided • Call Prompting time-out since the last digit was entered
Vector processing halted at collect step. Announcement heard again upon return.	Call put on hold, transferred, or conferenced
Insufficient digits collected. Call routed to intercept.	• Caller dialed the pound (#) sign too soon • Caller dialed “*” without reentering correct digits • Call Prompting inter-digit time out
Caller information button denied	• No digits were collected • Display not in Normal mode
Collect announcement not heard and first collected digit incorrect	System does not contain all TN748C Vintage 5 or later circuit packs
Incomplete announcement	• Agent becomes available • First digit dialed
`consider`	
Local split/skill best (in primary vector or status poll vector)	If split or skill number is correct, split or skill has no agents logged in, no queue slots available, or all agents are in the Aux Work mode
Remote location is never best	No BSR application plan assigned to Primary VDN. Location number not assigned in application plan. Missing routing number for Status Poll VDN. No vector assigned to Status Poll VDN. Step in Status Poll vector is initializing best data before reply-best step.
A step is skipped	A variable represents an invalid number, such as out of range or null and an event is generated
`converse-on split`	
VRU script not executed	Queue full. No queue. Invalid split. Split not vector-controlled. VRU down.
Ani digits not passed	ANI not available
Qpos digits not passed	Call not queued to a non-converse split
No data returned from VRU	No TTRs available
VRU script terminated prematurely	Agent becomes available. VRU script attempted to transfer the call.
Wait digits not passed	Call not queued or no working agents in splits where call is queued.
`disconnect`	
Announcement not heard	• Announcement board not present • Announcement not administered • Announcement not recorded • Announcement being rerecorded

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Customer observation	Cause
	• All ports busied out • Announcement restore in progress
Extra delay	• Announcement queue is full • All integrated announcement ports busy • All analog announcements busy
Vector stuck	Analog announcement does not answer
`goto step`	
Branch is not made to the specified step	• Step condition not met • System time not set
`goto vector`	
Branch is not made to the specified vector	Step condition not met
Vector stuck	Goto vector with no steps or with all failed steps
`messaging`	
Vector stuck with ringback	A variable represents an invalid number such as out of range or null. The variable is assigned the pound (#) sign and an event is generated.
`messaging split`	
Vector stuck with ringback	Extension unknown to the messaging system
Step skipped, no message left	• Messaging-system link is down • DCS link to the remote messaging system is down • All DCS trunks busy • Queue for messaging-system voice ports is full
Vector stuck with busy tone	Remote messaging-system link down
Messages not found	Message extension is none. Message is left for VDN that accessed the vector.
Delay before messaging-system answers	All messaging-system ports are busy, but there is space in the queue
Busy tone	Queue for the messaging-system voice ports is full
Step skipped	Split not a messaging-system split anymore
`reply-best`	
Status poll VDN/vector not processing any calls	Incoming call not ISDN or SIP. No application plan defined for BSR application. Status Poll VDN routing number missing from or wrong in application plan.
`route-to`	
Step skipped	• Invalid local extension • No trunks available • COR/FRL restricted

Customer observation	Cause
	• Digit string inconsistent with networking translation • Busy local destination (route to digits without coverage and route to number) • No digits collected • Step condition not met
Network reorder	Digit string inconsistent with public network translation
Intercept or reorder tone heard	Vector processing succeeded routing off Communication Manager, but a problem has occurred before routing to its final destination
All trunks busy on a quiet system	Two Communication Manager treating each other as a backup Communication Manager.
`set`	
A variable or digits buffer is assigned the pound (#) sign	In an arithmetic operation, the pound (#) sign signifies an invalid value, an overflow value, or an underflow value.
`stop`	
Call dropped	Call not queued when vector processing stops
`wait-time`	
Audible feedback longer than delay interval	• Queuing for an announcement or for a TTR • **`Stop`** command executed
Audible feedback shorter than delay interval	• Agent becomes available • Previous **`adjunct routing link`** step succeeds
Music not heard	• No music port administered • Music source disconnected or turned off
Alternate audio or music source not heard	• Announcement board not present • Audio or music source not administered • Audio or music source not recorded • Audio or music source being rerecorded • All ports busied out • Announcement restore in progress

Converse-on command debugging

Symptom	Cause	Analysis
Making a call		
Converse-on step skipped	VRU down (RONA)	Vector event
	Split queue full	Vector event

Symptom	Cause	Analysis
Call stuck in converse	VRU port does not answer, RONA not used	Check split administration
	VRU down, RONA leaves call in queue	Check split status
Data passing		
First set of digits not collected	Converse first delay too short	Check administration
	No ANI available	Vector event
	No digits collected	Vector event
	Call not queued (qpos)	Vector event
	Expected Wait Time unavailable	Vector event
	VRU timed out awaiting first digit	VRU error log/trace
	VRU first digit time-out too short	Check VRU script
	—	Check converse first data delay
	Faulty hardware	Diagnostics
Second set of digits not collected	VRU digit count on first prompt in VRU script does not include the pound (#) sign	Check VRU script
	Converse second delay too short	Check administration
	No ANI available	Vector event
	No digits collected	Vector event
	Call not queued (qpos)	Vector event
	Expected Wait Time unavailable because call is not queued or the splits/skills that the call is queued to are not staffed	Vector Event
	VRU timed out awaiting first digit	—
	VRU error log/trace	—
	VRU first digit time-out too short	Check VRU script. Check converse second data delay
	Inter-digit time-out too short on first prompt and collect	Check VRU script
	Faulty hardware	Diagnostics
Digits incomplete	Converse data delay too short.	Check administration
	Faulty hardware	Diagnostics
Second set of digits is the same as the first digits passed	VRUs first prompt timed out	Check administration
	Faulty hardware	Diagnostics
Data return		
No digits returned to Communication Manager	Flash not recognized by Communication Manager	VRU error log or trace
		Check flash timing on VRU

Symptom	Cause	Analysis
	Converse data return FAC not administered	Check administration
	VRU does not return FAC	VRU script. Transfer attempt vector event
	VRU returns incorrect FAC	VRU script. Transfer attempt vector event
	Digit time-out during FAC	Transfer attempt event
	Converse data return FAC overlaps with other entries in the dial plan	Check dial plan
	Faulty hardware	Diagnostics
Not all digits returned to Communication Manager	Digit time out after FAC	None unless VRU logs being dropped by Communication Manager
	Overflow of Call Prompting buffer	Vector event
	Faulty hardware	Diagnostics
Collect announcement not heard	Too many digits returned by VRU.	Check VRU script
	Faulty hardware	Diagnostics

Tracking unexpected events

When you have corrected each problem, you can clear events from the error log. An event is an error that results from resource exhaustion, from faulty vector programming, or from incorrect user operation rather than from the Communication Manager software error. For example, failures involving the **`route-to`** command are usually due to entry of an invalid extension.

By displaying events, you can diagnose and correct each problem, as indicated by its corresponding event number, and eliminate the need for a technician to make on-site visits to do the same.

How to view an event criteria

Use the **`display events`** command to access the EVENT REPORT screen. Specify the event report criteria.

```
display events                                          Page   1 of   1   SPE B
                                EVENT REPORT

      The following options control which events will be displayed.

         EVENT CATEGORY

            Category: meetme

         REPORT PERIOD
```


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```
           Interval: a      From:   /  /  :   To:   /  /  :

        SEARCH OPTIONS

                          Vector Number:
                             Event Type:
                              Extension: 36090
```

The following table describes the fields used with the **`display events`** command.

Field name	Description
Category	Enter `denial`, `meetme`, `vector`, or `all` to specify the type of event to display.
Interval	Select the time period to display events. Enter `h` (hour), `d` (day), `w` (week), `m` (month), or `a` (all).
From/To	Enter the date and time of day to start and end the search.
Vector Number	Enter a specific vector number to report on. The field is ignored when the **Category** field is set to `meetme`.
Event Type	Enter a specific event type to report on. If this field is blank, events for all types are reported.
Extension	Enter a specific extension or VDN to report on. If this field is blank, events for all extensions are reported.

How to view an event report

After you have entered the report criteria, press **Enter**. The following screen shows examples of events.

```
display events
                                EVENT REPORT
Event Event                     Event     Event      First       Last     Evnt
Type  Description               Data 1    Data 2     Occur       Occur     Cnt
90    Wait step music failed     3/1      2A2      02/12/15:42 02/13/09:40  255
112   Converse no prompt digits  3/2      2A2      02/12/15:42 02/13/09:40  255
56    Call not in queue          8/1      28B      02/12/15:43 02/13/09:40  255
220   EWT call not queued        8/2      28B      02/12/15:43 02/13/09:40  255
150   Invalid hunt group         8/3      28B      02/12/15:43 02/13/09:40  255
56    Call not in queue          8/5      28B      02/12/15:43 02/13/09:40  255
```

The following table describes the information displayed in the event report.

Column	Description
Event Type	Displays a unique number that identifies the type of event that occurred.
Event Description	Displays a brief explanation of the event.
Event Data 1	Displays the following data: • <number1>/<number2>, for example, 12/5, where “<number1>” is the vector number associated with the vector event and where “<number2>” is the step number associated with the vector event. • Split<number>, for example, split 89, where “<number>” is the split number associated with the vector event.

Column	Description
	• For Meet-me Conference events, this is the port ID of the user associated with the event.
Event Data 2	Displays the following data: • Additional data encoded as a hex number, for example, 4C. This number serves as a call identifier. If more than two events with an identical identifier occur at the same time, the events are caused by the same call. • For Meet-me Conference events, this is the VDN of the Meet-me Conference used during the event.
First Occur/Last Occur	Displays the date and time the event first occurred and the date and time the event last occurred.
Evnt Cnt	Displays, up to 255, the total number of vector events of this type that have occurred.

Vector events

The following table provides a list of events, a brief description that displays on the screen, and an explanation of the event.

Event type	Event description	Explanation
1	Call dropped. Call not queued at the **`stop`** step.	Vector processing ended without the call being queued to a split and, as a result, the call cannot be answered. Some default condition was not programmed or that the vector was designed to not always answer the call. Also, call was subsequently dropped.
2	Vector with no steps	The call encountered a vector with no steps administered.
3	10,000 step executed	• Incorrect vector programming, for example, including a series of **`goto`** steps that point to one another. • Excessive repetition of a programmed loop during a single call. For example, recurring announcement-wait loop.
4	Administration change	The administration of this step occurred while the step was being executed. The call flow for this call is unpredictable. Do not change vectors when calls are active.
5	Call dropped by vector disconnect timer	The call was still in vector processing when the vector disconnect timer expired. The call dropped.
7	Attd Vec Mismatch-VDN/Vec	There is a mismatch between Attendant Vectoring and Call Vectoring between the VDN and the vector.
9	Attd Vec Mismatch-CR/Vec	There is a mismatch between Attendant Vectoring and Call Vectoring between the incoming call and the vector.
10	Retrying announcement	During an **`announcement`** step, a **`collect digits`** step that contains an announcement, or a **`disconnect`** step, the

Event type	Event description	Explanation
		announcement was not available, and the announcement queue was full. The step is retried at regular intervals.
11	No announcement available	During an **announcement** step, a **collect digits** step that contains an announcement, or a **disconnect** step, the announcement was not available for one of the following reasons: • Announcement was not recorded. • Analog announcement was busied out. • Integrated announcement board was not installed. • Integrated announcement ports were busied out. • Integrated announcement was being recorded or restored.
20	Call cannot be queued	A **queue-to split**, **messaging split**, or **check split** command failed to queue the call. **Note:** Event types 520, 521, 522 and 541 can be observed for the same call at the same time.
21	Queued to three splits	The call attempted to queue to four splits. Multiple split queuing allows the call to queue to a maximum of three splits simultaneously. If the call queued to more than one splits and if the call must now be dequeued from the splits and then queued elsewhere, one solution is to route the call to a station, which can be administered without hardware. Once this happens, the call is forwarded to the VDN that controls the next stage of the call.
22	Attd Vec: Cannot requeue	Applies to Attendant Vectoring and indicates that the call is in the attendant queue and another attempt is made to queue the call to an attendant or hunt group, or the call is in the hunt group queue and an attempt is made to queue the call to an attendant or too many attempts are made at queuing to the hunt group.
30	No TTR available	A **collect digits** command failed because: • TN744 port is not available. • All queue slots are occupied.
31	Dial-ahead discarded	Previously entered dial-ahead digits are discarded using access of an **adjunct routing link**, **converse-on**, **route-to number**, or **messaging split** step.
32	Prompting buffer overflow	The prompting digit buffer already has the maximum of 24 digits when additional dial-ahead digits are entered by the caller. The additional digits are not stored.
33	ced digits left behind	A **collect ced digits** step collected digits from a UEC IE and more than 16 digits are sent from the network.
34	cdpd digits left behind	A **collect cdpd digits** step collected digits from a UEC IE and more than 16 digits are sent from the network

Event type	Event description	Explanation
35	ced digits not available	A **`collect ced digits`** step collected digits from a UEC IE and no digits are sent from the network, or no digits are present in the UEC IE.
36	cdpd digits not available	A **`collect cdpd digits`** step collected digits from a UEC IE and no digits are sent from the network, or no digits are present in the UEC IE.
37	collect digits for variable error	• Failed to put the local variable value in the local linked list of collect variables for the call. This implies that the system variable limit is reached. • Failed to put the global variable value in the Variables for Vectors table due to messaging issue with Communication Manager. • Unknown or invalid variable type defined in the **`collect`** vector step.
38	Variable not defined	• The variable conditional that is tested is not defined in the Variables for Vectors table. • A command or the messaging extension contains a variable with an invalid value of *none* or #.
39	Invalid table number	A variable used as a table entry has an invalid assignment.
40	Messaging step failed	A messaging step failed because the Messaging Adjunct is not available. **Note:** Event types 540 and 541 are observed for the same call at the same time.
41	Messaging ext invalid	The messaging extension contains a variable with an invalid value of *none* or #. Vector event 38 is also generated.
50	Route -to step failed	A **`route-to`** step failed to reach the intended destination. **Note:** Event types 51 and 52 provides specific information regarding the reason for the failure.
51	No digits to route-to	The **`route-to digits`** step is unable to route the call because the previous **`collect digits`** step failed to collect any digits. This can result from an error in vector programming, for example, a **`route-to digits`** step appears without a preceding **`collect digits`** step. More often, however, this results because the caller is unable to enter the required digits, that is, the caller is using a rotary telephone, or because the caller is not provided with enough information to do so, as can be the case for auto-attendant applications.
52	No available trunks	A **`route-to`** command is unable to reach the specified off-switch destination due to a lack of available trunks.

Event type	Event description	Explanation
53	Route-to step failed	The step is unable to seize a trunk because of a hardware problem or glare.
54	LAI retry	Look Ahead Interflow **`route-to`** step failed because of glare. The route is retried once.
55	Triple coverage attempt	Coverage option on **`route-to`** step is ignored because triple coverage is not allowed. This can happen when the call has covered to a VDN.
57	Deny vector-initiated MSO	The vector cannot add an observer because SRVOBS_MAX=2 is reached.
58	Deny observing observer	The vector cannot observe the agent because the vector is already an observer.
59	Variable invalid value	The adjunct route link ID for GAZ (1-8) or MIPSLX (1-64) is invalid.
60	Adjunct route failed	An adjunct route failed for one of reasons indicated in event types 61 through 66.
61	Invalid destination	The **`adjunct routing link`** command returned digits that do not represent a valid destination.
62	Adjunct route cancelled	The **`adjunct routing link`** step is cancelled because another routing step such as a **`queue-to split`** step, is encountered in the vector.
63	Queue before route	The **`adjunct routing link`** command is skipped because the call has already queued using a **`queue-to split`** or a **`check split`** command.
64	Adjunct link error	The **`adjunct routing link`** command is cancelled due to the following reasons: • Link to the adjunct is down. • ASAI protocol violation prevents call completion. • Software resources to complete the call are unavailable.
65	Agent not logged in	A direct agent call is made to an agent who is not logged in to the relevant split. Used for adjunct routing request only.
66	Agent not member of split	A direct agent call is made to an agent who is not a member of the relevant split. Used for adjunct routing request only.
67	Invalid direct agent	A direct agent call is made to an invalid agent extension. Used for adjunct routing request only.
68	Adj route via NCR failed	NCR routing failed and a tandem trunk-to-trunk routing cannot be done.
69	Adj rte fail-link not adm	The adjunct route link ID is within range but not administered.
70	Busy step for CO trunk	A CO trunk call reaches a **`busy`** step in a vector without having previously received answer supervision. As a result, the caller continues to hear ringback rather than the busy tone.

Event type	Event description	Explanation
80	Time not set	A **goto** step with a time-of-day conditional is processed, but the Communication Manager time is not set.
81	No digits collected	No digits are collected and a comparison is requested against a digit string or in-table. The comparison test is false and the next step in the vector is executed.
83	Service-hours table empty	The service-hours table is empty. The table must be administered.
90	Wait step music failed	A **wait-time** step with music is accessed, but music is not connected. Check if music is administered correctly.
91	Wait step ringback failed	A **wait-time** step with ringback is accessed, but ringback is not connected.
100	Redirect unanswered call	The call is sent to an agent using a vector, but due to RONA, the call is redirected.
101	Redirect of call failed	The call is sent to an agent using a vector, but due to RONA, the call was redirected. The call is not be redirected.
110	Converse no ANI digits	On a **converse-on** step with passing type *ani*, no information is available to populate the field.
111	Converse no qpos digits	On a **converse-on** step with passing type *qpos*, no information is available to populate the field.
112	Converse no prompt digits	On a **converse-on** step with passing type *digits*, no information is available to populate the field.
113	Converse drop during data	On a **converse-on** step, the converse agent hangs up while data is being passed. This can indicate a port failure.
115	ASAI transfer converse	ASAI attempts transfer of a call that is active at a **converse** step. The transfer fails and vector processing continues at the next vector step.
116	Converse transfer denied	Transfer of a call that is active at a **converse-on** step is attempted. The transfer either fails or is denied, and vector processing continues at the next vector step.
117	Agent drops converse	While active on a **converse-on** step, an agent became available in a split associated with a **queue-to** split or **check** split step. The call is delivered to the non-converse agent and the converse agent is dropped.
125	Data return no digits	On a **converse-on** step, the converse agent activated data return but did not return any digits.
126	Data return time-out	On a **converse-on** step, the converse agent activated data return but timed out while waiting to return digits. Vector processing continued at the next vector step.
140	Coverage conference denied	Coverage to a VDN in a coverage path is denied because more than one party is active on the call.
150	Invalid EAS hunt group used in the vector step	Either the skill hunt group is removed or is a non-ACD hunt group.

Event type	Event description	Explanation
151	Skill indirection used improperly	Either no VDN skills are administered or the vector command has skill indirection and **EAS** is not enabled.
160	No vector steps, ANI sent	ANI is sent to CMS for a call that reached a VDN that accessed a vector with no steps defined.
161	uui sent to CMS, but there were no steps in the vector	A call is directed to a VDN associated with a vector that has no steps.
170	ASA - invalid VDN	A `check` or `goto` test requested a comparison of ASA for a VDN that has been removed since the vector was programmed. The comparison test is false and the next step in the vector is executed.
200	ANI not avail - digits	A `goto` test requested a comparison of ANI against a digit string and ANI is not available for the call. The comparison test is false and the next step in the vector is executed.
210	Routing table not assigned	A `goto` test requested a comparison with a vector routing table that is not assigned or is removed since the vector was programmed. The comparison test is false and the next step in the vector is executed.
211	No entries in routing table	A `goto` test requested a comparison with a vector routing table that has no entries. This is a non-match.
212	ANI not avail - table	A `goto` test requested a comparison of ANI against in-table and ANI is not available for the call. The comparison test is false and the next step in the vector is executed.
213	No digits in variable	In-table is administered, but the variable does not contain any digits on which to search.
220	EWT call not queued	A `goto` test for a call or converse data passing requested EWT for a call not in queue. In this case, the wait time is treated as infinite and the comparison is based on EWT > largest possible threshold.
221	EWT not sent to VRU	The EWT wait time for the call is not sent to the VRU for a converse-on passing wait vector step because the call is not queued or the splits/skills that the call is queued to is unstaffed.
222	System clock change	The system clock has changed, therefore any calculations involving time, that is, ASA and EWT is inaccurate.
230	II-digits not avail - digits	A `goto` test requested a comparison of II-digits against a digit string and II-digits are not available for the call. The comparison test is false and the next step in the vector is executed.
231	II-digits not avail - table	A `goto` test requested a comparison if II-digits against in-table and II-digits are not available for the call. The comparison test is false and the next step in the vector is executed.
240	No agent strategy found in VDN	The active VDN for the call, as determined by VDN override, does not have a BSR Available Agent Strategy.

Event type	Event description	Explanation
251	Call is not incoming ISDN	Occurs when a **reply-best** command in a status poll vector receives and tries to process a non-ISDN call. Processing in the status poll vector terminated is without a reply being sent.
261	No best location found	A **queue-to best**, **check-best**, or **reply-best** command fails because the call vector is unable to calculate a best value or because no local best exists. Vector processing continues at the next step. Vectors in multisite BSR applications do not attempt to interflow calls.
262	LAI attempt failed	Interflow of the call fails since: no trunk was available, LAI denial, or some other problem. Vector processing continues at the next step. In BSR applications, polling of this resource is temporarily suppressed.
271	No BSR app num in VDN	A **queue-to best**, **check-best**, or **consider location** command fails because the active VDN for the call as determined by VDN override has no BSR application number assigned. Processing continues with the next vector step. Only occurs in multisite BSR applications.
272	No BSR application plan administered	A **queue-to best**, **check best**, or **consider location** command fails because the application number assigned to the active VDN does not have an application plan assigned. Processing continues at the next step.
273	Location not on BSR screen	A **consider** command fails because the command refers to a location number that is not in the BSR Application screen assigned to the active VDN. Vector processing continues at the next step.
274	Status Poll VDN field is blank	A **consider** command fails because the entry for this location on the BSR Application screen does not contain a routing number for the status poll VDN.
275	Interflow VDN field is blank	A **queue-to best** or **check-best** command fails because the entry on the BSR Application screen for the relevant location does not contain a routing number for the interflow VDN.
276	Agent status info invalid	A **consider location** command fails because the status poll returns invalid data for an available agent (AIT, skill level, or occupancy is missing or out of range). Vector processing continues at the next step. Polling of this location is temporarily suppressed.
277	BSR status info invalid	A **consider location** command fails because the status poll returns invalid EWT data. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
278	No BSR data in response	A **consider location** command fails because the status poll does not return data in the DISCONNECT message. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
279	No response from status poll	A **consider location** command fails because the status poll does not respond within the time allowed or because the status

Event type	Event description	Explanation
		poll cannot be performed. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
280	Bad resp from status poll	A **`consider location`** command fails because the command receives an invalid response from the status poll such as an LAI acceptance message (ALERT or CONNECT). Vector processing continues at the next step. Polling of this location is temporarily suppressed.
281	BSR EWT is infinite	A **`consider`** command fails because the EWT for the referenced split or skill is infinite. This can be because all agents are logged out, in the Aux work mode, or because no queue slots are available. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
282	BSR status poll attempt failed	A **`consider location`** command fails because the status poll attempt failed. See other events for the specific reason. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
283	BSR poll no trunks	A **`consider location`** command fails because there are no available trunks. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
284	BSR poll seize fail	A **`consider location`** command fails because the status poll is unable to connect to a trunk due to a hardware problem. Vector processing continues at the next step. Polling of this location is temporarily suppressed.
285	BSR poll glare retry	The first status poll attempt for a **`consider location`** command is unable to connect to a trunk due to a race condition. The same trunk being seized for the outgoing call has an incoming call from the remote end. This status poll is attempted once more. A second attempt failure results in event 282.
287	Invalid status polling destination	An attempt is made to perform BSR polling over ISDN without B-Channel over a tandem trunk configuration that combines QSIG TSCs and AT&T TSCs. Avaya's ISDN protocol does not support this type of interworking.
288	BSR Poll: TSC not administered	The Trunk Group screen does not contain a trunk member administered for purposes of TSC.
289	BSR: Adjust-by invalid	The **`consider location adjust by`** command contains a variable with an invalid value of `none` or `#`. Vector event 38 is also generated.
291	BSR: Location invalid	The **`consider location`** command contains a variable with an invalid value of `none` or `#`.
291	No AITCI storage left	No longer used.
292	Data dropped by other app	The network does not support the transport of all user data, so some user data is not sent. You can prioritize the user data on the Shared UUI Feature Priorities page of the Trunk screen.

Event type	Event description	Explanation
		For more information, see *Avaya Aura® Call Center Elite Feature Reference*.
293	No room for reply-best information	The network or shared trunk setting does not support the transport of all data for the best resource. This is unlikely under normal circumstances since only 12 bytes of user information are required. Also see event 298.
294	No room for in-VDN time	The network does not support the transport of all user data. You can prioritize the user data on the Shared UUI Feature Priorities page of the Trunk screen. For more information, see *Avaya Aura® Call Center Elite Feature Reference*.
295	No room for collected dgt	
296	No room for VDN Name	
297	No room for other LAI	
298	Reply-best got bumped	The network or shared trunk setting does not support the transport of all data for the best resource. No other applications share user data included in a DISCONNECT message.
299	In-VDN time got bumped	The network does not support the transport of all user data. You can prioritize the user data on the Shared UUI Feature Priorities page of the Trunk screen. For more information, see *Avaya Aura® Call Center Elite Feature Reference*.
300	Collected dgts got bumped	
301	VDN Name got bumped	
302	Other LAI got bumped	
303	Block: send reply-best	The transport of the best data for a **`reply-best`** command is denied because the trunk group is neither **supplementary service b** nor **shared UUI**.
304	No enhanced info is sent	During the execution of a **`queue-to best`** or **`check best`** steps, information forwarding transport over the trunk is denied because the trunk group is neither **supplementary service b** nor **shared UUI**. This event is not logged for LAI, for example, in execution of a **`route-to`** step, in order to permit backward compatibility.
305	A BSR local treatment vector pulled a remotely queued call back to the local switch to route it elsewhere	If a **`queue-to best`** step is followed by steps that use commands other than **`announcement`**, **`wait`**, or **`goto`**, the trunk to the remote queue is dropped. This functionality can be exploited to allow the local server to take back calls that are interflowed to a remote location after a specified time limit is exceeded. To implement this strategy, a **`wait`** step with a specified time interval is included in the interflow vector on the local server, followed by more than one **`route-to`** step that redirects the call to an alternate call center locations.
310	NCR: Invoke trunk not ISDN	Check that only ISDN trunks are executing the vector steps where NCR is being invoked.
311	Bad NCR trunk admin	Check that all Trunk Group screen and Signaling Group screen fields related to the NCR feature are correct.
312	NCR: No NCT service	Check that the service provider has activated the NCT feature for the trunk being used for NCT call redirections.

Event type	Event description	Explanation
313	NCR: No NCT outgoing trk	Check that the trunk group is administered as a two-way trunk group and that the Usage Allocation settings for the trunk have been set up correctly.
314	NCR: NCT outgo trk drop	Shows that the second leg of the NCT call is dropped due to a trunk hardware problem, or that a vector step is executed that returned and ISDN DISCONNECT message such as a busy vector step.
315	NCR: PSTN NCT invoke err	The PSTN switch has not accepted the NCT invocation attempt. Check that the PSTN network switch complies with the NCT standards.
316	NCR: NCT netwrk err	Communication Manager has accepted the NCT invocation attempt, but has rejected it due to some error condition within the network Communication Manager. Check that the **Network Call Redir** field on the Trunk Group screen is administered correctly. Make a request to the service provider for troubleshooting assistance.
317	NCR: Used NCT trk-to-trk	NCT has not been successfully invoked, but the incoming call is still active as a switch trunk-to-trunk connection, this is, only an informational message.
318	NCR: No NCD service	Check that the service provider has activated the NCD feature for the trunk being used for NCD call redirections.
319	NCR: invalid nmbr	Communication Manager has detected that the number used for the NCR invocation that is administered in the *~r* route to number vector step or in the BSR Application Table's **VDN Interflow Number** field is an invalid number, the correct number used through Communication Manager administration.
320	NCR: NCD call connect err	The vector step is executed before the vector step invoking NCD that sends an ISDN CONNECT message to the PSTN.
321	NCR: PSTN NCD invoke err	The PSTN has not accepted the NCD invocation attempt. Check that the PSTN network switch complies with the NCD standards. Make a request to the PSTN service provider for troubleshooting assistance.
322	NCR: netwrk err	Communication Manager has accepted the NCD invocation attempt, but has rejected it due to some error condition within the network Communication Manager. Make a request to the service provider for troubleshooting assistance.
323	NCR: PSTN NCD max redirs	PSTN has detected that the call is redirected by NCD more than the public network maximum number of call deflections limit allows. Modify vector processing to reduce the number of NCD attempts.
324	NCR: PSTN NCD no disc	The PSTN switch has not disconnected the trunk after performing the NCD or NCT call redirection. Make a request to the PSTN service provider for troubleshooting assistance.
325	NCR: Internal system err	Communication Manager problem with call processing for the NCR invocation attempt. Alternately, for NCT, the first vector step at the

Event type	Event description	Explanation
		redirected-to endpoint is possibly not programmed with a call treatment vector step such as wait hearing ringback, wait hearing music, or announcement. Do not use vector steps such as wait hearing silence or wait hearing i-silence, for the first vector step at the redirected Communication Manager endpoint.
326	No ETSI ECT linkID	The PSTN switch has returned a FACILITY message to the local Communication Manager that includes the following reject component: LinkIDNotAssignedByNetwork. In this case, the local Communication Manager leaves the calls in a trunk-to-trunk transfer state.
327	NCR: Caller not SIP trk	Check that only SIP trunks are executing the vector steps where NCR is being invoked.
350	No return destination	The **`return`** command fails and continues to the next step because no return destination data exists for the call.
351	Results Truncated	A **`set`** command executed with operator CATL or CATR. The result is truncated because it is higher than 16 digits.
352	Negative Result	A **`set`** command attempts to execute. A negative result is converted to # (underflow) during the processing.
353	Divide by Zero	A **`set`** command attempts to execute with operator DIV. The operation specified by operand 2 divided by zero and results in a # (underflow) assignment.
354	Assignment not allowed	A **`set`** command attempts to execute. The assignment field contains an invalid system-assigned variable. The variable is invalid because the variable is not a user-assigned variable or a digits buffer.
355	Can't set, no lcl var	A **`set`** command attempts to assign a value to a user-assigned variable when the 8000 system limit is reached.
356	Return destination stack error	A **`goto`** *vector* command is executed with a full return destination stack for the call. The return destination is not saved.
357	Operand Overflow Underflow	A **`set`** command attempts to execute with operator ADD, SUB, MUL, or DIV. One of the operands has a # value or a value greater than 4294967295.
358	Overflow Error	A **`set`** command executes and obtains one of the following results: • A value greater than 4294967295 with a ADD or MUL operator. • A number assigned to a variable from an arithmetic operation has exceeded the length definition. For example: set A = none ADD 1000 If variable A is defined as having a length of 3, A is set to # and this vector event is generated.

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Event type	Event description	Explanation
520	Split queue is full	A **queue-to split**, **check split**, or **messaging split** command is executed, but the call did not queue to the split because the queue is full. To prevent this condition, use a “goto step...if calls queued in split...>...” before each **queue-to split** or **check split** step so that an alternative treatment can be provided for such cases.
521	Not vector-controlled	The split accessed by a **queue-to split** or **check split** command is not vector-controlled. As a result, the step is skipped.
522	AAS split cannot queue	A **queue-to split**, **check split**, or **messaging split** command is executed on an AAS, but the call did not queue to the split because all the agents are logged out by RONA.
540	AUDIX link down	Messaging system cannot be accessed using a **messaging split** command because the messaging-system link is down. As a result, the step is skipped.
541	Not a messaging split	The split administered for the **messaging split** command is not a messaging split, that is, the split does not have a messaging type administered. As a result, the step is skipped.
542	Can’t connect idle agent	The call at the head of the queue cannot be connected to an idle agent.
550	ASA - No staffed agents	A **check** or **goto** test requested a comparison of ASA for a split or skill that has no staffed agents. The comparison was based on ASA > largest possible threshold.
560	EWT no history for split	A **goto** test requested EWT for a split or skill that has not yet acquired history. The wait time is the default value.
561	EWT no split queue	A **goto** test requested EWT for a split or skill that has no queue. The wait time is treated as infinite. The comparison is based on EWT > largest possible threshold.
562	EWT split queue full	A **goto** test requested EWT for a split or skill, the queue, of which, is currently full. The wait time is treated as infinite. The comparison is based on EWT > largest possible threshold.
563	EWT split no working agents	A **goto** test requested EWT for a split or skill that has no agents logged in or all logged in agents are in the Aux work mode. The wait time is treated as infinite and the comparison is based on EWT > largest possible threshold.
564	EWT split locked	A **goto** test requested EWT for a split or skill that is currently locked. The wait time is treated as infinite. The comparison is based on EWT > largest possible threshold.
565	EWT call no working agents	A **goto** test for a call or converse data passing wait requested EWT for a call that is queued only to splits or skills that have no agents logged in or that have all logged in agents in the Aux work mode. In this case, the wait time is treated as infinite and the comparison is based on EWT > largest possible threshold.

Event type	Event description	Explanation
1760	Conference COR restrict	Check authorization on calling and called parties for non-PCOL calls.
2034	Illegal TSC interaction	A BSR polling over ISDN without B-Channel attempt has resulted in an illegal TSC interaction. Either an AT&T TSC was routed to a QSIG interface, or vice versa. The call is dropped and the denial event is logged.
2035	NCA-TSC not available	A BSR polling over ISDN without B-Channel attempt is denied for one of the following reasons: • The terminated administered TSC endpoint is disabled. • The incoming nca-tsc call arrives at the wrong signaling group. • The maximum number of nca-tsc is set to 0.
2075	Var-in-vec COS restricted	The station that is attempting to change the value type variable with a Facility Access Code (FAC) does not have console permission.
2404	Var-in-Vec No adm for VAC	There is no Variable Access Code (VAC) administered for the variable in the Variable for Vector Table.
2405	Var-in-Vec Invalid digit	While attempting to change the value type variable to a new assignment, an invalid DTMF digit, for example #, is entered. You can enter zero to nine digits or an asterisk (*) sign.
3201	Meet-Me Access chg TMO	The user changing the access code allowed the call to time out to intercept treatment. The access code is not changed.
3202	Invld Num Digits MM Acc	The user changing the access code entered too many digits. The access code is not changed.
3203	MM Extension not valid	The user changing the access code did not enter a valid extension.
3204	MM Access Chg Not a VDN	The user changing the access code entered a non Meet-me Conference VDN extension.
3205	MM Invalid Access Entered	The user changing the access code did not enter the correct access code. The access code is not changed.
3206	MM Access Obj/SAT Busy	An administrator is making changes to the Meet-me Conference VDN, so the user cannot change the access code using an FAC. Try again later.
3207	Merge Meet-me Conf call	A user tries to access an existing Meet-me Conference call and is denied.
3208	Serv Observ Meet-me VDN	A user tries to service observe a Meet-me Conference call. This is not allowed.
3209	Meet-me Conf call full	A user tries to access a Meet-me Conference call that is already full.
3210	Wrong MM Acc. code dialed	A user trying to access a Meet-me Conference call dialed the wrong access code.
3211	Chg Station no Cons/Perm	The station attempting to change the access code does not have console permissions COS.

Event type	Event description	Explanation
3212	VDN not a meetme type	The VDN that was called is not a Meet-me Conference VDN.
3213	MM Invalid Conf Ctrlr Sta	If controlling extension is filled in and the station and controller do not match.
3214	MM Inv Trk not Remote Acc	The trunk used to access the Meet-me Conference is not a remote access trunk.
3215	MM Invalid Station Type	Controlling extension is blank and the station type is invalid.
3216	Conf/Transfer 2 Meet-me	A user cannot conference or transfer another call into a Meet-me Conference call.
3217	MM Abbrev Dial Invalid	When changing a Meet-me Conference access code, the only entry that can be set up for AD is the FAC. Any other entry generates the vector event.

Clearing events

When your review of the event log is complete, you can remove the events from the error log. You must use a super user login ID to clear the events.

To clear the events from the error log, enter `clear events` at the command prompt and press **ENTER**. The command clears all the events from the event buffer within the error log. The command does not delete the other entries in the error log.

Global variables can change during processing

The collect global vector variable value is susceptible to being unintentionally changed and read by different vectors being processed for multiple calls - especially during high traffic periods. This can result in unexpected behaviors, such as callers hearing the wrong announcement.

Caution:

Global vector variables are accessible by all calls currently in vector processing and are susceptible to be overwritten by vectors associated with other active calls.

It is good programming practice to copy a global variable to a local variable before using it in a vector. This secures a snapshot of the global variable value that is used for subsequent vector processing.

Example

1. Use *A* as a global collect type variable.
2. Define *Z* as a local collect type variable. Use *Z* as the scratch pad variable to get the current value of *A*. You can use *Z* to test the value obtained from *A* later in the vector.
3. Use the following command at the beginning of the call processing vector program:

   ```
   set Z = A ADD none
   ```

4. Use the following command when the testing the value of *A* is required later in the vector:

   goto step 20 if Z = 123

If you modify the value of a global variable, complete the manipulation of the global variable within 15 steps. This is due to vector operation that temporarily suspends vector processing for 1.0 seconds after processing 15 steps under certain conditions. Therefore, the time period during which the value of a global variable changes can be greater than expected since the value can change during the real-time break.

Troubleshooting vector variables

List commands

You can use the following **list** commands to analyze vector variable operations:

- **list trace vector/vdn xx**: Displays the current values assigned to the variables used in vector steps. You can use this command to analyze vector operations.
- **list usage variables [x]** : Displays a list of all vectors that use variables and specifies which administered variable is used in each vector. You can optionally filter the list if you include a specific (A-Z, AA-ZZ) administered variable.
- **list measurement summary**: Displays the traffic summary report, which provides an overview of the system performance. Page 4 of the report displays the vector variables usage data showing the number of currently administered global vector variables, instantaneous in-use totals, corresponding high-water marks, and the average usage for local and persistent vector variables.

Variable related vector events

The following vector events are associated with vector operations:

- Event type 37: collect digits for variable error
- Event type 38: variable not defined
- Event type 213: No digits in variable

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Chapter 4: Communication Manager denial events

Note:

For more information about denial events, see *Avaya Aura® Communication Manager Denial Events*.

Event type	Event description	Explanation
1039	ACD login failed	Group Manager or User Manager set up of the ACD Logical Agent login information failed before password matching, if any.
1363	SIP Agent logins maximum	Maximum number of simultaneous SIP EAS Agents logins exceeded.
1375	Double agent login to station	Agent is logging in to a physical station that has another agent already logged in.
1380	Agent login failure	Agent login failure in getting the number of digits in the Logical Agent password. The system cannot find the login ID or user ID or the ID is invalid.
1381	Agent login failure	Possible causes: • An agent who logs in to a Multiple Call Handling (MCH) split or adjunct-controlled split is already logged in to the system. • The **Expert Agent Selection (EAS)** field on the Feature-Related System-Parameters screen is **n**.
1382	Agent login invalid/ error	Login is invalid.
1383	Agent login failure/ error	Logical Agent failure in getting the agent login ID. Possible causes are as follows: • Error in initializing agent-stat table. • Login for the skill failed. • Logging in to skill that the agent has already logged in to before. • Maximum number of logged in skill reached.
1384	Agent logins maximum	Maximum number of simultaneous logins exceeded or agent login failed.
1385	Agent password digits failed	Failure in getting the Logical Agent password digits from the Dial Plan Manager.

Event type	Event description	Explanation
1386	Agent password mismatch	Agent entered a password that does not match the administered password.
1387	Agent login invalid/ error	Login is invalid.
1388	Login acceptance fails	Logical Agent login processing of agent login messages failed.
2120	Advocate agents exceed maximum	Maximum number of Business Advocate agents already logged in.
2127	Over BCMS agent login cap	Reached maximum BCMS capacity.
5073	SIP OPTIM TG Meas Error	Trunk groups for SIP OPTIM OPS signaling are defined as measured and SPI events have been blocked.

AAR

When resources are unavailable, Communication Manager uses the Automatic Alternate Routing (AAR) feature to route calls to a different route than the first-choice route.

ACD

Automatic Call Distribution (ACD) is a telephony feature for processing and distributing inbound, outbound, and internal calls to groups of extensions.

ACD call

A call that Communication Manager:

- Delivers to an agent with the required skill.
- Delivers to an agent or puts in a queue as a direct agent call.
- Puts in a queue for an agent skill.

AD

Abbreviated Dialing (AD) makes agent login easier as agents can press the **AD** button to dial an access code, split number, or login ID.

ANI

Automatic Number Identification (ANI) is a display of the calling number for agents to gain access to information about the caller.

application

An adjunct that requests and receives ASAI services or capabilities. Applications can reside on an adjunct. However, Communication Manager cannot distinguish among several applications residing on the same adjunct. Hence, Communication Manager treats the adjunct and all resident applications as a single application. The terms application and adjunct are used interchangeably throughout the document.

ARS

Automatic Route Selection (ARS) is a feature that Communication Manager uses to automatically select the least cost route to send a toll call.

ASA

Average Speed of Answer (ASA) is the average number of seconds that a call waits in a queue before an agent answers the call. ASA includes the queue time and the station ring time.

ASAI

Adjunct-Switch Application Interface (ASAI) is an Avaya protocol that applications use to gain access to the call-processing capabilities of Communication Manager.

AUDIX™

Audio Information Exchange (AUDIX™) is an Avaya messaging system.

AUX work

Agents enter the Auxiliary (AUX) work mode for non-ACD activities, such as taking a break, going for lunch, or making an outgoing call. Agents in the AUX work mode are unavailable to receive ACD calls.

B-channel

Bearer channel (B-channel) is an ISDN channel that carries voice, video, or data.

BCMS

A software package residing on Communication Manager that monitors the operations of ACD systems. Basic Call Management System (BCMS) collects data related to the calls on Communication Manager and organizes data into reports that help supervisors manage ACD facilities and personnel.

best

The split/skill or location that can provide the best service to a caller as determined by BSR.

BSR

A feature that provides singlesite and multisite load balancing and maximizes staffing resources. Communication Manager uses Best Service Routing (BSR) to compare skills and to route calls to the best skill.

ced

Caller-Entered Digits (CED) are digits that a caller enters in response to system prompts

cdpd

Customer Database Provided Digits (CDPD).

check best

A vector command that Communication Manager uses to verify if the best found split or skill meets all the conditions in the vector. For example, Communication Manager can use the **`check`** command to verify if the best found split or skill has the best Expected Wait Time (EWT).

CMS

A software program for reporting and managing agents, splits, trunks, trunk groups, vectors, and VDNs. With Call Management System (CMS), you can also administer some ACD features.

CO

Central Office (CO) is a switch that a local phone company owns to provide local phone service (dial-tone) and access to toll facilities for long-distance calling.

consider

A vector command for collection of Best Service Routing (BSR) status data that Communication Manager uses for comparison of splits or skills. Use the **`check best`** and **`queue-to best`** commands in the consider series to identify and queue calls to the best split or skill.

COR

Class of Restriction (COR) is a feature that allows classes of call-origination and call-termination restrictions for phones, phone groups, data modules, and trunk groups.

COS

Class of Service (COS) is a feature that uses a number to specify if phone users can activate the Automatic Callback, Call Forwarding All Calls, Data Privacy, or Priority Calling features.

D-channel

Delta channel (D-channel) is an ISDN channel that carries control and signaling information.

DCS

Distributed Communication Service (DCS).

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.

DNIS digits

Dialed Number Identification Service (DNIS) digits are extensions in the dial plan that correspond to phone numbers, for example, 800 lines, that callers dial to connect to a contact center.

EAS

A feature that Communication Manager uses to distribute calls based on agent skills. With Expert Agent Selection (EAS), you can ensure that callers connect to agents with the required skills.

ECT

Explicit Call Transfer (ECT).

ETSI

European Telecommunications Standards Institute (ETSI).

EWT

Expected Wait Time (EWT) is an estimate of how long must a call wait in a queue before an agent answers the call. Communication Manager calculates EWT based on the current call traffic, past call traffic, call handling time, and agent staffing conditions.

FAC

Feature Access Code (FAC).

FRL

Facility Restriction Level (FRL).

glare

A simultaneous seizure of a 2-way trunk by two communications systems resulting in a standoff.

intercept tone

An tone that indicates a dialing error or denial of the service requested.

interflow

An 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.

interflow-qpos

The position of interflow call in the destination queue.

ISDN trunk

A trunk administered for use with ISDN-PRI. Also called ISDN facility.

LAI

A feature that improves agent productivity and call-handling capabilities of multisite contact centers. Communication Manager uses Look-Ahead Interflow (LAI) to balance ACD load among multiple sites.

MCH

With Multiple Call Handling (MCH), agents can receive more than one ACD call without releasing an active call. You can use MCH in EAS and non-EAS environments.

MSO

Multiple Service Observing (MSO).

NCA-TSC

Non Call Associated-Temporary Signaling Connection (NCA-TSC).

NCD

Network Call Deflection (NCD).

NCR

Communication Manager uses Network Call Redirection (NCR) to reduce trunking costs. NCR provides a call routing method between sites on a public network or Virtual Private Network (VPN). When calls arrive on a communication server with NCR active, Communication Manager releases the trunks after call redirection.

NCT

Network Call Transfer (NCT).

PCOL

TBD

phantom call

A call that rings at an agent station and the caller abandons before the agent can answer the call.

PN

Port Network (PN).

Processor Port Network (PPN)

A port network (PN) controlled by a switch-processing element that is directly connected to that PN's TDM bus and LAN bus.

queue slot

The position of a call in a queue.

queue-to best

A vector command for queuing calls to the best split or skill that is determined by a consider series.

QSIG

Q signaling (QSIG) is an ISDN-based signaling protocol for signaling between Private Branch Exchanges (PBXs).

reorder tone

A tone to signal that one of the facilities such as a trunk or a digit transmitter, was not available.

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.

SIP

Session Initiation Protocol (SIP) is an application-layer control signaling protocol for creating, modifying, and terminating sessions with more than one participant using http like text messages.

status poll

A call that Communication Manager makes to gain status data from a remote place in a multisite BSR application plan.

TAC

Trunk Access Code (TAC).

Tenant Partitioning

A method of separating resources to support multiple users on a single instance of the system. Assign the same tenant number to members of a partition to avoid unintended interactions between members of different partitions.

trunk

A dedicated telecommunications channel between two communications systems or Central Offices (COs).

tie trunk

A dedicated telecommunications line that directly connects two private network configurations. Communication Manager uses ARS to automatically route calls over tie trunks instead of the Public Switched Telephone Network (PSTN) lines.

trunk group

An arrangement of communication channels that carry multiple calls for the same phone number.

TTR

Touch Tone Receiver (TTR).

UCID

Universal Call Identification (UCID).

UUI

User-to-User Information (UUI).

VAC

Variable Access Code (VAC).

VDN

Vector Directory Number (VDN) is an extension number that directs calls to a vector. VDNs can represent a call type or a service category, such as Billing or Customer Service.

vector-controlled split

A hunt group that you can gain access to only by dialing a VDN extension.

vector events

Denial events that Communication Manager displays if an error occurs when Communication Manager processes call vectors.

VRU

Voice Response Unit (VRU).

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