



# **Avaya Call Center**

Release 4.0

What's New for Avaya Call Center 4.0

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# Preface

This document presents the enhancements added for Call Center Release 4.0 (R4.0).

This section contains the following topics:

- [Purpose](#) on page 5
- [Audience](#) on page 5
- [Related documents](#) on page 5
- [Availability](#) on page 6

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## Purpose

The purpose of this document is to describe the new or changed features in Avaya Call Center R4.0.

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## Audience

This guide is intended primarily for existing call center customers who are upgrading to Avaya Call Center R4.0.

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## Related documents

You might find the following Avaya documentation useful. This section includes the following topics:

- [Other Call Center documents](#) on page 6
- [Associated application documentation](#) on page 6

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## Other Call Center documents

These additional documents are issued for Avaya Call Center applications:

- *Avaya Call Center Call Vectoring and EAS Guide* - Provides information on how to write, use, and troubleshoot vectors, which are command sequences that process telephone calls in an Automatic Call Distribution (ACD) environment.
- *Avaya Call Center Automatic Call Distribution (ACD) Guide* - Provides feature descriptions and some implementation guidance for call center features.
- *Avaya 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.

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## Associated application documentation

The most recent application documentation for Avaya Communication Manager and Avaya Call Management System is available on the Avaya Support web site: <http://support.avaya.com>.

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## Availability

Copies of Avaya Call Center documentation are available from the Avaya Support web site, <http://support.avaya.com>.

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# Call Center 4.0 enhancements

Avaya Call Center Release 4.0 (Call Center R4.0) offers a number of enhancements to functionality provided by Call Center Release 3.0 and its successor Service Pack releases. This section contains an overview of the changes and additions you will find in Call Center R4.0.

Each topic in this section contains reference to the Call Center R4.0 documents where detailed information is located.

This section includes the following topics:

- [Agent enhancements](#) on page 8
- [Capacity increases](#) on page 12
- [Second pair of MIS links](#) on page 15
- [Dial plan expansion](#) on page 16
- [Call vectoring enhancements](#) on page 17

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## Agent enhancements

Call Center R4.0 provides several enhancements to the Agent functionality. This section provides overviews of the enhanced Agent functionality, including why the functionality is beneficial and where you can locate more information about the functionality.

This section includes the following topics:

- [Forced Agent Logout by Clock Time](#) on page 8
- [Improved integration with Proactive Contact outbound calling](#) on page 9
- [Service Observing with Multiple Observers](#) on page 11

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### Forced Agent Logout by Clock Time

The Forced Agent Logout from Clock Time feature allows administrators to:

- Set a specific time when the system will automatically log out Expert Agent Selection (EAS) agents.
- Define a system-wide logout reason code for agents for use with the forced logout.
- Administer a forced logout override button so that agents can override this feature.

**Reason to use:** This feature allows you to set a pre-determined time to automatically log out agents when the agents forget to log out at the end of their shifts. Using this feature assures that agents will not remain logged into the system when they are not on their shift. This allows the company to maintain accurate staffing views and prevents sending calls to auto-answer agents who have left their positions.

**Prerequisites:** You can administer Forced Agent Logout by Clock Time only if all of the following fields are set as follows:

- The **Expert Agent Selection (EAS)** field is set to **y** on the System-Parameters Customer-Options screen.
- The **AAS?** field on the Agent LoginID screen is set to **n**.
- The **Call Center Release** field is set to 4.0 or later on the System Parameter Customer-Options screen.

**Administration:** The following screens are used to administer Forced Agent Logout by Clock Time:

- The new **Forced Agent Logout Time** field on the Agent Login ID screen administers a time of day to log out the agent.
- The new **Clock Time Forced Logout Reason Code** field on the Feature-Related System Parameter screen specifies the reason why the agent was logged out.



- A new station button, logout-ovr, allows agents to override this feature. Administrators add this forced logout override button from the Station screen.

### Related topic

For more information about this feature, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

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## Improved integration with Proactive Contact outbound calling

Avaya Call Center R4.0 customers using an Avaya Proactive Contact (PC) integration with Communication Manager (CM) can now track and analyze the time agents in AUX Work mode spend placing outbound calls using the same real-time and historical Call Management System (CMS) reports used by customers with other Outbound Call Management (OCM) applications.

**Reason to use:** The improved integration with Proactive Contact provides functionality to track and analyze switch-classified and non-switch-classified outbound-calling operations using CMS real-time and historical reports that are similar to the CMS reporting available for fully-integrated outbound-calling applications that use the ASAI 3rd-Party Make Predictive Call and 3rd-Party Make Call APIs in a standard fashion.

The improved integration with Proactive Contact outbound calling also provides the capability to include outbound-calling calls in the Most-Idle Agent (MIA) and Least-Occupied Agent (LOA) agent-queuing algorithms. This provides fairer treatment of agents who are performing "blended" (inbound and outbound) call-handling operations. Agents will be given credit for their outbound call talk-time when the MIA or LOA algorithm determines which agent should receive the next incoming ACD call to the agents' skill(s).

**Prerequisites:** You can use the improved integration with Proactive Contact outbound calling only if all of the following conditions are true:

**Note:**

All the following fields appear on the System-Parameters Customer-Options screen.

- The **Expert Agent Selection (EAS)** field is set to **y**.
- The **ASAI Link Plus Capabilities** field or the **Computer Telephony Adjunct Links** field is set to **y**.
- The **Call Center Release** field is set to 4.0 or later.

**Administration for Proactive Contact switch-classified calls:** Switch-classified outbound calls are outbound calls placed by the Proactive Contact dialer and connected to the agents after the Communication Manager Call Classifier determines that the call has been answered.

The Vector Directory Number screen (page 2) is used to administer Proactive Contact Outbound Calling for switch-classified calls:

- The new **Reporting for PC Predictive Calls?** option field activates the Proactive Contact Outbound Calling feature when the field is set to **y**.
- The new **PC Predictive Reports Skill** field, which appears after the **Reporting for PC Predictive Calls?** field is set to **y**, administers the skill hunt group to be used for reporting Proactive Contact switch-classified calls on a per VDN basis. Reports are generated as though the agent were in the ACD-OUT state.

**Administration for Proactive Contact non switch-classified calls:** Non switch-classified outbound calls are outbound calls that are automatically launched by Communication Manager and connected to an available agent during call setup. This configuration is also referred to as agent-classified calling. The Feature-Related System Parameters screen (page 13) is used to administer Proactive Contact Outbound Calling for non-switch-classified calls:

- The new **Reporting for PC Non-Predictive Calls?** option field activates the Proactive Contact Outbound Calling feature for Proactive Contact non-switch-classified outbound calls when the field is set to **y**.
- The new **PC Non-Predictive Reports Skill** field, which appears after the **Reporting for PC Non-Predictive Calls?** option is set to **y**, administers the skill hunt group to be used for reporting Proactive Contact non-switch-classified calls. CMS reports are generated as though the agent were in the ACD-OUT state.

### Related topic

For more information about this feature, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

## Service Observing with Multiple Observers

The Call Center R4.0 Multiple Observers with Service Observing feature increases the number of service observers per call to enhance voice-call recording capabilities and for call-conference scenarios.

**Reason to use:** Customers have more options for recording and observing agent-to-customer transactions.

For example, using Service Observing with Multiple Observers means that:

- Up to two observers can monitor the same agent Login ID or station extension by using the Service Observing station button or by using any of the following Feature Access Codes (FACs):
  - Service Observing Listen-Only
  - Service Observing Listen/Talk
  - Service Observing No-Talk
- Two separate calls, each with an associated service observer, can be conferenced together with both service observers included in the merged conferenced call except when both observers are VDN observers. In this case one VDN observer will be dropped.
- Customers who use call-recording products, such as the Avaya Witness Call Recording or NICE, can connect a voice-storage server to a station or Login ID extension in order to record agent-to-customer transactions acting as an observer.
- Customers who use call recording products can allow an observer to monitor a station or Login ID extension and record the transaction at the same time.

**Prerequisites:** You can use this feature only if all of the following fields are set as follows:

- The **Call Center Release** field is set to 4.0 or later on the System Parameter Customer-Options screen.
- The **Service Observing (Basic)** field is set to **y** on the System Parameter Customer-Options screen.
- The **Can Be A Service Observer?** field is set to **y** on the Class of Restriction screen to be an observer.

OR

The **Can Be Service Observed?** field is set to **y** on the Class of Restriction screen to be an observee.

**Administration:** The following screens are used to administer Service Observing with Multiple Observers:

- The new **Allow Two Observers in Same Call?** field on the Feature-Related System Parameters (page 11) screen increases the number of service observers allowed in a call to two.

- The new **Service Observing by Recording Device?** field on the Class of Restriction (page 2) screen indicates that the service observer associated with the Class of Restriction is actually the remote service-observing connection made by an audio recording device.

### Related topic

For details on how to administer and how to use this feature, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

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## Capacity increases

Call Center R4.0 enhances system performance by increasing agent capacities in several key areas. This section identifies the increased agent capacities, including conditions required to enable the increased capacities and parameters that are unaffected by the capacity increases.

This section includes the following topics:

- [Simultaneous logged-in agents](#) on page 12
- [Agents logged-in to a skill](#) on page 13
- [Logged-in agent-skill pairs](#) on page 13
- [Total hunt group dynamic queue slots](#) on page 14

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## Simultaneous logged-in agents

**Capacity changes:** The simultaneous logged-in agents changes are as follows:

- The number of ACD/EAS agents that can be simultaneously (concurrently) logged in to Call Center is increased from a maximum of 5,200 agents to a maximum of 7,000 agents.
- Display capacities support the new 7,000 limit.
- The latest versions of the reporting adjuncts (CMS R14) support up to 7,000 agents logged into a shift.

**Required conditions:** The following conditions must be met for the increased capacities to be available:

- Call Center must be upgraded to Release 4.0.
- The platform must be an S8720XL with a DL-2 board or RAM shadow memory  
OR  
an S8300C/S8500XL/S8720XL LSP or ESS in an S8700XL configuration

**Unaffected parameters:** The following are unchanged by this increase in capacity:

- The rules for counting logged-in agents.
- Basic Call Management System (BCMS) and VuStats are still limited to 3,000 agents.
- Agent vector conditionals are still limited to 999 agents.

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## Agents logged-in to a skill

**Capacity changes:** The agents logged-in to a skill changes are as follows:

- The number of agents who can log in to the same skill has been increased from a maximum of 3,000 agents to a maximum of 7,000 agents.
- This capacity increase applies to ucd-mia and ead-mia hunt group skills.
- A new field, **LOA Increased Agts in Skill?**, is added to the Hunt Group screen.
  - When this field is set to **y**, the algorithm for determining LOA is changed to a coarser occupancy level "bucket" approach. The "buckets" are 0-69%, 70-74%, 75-79%, 80-84%, 85-89%, 90-94%, and 95-100%.
  - When this field is set to **n** (the default), the existing linear algorithm and 1,500 agents in the same skill limit are retained.

**Required conditions:** The following conditions must be met for the increased capacities to be available:

- Call Center must be upgraded to Release 4.0.
- The platform must be an S8720XL (or associated LSP/ESS).
- EAS is active and enabled.

**Unaffected parameters:** The following are unchanged by this increase in capacity:

- The SLM and PAD hunt group types are still limited to 1,500 agents.
- BCMS and VuStats are still limited to 3,000 agents.
- Agent vector conditionals are still limited to 999 agents.

---

## Logged-in agent-skill pairs

**Capacity changes:** The logged-in agent-skill pairs capacity changes are as follows:

- The maximum number of agents with 60 skills each is increased to 1,666 from 1,000.
- Applies to non-EAS agents as well as EAS agents, but does not provide additional capacity for non-EAS agents which are still limited to 4 splits per agent or 28,000 ACD members.

- SPI messages and R14 CMS are enhanced to support 100,000 for a single ACD.

**Required conditions:** The following conditions must be met for the increased capacities to be available:

- Call Center must be upgraded to Release 4.0.
- The platform must be an S8720XL (or associated LSP/ESS).

**Unaffected parameter:** The following is unchanged by this increase in capacity:

- The total CMS capacity of 100,000.

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## Total hunt group dynamic queue slots

**Capacity changes:** The total hunt group dynamic queue slots capacity changes are as follows:

- Maximum 15,000 slots from 12,000 to correspond with the increase in trunk capacity.
- Active collect local vector variables increased to 12K from 8K.
- Active subroutine return destinations increased to 12K from 8K.

**Required conditions:** The following conditions must be met for the increased capacities to be available:

- Call Center must be upgraded to Release 4.0.
- The platform must be S8700/S8710/S8720/S8500 servers.

**Unaffected parameters:** The limit for S8300/S8400 platforms remains at 1,000 dynamic queue slots.

### Related topic

For a complete list of Communication Manager capacities, see *System Capacities Table for Avaya Communication Manager on Avaya Media Servers*.

---

## Second pair of MIS links

Call Center R4.0 adds an additional TCP/IP link pair to support two reporting adjuncts on the same system. This feature enhancement consists of four Management Information System (MIS) links (two link pairs), that allow customers to use an optional High Availability configuration with dual Call Management System (CMS) and CCR configurations.

**Note:**

CCR is the internal development name for Avaya's next generation reporting platform.

Both of the link pairs - all four links - must be running the same SPI language as established by the adjunct reporting release administration. For High Availability support, the reporting adjunct systems (CMS or CCR) connected to a link pair must be the same product, the same software release, and run the same SPI language.

**Reason to use:** You can use CMS and CCR configurations concurrently while maintaining High Availability functionality. Further, CMS and CCR are explicitly identified to help facilitate maintenance activities.

**Prerequisites:** You can use this feature only if you have updated Call Center to Release 4.0.

**Administration:** The following screens have been changed to accommodate this feature:

- The **Reporting Adjunct Release** field on the Feature-Related System Parameters screen contains two sub-fields: **CMS (appl mis):** and **CCR (appl ccr):**.
- The **Appl** field on the Processor Channel Assignment screen has a new CCR option.
- The Survivable Processor screen has been modified to support the second CCR link pair.

**Related topic**

For more information, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

## Dial plan expansion

Call Center R4.0 supports the expanded Avaya Communication Manager dial plan. The dial plan has been expanded from a maximum of 7 digits so that most extension types can have lengths up to 13 digits. Extension types include physical stations, EAS agent Login IDs, VDNs, and so forth.

This dial plan expansion affects Avaya Call Center as follows:

- The dial plan expansion is only supported by Basic Call Management System (BCMS) and CCR. Extensions greater than 7 digits are not supported by Basic Call Management System Reporting Desktop (BCMRD), or the Call Management System (CMS).

**Note:**

CCR is the internal development name for Avaya's next generation reporting platform.

- Call Center Release 4.0 Adjunct Switch Application Interface (ASAI) and Application Enablement Services (AES) support the extended dial plan.
- Announcement extensions are still limited to 7 digits.

**Note:**

Avaya IP Agent R7 supports the extended dial plan.

### Related topic

For details on how to administer and how to use this feature, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.



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## Call vectoring enhancements

Call Center R4.0 responds to customer requests for more flexibility in the call vectoring functionality of the product. This section presents overviews the call vectoring enhancements, their value in your installation, and where to find more information about the enhancements.

This section includes the following topics:

- [Duplicate vector SAT command](#) on page 17
- [Service Hours Table Routing](#) on page 18
- [Vector steps increased to 99](#) on page 18
- [VDN variables increased to nine](#) on page 19
- [Vector variables increased to 702](#) on page 19
- [Assign to ASAI UUI string capability added to set command](#) on page 20
- [Vector comments](#) on page 22

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### Duplicate vector SAT command

The new `duplicate vector` System Administration Terminal (SAT) command takes an existing vector and creates one or more duplicate vectors that you can edit to create new vectors. This command is available through Avaya Site Administration (ASA).

**Reason to use:** A quick way to add vectors is to configure one vector as a template that can be reused when creating similar vectors. The administrator names the duplicated vectors and then edits them as needed.

**Prerequisites:** One or more of the following existing vectoring customer options must be active and the Call Center Release must be 4.0 or later:

- Attendant Vectoring
- Meet-me Conference
- Call Vectoring (Basic)
- Call Vectoring (Prompting)

**Administration:** From the SAT, type the following command:

```
duplicate vector master_vector [start nnnn] [count xx]
```

This command displays the new Duplicate Vector screen. The Duplicate Vector displays:

- The vector number and name of the original (master) vector command.
- The vector directory number (VDN) associated with the vectors.

- Indication of more VDN-vector associations.

### Related topic

For more information, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

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## Service Hours Table Routing

Customers can use tables to specify the service hours. Vectors use these tables to determine how to handle calls that are received during service hours versus calls that are received out of hours. Customers can use this feature as an alternative to tod (time of day) routing and can specify service hours on a daily or hourly basis.

**Reason to use:** Previously, customers had to add multiple time-of-day goto steps to their vectors in order to define the hours of operation for a specific business application (VDN or vector). This feature allows customers to define service hours in one place. One simple vector command can check to see if the call meets the administered service hours.

**Prerequisites:** Service Hours Table Routing is available only when:

- Call Center is Release 4.0 or later.
- Vectoring (Basic) is enabled.

**Administration:** There is a new screen and conditional for administering Service Hours Table Routing:

- The new Service Hours Table screen allows administering up to 99 different tables.
- A new vector "service hours" goto conditional controls the flow of the call based on whether or not the current day or time is in the range specified by the corresponding table.

### Related topics

- For more information about this feature, see *Avaya Call Center Call Vectoring and EAS Guide*.
- For more information about the Service Hours Table screen, see *Avaya Call Center Automatic Call Distribution (ACD) Guide*.

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## Vector steps increased to 99

The number of steps in a vector has been increased from 32 to 99.

**Reason to use:** Administrators can create longer vector programs facilitating ease of use by supporting more logic (and comments) in one place. This enhancement:

- Improves the efficiency of vectoring.

- Assists customers who are limited by the number of vectors or the number of steps in a vector.
- Enables additional applications and routing criteria.

**Prerequisites:** You can use this feature only if you have both

- CM Release 4.0
- Call Center Release 4.0

**Administration:** All applicable Release 4.0 screens and commands now accept 99 vector steps.

### Related topic

For more information, see *Avaya Call Center Call Vectoring and EAS Guide*.

---

## VDN variables increased to nine

In Release 3.0, administrators were given the option of entering a VDN variable instead of a specific link number. For Call Center R4.0 with extra large memory configuration, the number of variables allowed has been increased from five to nine (V1 - V9).

**Reason to use:** This enhancement increases the number of parameters within a vector program that can be assignable via the active VDN for the call. This results in increased flexibility for the VDN Variables feature.

**Prerequisites:** The increase in VDN variables is only available when Call Center is upgraded to Release 4.0.

**Administration:** The **VDN Variables** field on the VDN screen has been expanded to list nine variables.

### Related topic

For more information, see *Avaya Call Center Call Vectoring and EAS Guide*.

---

## Vector variables increased to 702

The number of vector variables that can be assigned has been increased from 26 to 702. In previous releases, administrators could use any single-character variable (A-Z). Beginning with Call Center R4.0, administrators can continue to use a single-character variable (A-Z), as well as any two-character variable (AA-ZZ).

**Reason to use:** The increase in the number of vector variables improves vectoring efficiency and assists customers limited by the number of vectors or the number of steps in a vector. Customers can add additional applications and routing criteria.

**Prerequisites:** The increase in vector variables is only available when Call Center is upgraded to Release 4.0.

**Administration:** Administer the vector variables (A-Z, AA-ZZ) in the Variables for Vectors table. The example below shows how the increased variables can be used. The AA-ZZ variable can be used anywhere the A-Z variable can be used.

### Release 3.1 command syntax

<code>announcement</code>	<code>extension no.</code> <code>A-Z</code> <code>V1-V5</code>
---------------------------	--

### Release 4.0 command syntax

<code>announcement</code>	<code>extension no.</code> <code>[A-Z, AA-ZZ]</code> <code>V1-V9</code>
---------------------------	---

### Related topic

For more information, see *Avaya Call Center Call Vectoring and EAS Guide*.

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## Assign to ASAI UI string capability added to set command

In previous releases, system-assigned variables, which included the `asaiui` variable type, were only allowed in the operand 1 and operand 2 positions of the `set` command. They were not allowed to be used in the left assigned-to position of the command.

You can now assign or change digits in the Adjunct/Switch Application Interface User to User Interface (ASAI UI) string with the `set` command using the `asaiui` variable type. The inserting, replacing, or appending of the stored ASAI UI digits is based on the start and length parameters defined for the `asaiui` type vector variable.

**Reason to use:** Customers can use information obtained from vectoring to make ASAI routing decisions or to provide adjunct display information to the agent.

For example, customers can choose to give higher priority status to calls that have been waiting at both remote and local call centers past a certain length of time.

**Prerequisites:** In addition to upgrading to Call Center Release 4.0, the following feature packages must be active:

- Vectoring (Variables)
- Vectoring (3.0 Enhanced)

**Administration:** To use this capability you must:

- Define the `asaiuui` variable type in the Variable screen.
- Define the `set` command in the Vector screen.

### Release 3.1 command syntax

`set [vector variable, Digits] = [operand1] [operator] [operand2]`

Command	Variable or Digits		Operand1	Operator	Operand2
set	user-assigned A-Z vector variable  Digits	=	user-assigned A-Z vector variable	ADD SUB	user-assigned A-Z vector variable
			system-assigned A-Z vector variable	MUL DIV CATL	system-assigned A-Z vector variable
			V1-V5 VDN variable	CATR MOD10 SEL	directly-entered numeric string
			Digits		V1-V5 VDN variable
			none		Digits
					none

## Release 4.0 command syntax

`set [vector variable, Digits] = [operand1] [operator] [operand2]`

Command	Variable or Digits		Operand1	Operator	Operand2
set	<i>user-assigned A-Z or AA-ZZ vector variable</i>	=	<i>user-assigned A-Z or AA-ZZ vector variable</i>	ADD	<i>user-assigned A-Z or AA-ZZ vector variable</i>
	<b>asaiuui A-Z or AA-ZZ vector variable</b>			SUB	
	Digits		<i>system-assigned A-Z or AA-ZZ vector variable</i>	MUL	<i>system-assigned A-Z or AA-ZZ vector variable</i>
				DIV	
				CATL	
				CATR	
				MOD10	
				SEL	
	<i>V1-V9 VDN variable</i>		directly-entered numeric string		
	Digits		<i>V1-V9 VDN variable</i>		
	none		Digits		
			none		

### Related topic

For more information, see *Avaya Call Center Call Vectoring and EAS Guide*.

## Vector comments

Administrators can now add comments to vectors using the # character. Whenever the # character is encountered at the beginning of a step, the step is skipped without being analyzed. Vector processing continues at the next step.

Call Center R4.0 offers two types of comment functionality:

- # vector comment step type.
- Comment-out capability using the “#” character.

### # vector comment step type

The # comment step type command accepts a string of up to 71 visible ASCII alpha-numeric text, including blanks.

Example command syntax:

`82 # This is a comment`

## Comment-out capability using the “#” character

The comment-out capability can insert a “#” at beginning of existing vector commands to “comment out” vector steps. These step can later be uncommented out for normal processing.

The **ESC f 6** editing function has been expanded to include **c** – comment and **u** – uncomment functions.

**Reason to use:** You can use the # comment step type command for commenting the vector. You can use the comment-out capability to debug vectors.

**Prerequisites:** The vector comment functionality is available when the Call Center Release field is set to 4.0 or later.

**Administration:** The comment out capability is supported by CMS R14, but the # comment command step type is not supported by CMS.

### Related topic

For more information, see *Avaya Call Center Call Vectoring and EAS Guide*.





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