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# Interaction Analyzer

## Technical Reference

### Abstract

This content provides concepts and procedures for Interaction Analyzer. Interaction Analyzer is a subsystem of CIC. It determines, in real time, when defined words (keywords) are spoken in a telephone conversation. If a keyword is detected, Interaction Analyzer identifies the location in the recording where the word was spoken. Interaction Recorder can provide access to recorded conversations that indicate where keywords were spoken. IC Business Manager can use views from Interaction Analyzer and Interaction Supervisor to alert contact center supervisors in real time and provide keyword statistics on active calls.

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# Table of Contents

Table of Contents	2
Introduction to Interaction Analyzer	5
Recording analysis before Interaction Analyzer	5
Real-time keyword spotting with Interaction Analyzer	5
Interaction Analyzer integration	6
Interaction Analyzer installation	6
Introduction to Interaction Analyzer Keyword Spotting	7
Interaction Analyzer keyword reactions	7
Interaction Analyzer aggregated scoring	7
Interaction Analyzer keyword spotability	8
Interaction Analyzer confidence threshold	9
Interaction Analyzer keyword analysis processing	10
Interaction Analyzer Keyword Organization	12
Interaction Analyzer Categories	12
Interaction Analyzer Keyword Set Names	13
Keyword Limits	13
Interaction Analyzer Keyword Definitions	15
Interaction Analyzer Keyword Entry	15
Interaction Analyzer keyword spelling entries	15
Keyword synonyms	15
Keyword punctuation	15
Keyword numbers	15
Keyword contractions	15
Keyword abbreviations	15
Interaction Analyzer anti-spellings	15
Interaction Analyzer Keyword User-defined Pronunciations	17
Defining multiple words in pronunciations	17
Interaction Analyzer Base Phoneme Table	17
Interaction Analyzer Phoneme Table Extension - Dutch, Netherlands (nl-NL)	19
Interaction Analyzer Phoneme Table Extension - English, Australia (en-AU)	20
Interaction Analyzer Phoneme Table Extension - English, Great Britain (en-GB)	22
Interaction Analyzer Phoneme Table Extension - French, Canada (fr-CA)	23
Interaction Analyzer Phoneme Table Extension - French, France (fr-FR)	24
Interaction Analyzer Phoneme Table Extension - German, Germany (de-DE)	25
Interaction Analyzer Phoneme Table Extension - Italian, Italy (it-IT)	27
Interaction Analyzer Phoneme Table Extension - Japanese, Japan (ja-JP)	28
Interaction Analyzer Phoneme Table Extension - Mandarin Chinese, China (zh-CN)	30
Interaction Analyzer Phoneme Table Extension - Polish, Poland (pl-PL)	31
Interaction Analyzer Phoneme Table Extension - Portuguese, Brazil (pt-BR)	32
Interaction Analyzer Phoneme Table Extension - Spanish, Spain (es-ES)	33
Interaction Analyzer Phoneme Table Extension - Spanish, United States (es-US)	35
Interaction Analyzer Phoneme Table Extension - Turkish, Turkey (tr-TR)	35
Methods for Creating Keyword Definitions	38
Understand the purpose of your contact center	38
Create meaningful keywords	38
Determine problems and effectiveness	38
Gather keywords from other areas of your business	39
Ensure proper agent training	39
Listen to your customers	39
Use only the consistent keywords	39
Other Considerations for Defining Keywords	39
Do you have enough personnel?	39
Do you have the right personnel?	40
When do you want to see action on identified keywords?	40
What will happen when identification of a keyword occurs?	40
Example Table for Defining Scenarios, Keywords, and Actions	41
Interaction Analyzer Licensing	42
Interaction Analyzer required licenses	42
Licensing users and stations	42
Assign Interaction Analyzer licenses to a station	43
Assign Interaction Analyzer licenses to a user	43

Interaction Analyzer Permissions and Roles	45
Allow a Supervisor Role to Create Keywords	45
Allow Monitoring of Queues and Viewing of Statistics and Columns	46
Allow View of Agent and Customer Score Columns	48
Language Support for Interaction Analyzer Keyword Spotting	50
Multiple language support in a single keyword set	50
Interaction Analyzer Language Selection Methods for Interactions	51
Specify Language for Interaction Analyzer to Use	51
Specify the Default Interaction Analyzer Language for a Workgroup	53
Create Interaction Analyzer Keyword Definitions	54
Set the Score for a Keyword	56
Set the Confidence Threshold for a Keyword	57
Modify Advanced Keyword Definition Settings	58
Create an Interaction Analyzer Initiation Policy in Interaction Recorder	60
Keyword Spotting for Intercom Calls	65
Functional overview	65
Keyword Spotting for Specific Locations	66
Overview of location-based keyword spotting	66
Set keyword spotting for a location	66
View Interaction Analyzer Call Statistics in a Workgroup Queue	68
Keyword spotting information in Interaction Supervisor	69
View Interaction Analyzer Statistics for an Agent	71
View Interaction Analyzer Statistics in a Line Graph	74
Interaction Analyzer Statistics Reference	76
Interaction Analyzer queue columns	76
Interaction Analyzer workgroup statistics	76
Interaction Analyzer workgroup details statistics	76
Interaction Analyzer agent details statistics	77
Locate and Review Analyzed Interaction Recordings	78
Search Interaction Analyzer Keyword Recordings by Score	78
Search Interaction Analyzer Recordings by Analyzed Channel	81
Search Interaction Analyzer Recordings by Category	83
Search Interaction Analyzer Recordings by Keyword	86
Analyzed Recordings in Interaction Recorder Client	89
CIC Database Fields and Values for Recordings With Interaction Analyzer	90
Interaction Analyzer Reports	91
Analyzer Scoring Detail Report	91
Keyword Hit Report	91
Troubleshoot Interaction Analyzer	92
Interaction Analyzer diagnostic recordings	92
Failure to identify any keywords	92
Failure to identify a specific keyword	93
Incorrect keyword identification	93
Inconsistent keyword identification	93
Appendix A: Interaction Analyzer Keyword Examples	95
Example Keyword Set Category: Agent Greetings	95
Example Keyword Set Category: Agent Training Issues	96
Example Keyword Set Category: Call Conclusion	97
Example Keyword Set Category: Call Escalation	98
Example Keyword Set Category: Competitors	98
Example Keyword Set Category: Cursing	98
Example Keyword Set Category: First Call Resolution (FCR)	98
Example Keyword Set Category: Marketing	99
Example Keyword Set Category: Negative Statements	99
Example Keyword Set Category: Positive Statements	99
Example Keyword Set Category: Problem Identification	101
Example Keyword Set Category: Problem Resolution	102
Example Keyword Set Category: Sales	103
Example Keyword Set Category: Service Improvement	103
Example Keyword Set Category: Threats	104
Example Keyword Set Category: Upset Customer	105
Appendix B: OpenSSL Copyright	106

Glossary	108
Change Log	109

# Introduction to Interaction Analyzer

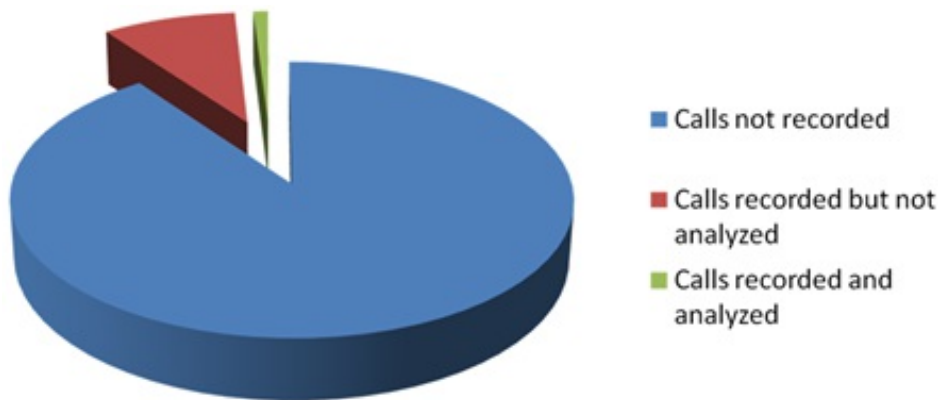
One of the most important aspects of a contact center is the knowledge that agents are handling customer interactions with a good level of performance. Often, customers call with complaints, concerns, or problems, which can make that customer emotional. The purpose of the agent is to alleviate the problem as best as possible and retain the business of the customer.

To ensure that agents are doing their job sufficiently, many contact centers employ call recording to verify that customer interactions are handled appropriately. These contact center systems enable you to record calls and review them later. However, with the advent of Interaction Analyzer in the Customer Interaction Center (CIC) product suite, you can determine the quality of contact center interactions in real time. You can take appropriate action while the interaction is still active.

## Recording analysis before Interaction Analyzer

Previously, with many analysis products, contact center supervisors had to select which voice interactions were recorded and then which recordings were analyzed. There are, usually, not enough resources to record, monitor, and then analyze all voice interactions for appropriateness, word usage, agent conduct, customer reactions, and so on.

A 75-agent contact center can process approximately 10,000 calls each day. Of those calls, approximately 1000 calls (10%) are recorded randomly. Of those recorded calls, approximately 200 calls (2%) are analyzed for quality assurance. The following diagram displays a visual representation of these ratios:



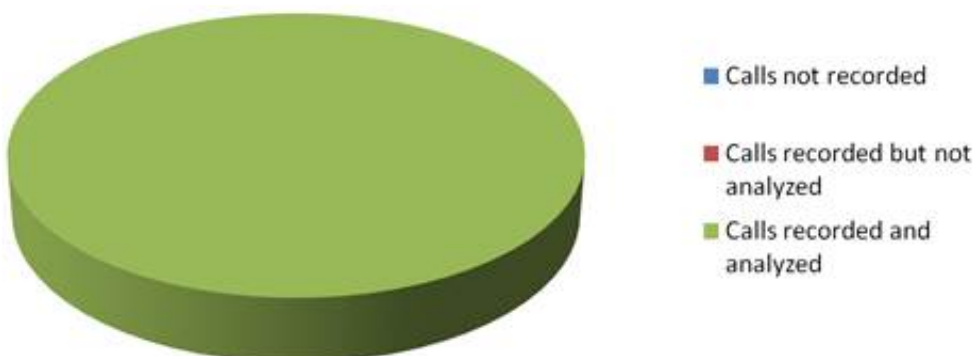
The result of this method is that 98% of the calls in the contact center are not analyzed for content and quality.

## Real-time keyword spotting with Interaction Analyzer

Interaction Analyzer allows you to record and analyze all voice interactions in real time. It does the following actions:

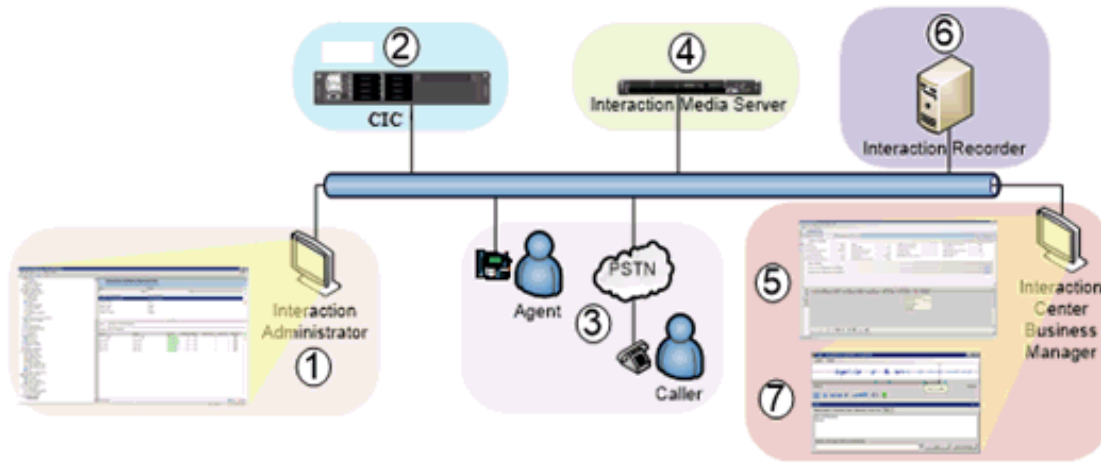
- Identifies each defined keyword that the participants use in an interaction
- Displays the aggregated score in IC Business Manager views
- Bookmarks the keyword in the call recording

This capability negates the need to spend resources on manual analysis of random recordings and provides complete coverage of voice interactions in the contact center.



## Interaction Analyzer integration

Interaction Analyzer is not an independent product. It is a feature that is integrated in multiple products within the CIC suite. The following diagram displays how the different products cooperate to provide the functionality and robustness of Interaction Analyzer.



The following table describes each step in the Interaction Analyzer process:

Item	Description
1	Using the Interaction Analyzer interface in Interaction Administrator, you define your keywords and phrases. Through this interface, you also enter user-defined pronunciations, anti-spellings, and confidence thresholds. You configure what interactions are analyzed and what keyword sets are used through the Interaction Recorder Policy Editor interface in Interaction Administrator.
2	The keyword sets and policies are stored on the Customer Interaction Center server.
3	A call enters or is placed within the contact center. Interaction Recorder searches existing policies to see if the call should be recorded, if it should be analyzed, which keyword sets are used.
4	Interaction Media Server begins recording the call and analyzing the conversation, looking for defined keywords.
5	Using IC Business Manager, a contact center supervisor can watch interactions in real time and monitor the weighted scoring of each interaction. If necessary, the supervisor can listen to or take part in problematic calls.
6	When the call completes, Interaction Recorder archives the recording to a file server.
7	Using the Interaction Recorder Client interface in IC Business Manager, the supervisor reviews interactions and sees where defined keywords and phrases were spoken in the interaction.

## Interaction Analyzer installation

Interaction Analyzer is integrated into the following products in the CIC environment:

- CIC server
- Interaction Administrator
- Interaction Media Server
- Interaction Recorder Client
- IC Business Manager

All of these products incorporate Interaction Analyzer within their respective installation programs. As such, there is no separate installation for Interaction Analyzer.

# Introduction to Interaction Analyzer Keyword Spotting

Keyword spotting, a subset of speech analytics, is the ability of a monitoring system to recognize predefined words and phrases in interactions.

For example, you are interested in knowing when customers use the word "frustrated" or other words during an interaction with one of your agents. You define the keywords in the monitoring system, such as Interaction Analyzer, and then put it into operation.

## Keywords

- Frustrated
- Upset
- Cancel my account
- Angry
- You're not listening

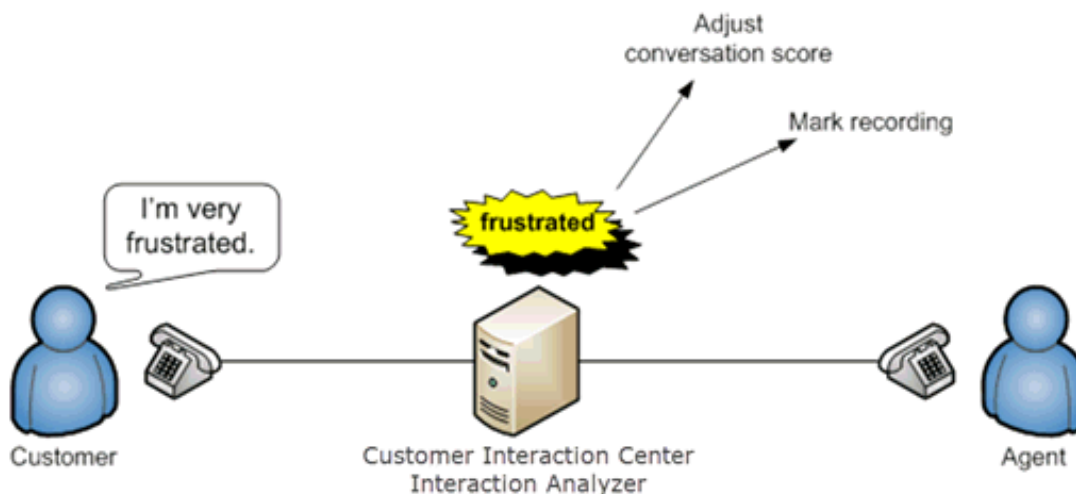
Keyword spotting in Interaction Analyzer is not limited to the words and phrases that customers say. You can also use it to monitor words and phrases for the agent portion of the conversation.

Customer example keywords	Agent example keywords
Frustrated	Help me understand
Upset	How can I help you
Cancel my account	Sorry to hear that
Angry	I want to make things right
You're not listening	I can't help you

Interaction Analyzer provides keyword spotting for recorded interactions. You cannot use Interaction Analyzer for non-recorded interactions.

## Interaction Analyzer keyword reactions

When a keyword is recognized, the system displays an instantaneous, aggregated score of the conversation in the Interaction Supervisor workgroup queue view. A supervisor can react promptly to the score and participate in the interaction. The following diagram displays the default actions that Interaction Analyzer creates when it spots a keyword:

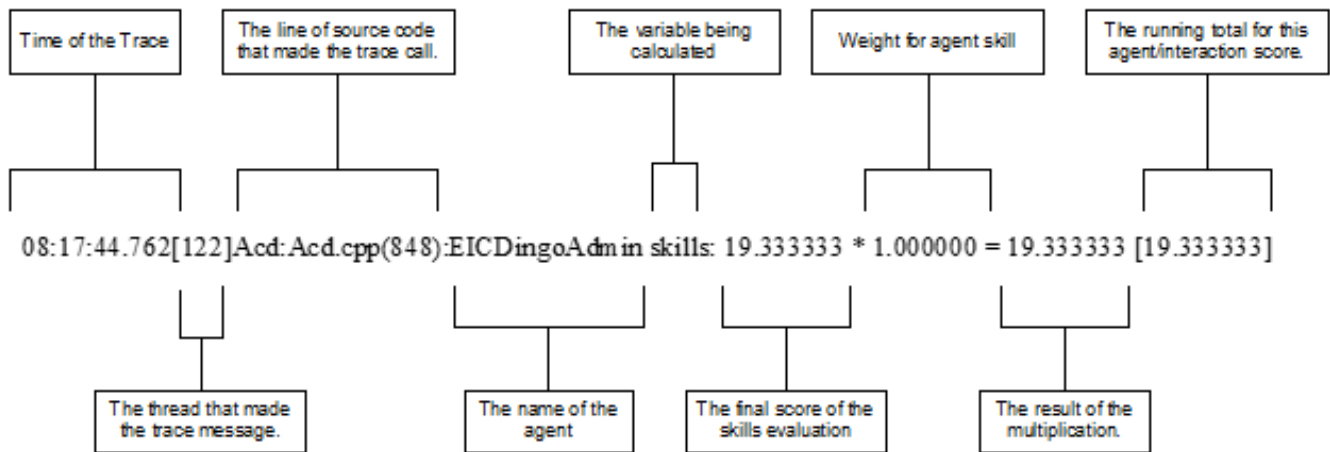


Using Interaction Analyzer, a contact center supervisor can track the real-time conversations in the Customer Interaction Center system. Each tracked conversation shows duration, the involved agent, spotted keywords, the conversation score, and other details.

You can request that the Professional Services do customization of your Customer Interaction Center system to do other events based on keyword spotting. These events range from taskbar pop-ups and screen pops.

## Interaction Analyzer aggregated scoring

Aggregated scoring involves the importance that you assign to different keywords and phrases that you define. This score gives you an idea of how a conversation is going. For example, you want to have a conversation score reduced greatly when the customer is getting difficult or problematic. You can assign point values to the keywords and phrases for both agents and customers as displayed in the following diagram:



Interaction Analyzer constantly accumulates the scores for keywords and phrases in a conversation as a point total. It is through this point total that a supervisor can determine which calls require monitoring or intervention.

You can assign any point value that you want to a keyword or phrase, from +/-1 to +/-100. This scoring method defines which calls need the most attention from the contact center supervisor, who monitors the workgroup queue using a few simple metrics. For example, you can heavily score the names of your competitors if they are mentioned in an interaction. Using IC Business Manager, you can view the real-time scores of the agent, the customer, and the sum of those scores as a total overall score for the interaction.

**Note:**

The maximum values that an interaction score can have are -99999 to 99999. Ensure that your assigned point values are within a reasonable range so that the cumulative score for the entire interaction does not exceed the maximum values.

## Interaction Analyzer keyword spotability

When you define keywords, Interaction Analyzer notifies you of the spotability of that keyword. Spotability is the predicted ability of Interaction Analyzer to identify a keyword based on different linguistic and phonetic factors that define the keyword. The result is a green, yellow, or red indicator in the administrative interface. The following list describes each of these indicators:

- Green - This color indicates that Interaction Analyzer does not have difficulty in identifying the keyword.
- Yellow - This color indicates that Interaction Analyzer can identify the keyword, but it could also identify other similar sounding words as this keyword.
- Red - This color indicates that Interaction Analyzer has significant difficulty in identifying the keyword or it could mistake other words for this keyword. For example, having a keyword of "hi" could be identified in other words, such as "highway," "higher," "height," and "hype". Additionally, words such as "thigh," "buy," and "guy" could be misinterpreted as "hi." Genesys recommends that you do not attempt to use or further define keywords that have a red spotability indicator.

If a keyword is too short, Interaction Analyzer can interpret that word within other words as a *false positive*.

For example, identifying "How can I help you" is much easier for Interaction Analyzer to identify as a keyword than "hi." The following table displays how short words are more difficult to identify than longer words and phrases. These short words can be misinterpreted when their phonetic pronunciation exists in larger or similar words:



Keyword	Example false positives
Hi	Highway High prices Hide Hype Hibernate Hyper Height
Mad	Map Mat or Matt Ma'am Man
Caller	Color Collar Column Calmer

As demonstrated by this example, you think that you are specifying a unique word, but consider how Interaction Analyzer can misinterpret this word.

To increase the spotability of a keyword, use phrases that are either in your agent scripts or that commonly appear in agent recordings. The following table suggests some alternatives to the short words that you want to track:

Short keyword	Suggested replacements
Hi	Hello my name is Hi and thank you for calling
Mad	I'm very mad Mad at your company Mad with your company Made me mad
Call	Thank you for your call Call back Calling over and over Call me

The more syllables that a word or phrase possesses, the better the spotability factor. Consider all possible situations in which a word or a word that sounds similar exists. A higher spotability factor ensures that you are not receiving false positives in your interaction scoring.

Another factor regarding keyword identification is the colloquial variants of words and phrases. For example, "did you know" is often slurred together in everyday speech as "di-jya-no." For more information on how you can phonetically define these types of keywords so that no instance of that keyword or phrase goes unidentified, see "Interaction Analyzer anti-spellings" in [Interaction Analyzer Keyword Entry](#).

## Interaction Analyzer confidence threshold

Through the Interaction Analyzer interface, you can alter the *confidence threshold* of a keyword or phrase. The confidence threshold informs Interaction Analyzer how certain it must be in the identification of a keyword before it reports that keyword as being found. For example, to determine that a caller is threatening legal action, you want a higher threshold so that Interaction Analyzer

does not mistake the word for another. This mistake falsely decreases the scoring of the call. The following table shows how some words could be mistaken for keywords:

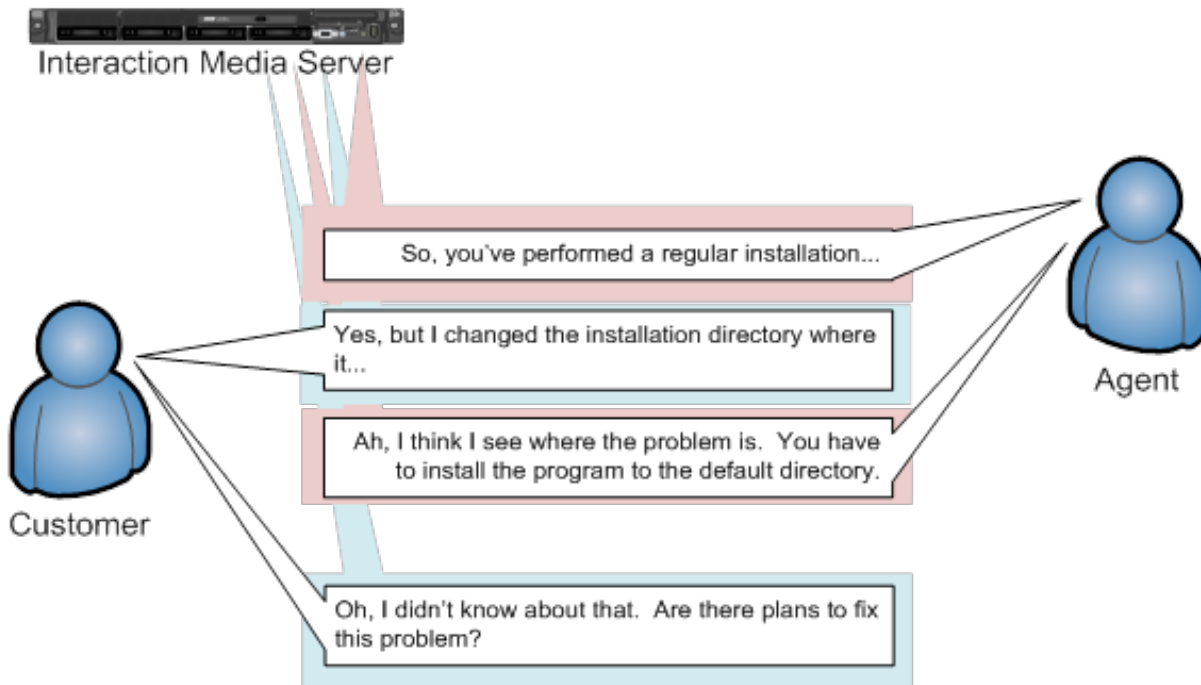
Keyword	Misinterpretations	Keyword	Misinterpretations
Lawyer	All your Lower Low year Foyer	Attorney	A tourney A journey A gurney A turnkey A churning
Court	Cork Cord Corn Corps Core	I'll sue	Also I'll soon A suit All soup

## Interaction Analyzer keyword analysis processing

This topic explains how Interaction Analyzer spots keywords and reports them to Customer Interaction Center for viewing through an Interaction Supervisor workgroup queue view.

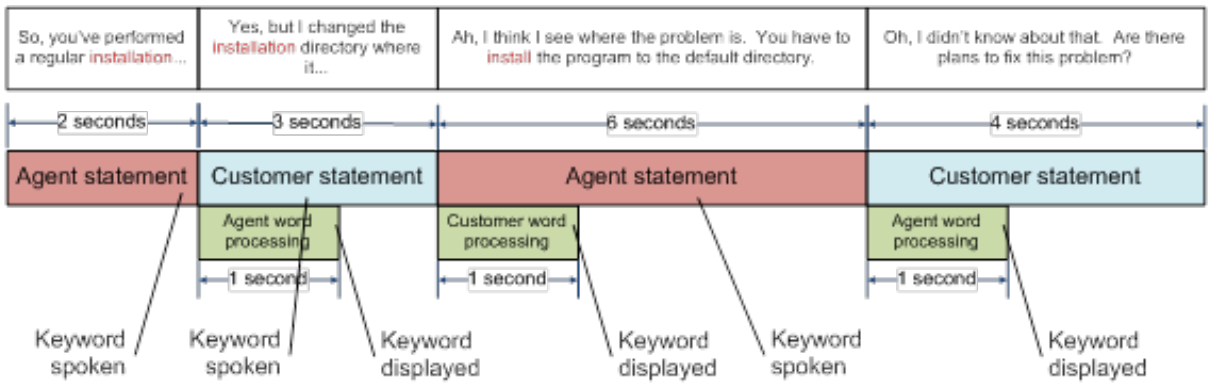
When Interaction Analyzer actively monitors a real-time interaction, it does not attempt to recognize each word as this process demands many CPU resources. Instead, it monitors for only the specified phrases in a stream of words for each channel (customer and agent).

Interaction Analyzer processes each side of the conversation regardless of interruptions or when one person talks over another as seen in the following diagram:



In this example, the customer and the agent are interrupting each other. However, each side pauses speaking after being interrupted as they listen to the other side. It is during this pause that Interaction Analyzer reports the identified keywords, if any.

There is a brief delay of a few seconds between the time when a keyword is spoken and identified, and when it is displayed in the workgroup queue view of Interaction Supervisor. The following diagram displays how Interaction Analyzer processes this conversation and when the keyword is displayed in Interaction Supervisor:



All times displayed in this diagram are approximate. Although there is a brief delay in real-time reporting, this delay does not affect how the keyword is identified in the recording. The keywords in recordings are identified at the exact point where they occur.

# Interaction Analyzer Keyword Organization

The following table shows how you can use categories and keyword set names to organize your keyword definitions.

Category	Keyword set name	Keywords
Marketing	(Agent) Ad placement	<ul style="list-style-type: none"><li>• Where did you see our ad</li><li>• Where you saw our ad</li><li>• How did you hear about us</li></ul>
	(Customer) Ad placement	<ul style="list-style-type: none"><li>• I saw your ad</li><li>• I saw your commercial</li><li>• I read your ad</li><li>• I heard your commercial</li></ul>
Sales	(Agent) Sale success	<ul style="list-style-type: none"><li>• Could I have your credit card number</li><li>• I'm very glad that you've decided to</li></ul>
	(Customer) Sale success	<ul style="list-style-type: none"><li>• You've talked me into it</li><li>• I would like to purchase</li><li>• I would like to buy</li></ul>
Agent greetings	(Agent) Initial greeting	<ul style="list-style-type: none"><li>• Hi, my name is</li><li>• Hello, my name is</li><li>• Thank you for calling</li></ul>
	(Agent) Reason for call	<ul style="list-style-type: none"><li>• How can I help you</li><li>• What can I do for you</li><li>• What is the nature of your call</li></ul>

## Interaction Analyzer Categories

Categories allow you to group your keyword sets. You can use a category to define the purpose of the keyword sets that it contains. By design, categories are a general description of your organization of keyword sets, and the included keywords. Create your structure from general to specific so that it is easier to locate the keywords for which you are searching.

**Note:**

When you define a keyword in Interaction Analyzer, you must provide a category to which that keyword is assigned. Category names are limited to 128 characters.

CIC uses the categories that you create to sort your keyword sets in the administrative interface and to tag recordings. These recording tags are visible when you view recordings, which allow you to search for and find keywords quickly.

## Interaction Analyzer Keyword Set Names

Keyword sets enable you to organize keywords and phrases for a specific purpose. Using multiple, specialized keyword sets that contain only a few keywords and phrases provides you with flexibility in how you assign them to interactions.

For example, if a Marketing department wants to gauge the effectiveness of an advertisement for a 10 percent discount for first-time customers, the administrator could create a keyword set as displayed in the following example:

Category	Keyword set names	Keywords
Marketing	(Customer) July ad	<ul style="list-style-type: none"><li>• I saw your ad in this month's</li><li>• Your ad for 10 percent off</li><li>• 10 percent discount</li></ul>

The administrator can quickly create, assign, and remove this keyword set from interactions with new customers. If the administrator added these keywords in a larger, more general keyword set that is assigned to all interactions, it would be a waste of resources for agents who handle return customers or provide customer support.

When you create keywords, you enter those keywords under a keyword set name. Keyword set names must be unique and long enough to describe the keywords that the set contains accurately so that you or anyone else can easily identify its purpose. For example, if you want to monitor for keywords that an agent could say when receiving a call, you could name the keyword set "Agent greeting - Name" or "Agent - initial greeting."

Your keyword set name must not be identical to your category name. Doing so removes the organizational benefits. Ideally, you want two or more keyword sets within each category, which helps you find the keyword set containing the keywords that you want to modify or add.

## Keyword Limits

By default, you can assign up to 50 keywords or phrases for each interaction across both the agent and customer channels. This limit ensures that your Interaction Media Servers do not exhaust processing resources when spotting keywords.

When you define a keyword in the Interaction Analyzer interface of Interaction Administrator, you can provide the following details of the keyword definition:

- Spelling
- User-Defined Pronunciations
- Anti-Spellings
- User-Define Anti-Pronunciations
- Language

For more information about these details of a keyword definition, see [Modify Advanced Keyword Definition Settings](#). For keyword spotting, Interaction Administrator counts each detail that you add to the keyword definition as another keyword.

When you assign keyword sets to Interaction Recorder policies, each policy calculates the number of keywords in all assigned keyword sets. The following table provides an example of a keyword set, its keywords, its associated details, and the total cost in keyword count:

Keyword	Details	Total cost
Lawyer (cost:1)	Anti-spellings: <ul style="list-style-type: none"><li>• Lower</li><li>• Loiter</li><li>• Foyer</li><li>• Employer</li></ul> (cost:4)  Pronunciations: <ul style="list-style-type: none"><li>• (l ao y er)</li><li>• (l aa y ah)</li><li>• (l ao r y uh r)</li></ul> (cost:3)	8
cancel my account (cost: 1)	None	1
Total keyword set count:		9

What someone could consider being two keywords in a keyword set in the previous table actually requires processing for nine keywords because of keyword details, including anti-spellings and pronunciations.

The **Analyzer Maximum Keyword Count** server parameter, which you set through Interaction Administrator, controls the number of keywords that each policy allows.

### Caution!

Genesys strongly recommends that you do not change the **Analyzer Maximum Keyword Count** server parameter without proper and careful study of available processing resources of all Interaction Media Servers, the number of active recordings, call load distributions, keyword optimizations, and business needs. Increasing the value for this server parameter can overload Interaction Media Servers, which can then result in failure to process any calls.

# Interaction Analyzer Keyword Definitions

## Interaction Analyzer Keyword Entry

You enter keywords, up to 120 characters, through the Interaction Analyzer interface of Interaction Administrator or IC Server Manager. Spell keywords as you would enter them in any document intended for communication. The speech recognition engine uses that spelling entry to match it to its usual phonetic pronunciation.

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## Interaction Analyzer keyword spelling entries

You can also add multiple spelling entries of a keyword, depending on the different ways in which a person pronounces a word, such as *data*. For this word, some people pronounce it as *dayta* while others pronounce it as *dahta*. The dictionary through which Interaction Analyzer compares pronunciations already handles many words with multiple pronunciations. However, if you enter terms that are specific to a specialized field, such as medicine or science, you may need to provide alternate spelling entries or user-defined pronunciations to ensure recognition by Interaction Analyzer.

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## Keyword synonyms

One method you must avoid regarding spelling entries is that of synonyms. For example, if you wanted a keyword of *home*, do not enter the following synonyms as alternate spelling entries:

House	Casa	Castle	Home	Dwelling
Abode	Hacienda	Shack	Condominium	
Domicile	Chateau	Hut	Apartment	

Genesys recommends that you do not enter synonyms as alternate spelling entries because Interaction Analyzer determines the spotability factor by the lowest, least discernible entry. In the previous example, the lowest, least discernible spelling entry would be "Hut." Instead, create a keyword set with the name of **home** and enter each synonym as a keyword. This method insures that each synonym keyword has a separate spotability factor and confidence threshold, and can be further discerned through more spelling entries and user-defined pronunciations.

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## Keyword punctuation

Interaction Analyzer ignores any punctuation characters in keywords. These characters include commas, periods, exclamation points, hyphens, dashes, question marks, colons, semicolons, special characters (\$, %, &, (, ), @), and quotation marks.

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## Keyword numbers

Each digit that you enter in a keyword is recognized as a word. For example, if you enter H<sub>2</sub>O, Interaction Analyzer recognizes this keyword as "H two O." However, if you enter multiple digits, Interaction Analyzer recognizes each number separately. For example, if you enter 100, Interaction Analyzer recognizes this keyword as "one, zero, zero", not "one-hundred." Likewise, "21" is identified as "two, one", not "twenty-one."

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## Keyword contractions

Interaction Analyzer recognizes contractions when you enter them as keywords. Words such as "don't," "can't," "won't," "couldn't," "it's," and "I'll" are acceptable.

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## Keyword abbreviations

Interaction Analyzer does not recognize abbreviations, such as Dr., Mrs., Mr., Jr., Sr., and others.

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## Interaction Analyzer anti-spellings

After you define keywords, you have the option of entering anti-spellings that specify similar-sounding words that you do not want

mistaken for that keyword. These words could confuse Interaction Analyzer, which could mark them incorrectly as instances of that keyword; these mistakes are *false positives*.

For example, the following table presents some keywords and possible anti-spellings that you can add to the definitions:

Keyword	Anti-keywords	Keyword	Anti-keywords
Lawyer	Lower Loiter Foyer Employer	Guarantee	Warranty Guillotine Green tea
Surely	Charlie Surly Purely Journey	Unfair	Conveyor Unveil Affair A fare On there

Additionally, you can also specify anti-spellings where the keyword is part of a larger word. For example, consider the word *form*. You probably would not want Interaction Analyzer to spot this word when it is a part of larger words, such as *uniform*, *formatted*, and *formation*. In this case, if Interaction Analyzer does spot the keyword within the larger words, you can enter the larger words as anti-spellings.

Do not try to determine anti-spellings when you define a keyword. Instead, when your keywords are used in real interactions in a test environment or in the contact center, you can analyze recordings, identify words mistaken as keywords, and then add them as anti-spellings to the keyword definitions.

If you eventually enter anti-spellings in a keyword definition, you can also consult numerous websites that list other rhyming words for that specific keyword.



## Interaction Analyzer Keyword User-defined Pronunciations

When you define keywords, Interaction Analyzer also enables you to enter phonetic, user-defined spellings, which are referred to as *pronunciations*. The set of phonemes that Interaction Analyzer uses is a customized version of ARPAbet. ARPAbet was a project that used ASCII characters to define the phonemes that make up all possible sounds in the English (US) language. The Interaction Analyzer phonemes differ from ARPAbet to provide more robust keyword spotting and to support languages other than English (US).

Some languages have sequences of letters that are pronounced differently when they appear in different words. For example, in English (US), *tough*, *cough*, *dough*, *through*, and *bough* are all similar in their spellings ("ough"), but have different pronunciations. Using user-defined pronunciations enables Interaction Analyzer to identify these words correctly. For example, the following table displays how these words are specified using phonemes.

Word	Pronunciation
tough	t ah f
cough	c ao f
dough	d ow
through	th r uw
bough	b aw

### Note:

The example words in the previous table are common and already phonetically-defined in the Interaction Analyzer dictionary. The example words are for conceptual purposes only.

User-defined pronunciations are also useful for the different dialects that you can encounter in a language. For example, consider the English (US) word "lawyer" (l ao y er). Someone from the New England region of the United States could pronounce the word as "lahyah" (l aa y ah) while someone from the Deep South of the United States could pronounce it "lawryer" (l ao r y uh r). User-defined spellings enable you to define the keyword further so that Interaction Analyzer can correctly produce a match.

### Important!

There are words in the medical and scientific fields that are based on Latin and Greek, but the associated pronunciations transformed over centuries of usage, such as *peritonitis*. If Interaction Analyzer has difficulty identifying the keyword based on the correct spelling, Genesys recommends that you enter user-defined pronunciations to ensure proper identification of those unique keywords.

## Defining multiple words in pronunciations

If you want to create a pronunciation or anti-pronunciation, which use phonemes, and it consists of multiple words, you must enter a wd character string between each word. This character string enables Interaction Analyzer to focus on the phonemes for each word, which provides a more accurate comparison, instead of the entire phrase.

For example, "Hi my name is" would be entered as hh ay wd m ay wd n ey m wd ih s. Enter a user-defined pronunciation only for keywords that Interaction Analyzer does not recognize.

## Interaction Analyzer Base Phoneme Table

The following table provides the base Interaction Analyzer phonemes and example words for English (en-US):

Phoneme	Word example	Phonetic spelling
p	pedal	p eh d ah l
t	tilt	t ih l t
k	closure	k l ow zh er
b	ban	b ae n
d	deer	d iy r

g	gander	g ae n d er
f	fine	f ay n
v	vine	v ay n
th	thunder	th ah n d er
dh	they	dh ey
s	sign	s ay n
z	zero	z ih r ow
sh	shack	sh ae k
zh	seizure	s iy zh er
hh	hope	h ow p
ch	church	ch er ch
jh	judge	jh ah jh
m	me	m iy
n	knee	n iy
ng	sing	s ih ng
r	rent	r eh n t
l	leaf	l iy f
y	yes	y eh s
w	went	w eh n t
iy	beet	b iy t
ih	bit	b ih t
ey	bay	b ey
eh	bet	b eh t
ae	bat	b ae t
aa	father	f aa dh er
ao	fort	f ao r t
ow	boat	b ow t
uh	book	b uh k
uw	boot	b uw t
ah	above	ah b ah v
ay	island	ay l ah n d
aw	out	aw t
oy	oil	oy l
er	butter	b ah t er

The following table provides some example user-defined spellings of words in the English (US) language:

Sample Word	User-defined Spelling
Abdominal	ae b d aa m ah n ah l
Acrimonious	ae k r ah m ow n iy ah s
Affluent	ae f l uw ah n t
Articulated	aa r t ih k y ah l ey t ah d
Belaboring	b ih l ey b er ih ng
Botanists	b aa t ah n ih s t s
Channeling	ch ae n ah l ih ng
Charismatic	k eh r ih z m ae t ih k
Circumstantially	s er k ah m s t ae n ch ah l iy
Deformation	d iy f ao r m ey sh ah n
Domestication	d ah m eh s t ah k ey sh ah n
Eyeglasses	ay g l ae s ah z
Galvanizing	g ae l v ah n ay z ih ng
Hostilities	hh aa s t ih l ah t iy z
Infrastructure	ih n f r ah s t r ah k ch er

Interaction Analyzer supports keyword spotting in multiple languages. The following sections provide the substitutions and additions for each supported language.

## Interaction Analyzer Phoneme Table Extension - Dutch, Netherlands (nl-NL)

Phoneme	Word example	Phonetic spelling
p	pak	p ah k
t	tak	t ah k
k	kap	k ah p
b	bak	b ah k
d	dak	d ah k
g	goal	g ow l
f	fel	f eh l
v	vel	v eh l
s	sein	s eh y n
z	zijn	z eh y n
sh	chef	sh eh f
zh	bagage	b ah x aa zh ax
x	toch	t ao x

hh	hand	hh ah n t
m	met	m eh t
n	net	n eh t
ng	bang	b ah ng
l	land	l ah n t
r	rand	r ah n t
w	wit	w ih t
y	ja	j aa
ih	pit	p ih t
eh	pet	p eh t
ah	pat	p ah t
ao	pot	p ao t
ihr	put	p ihr t
ax	gemakkelijk	x ax m ah k ax l ax k
iy	vier	v iy r
iyr	vuur	v iyr r
uw	voer	v uw r
aa	naam	n aa m
ey	veer	v ey r
eyr	deur	d eyr r
ow	voor	v ow r
ehy	fijn	f eh y n
ehryr	huis	hh ehryr s
aw	goud	x aw t

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### Interaction Analyzer Phoneme Table Extension - English, Australia (en-AU)

Phoneme	Word example	Phonetic spelling
p	pin	p ih n
t	tin	t ih n
k	can	k ae n
b	bin	b ih n
d	din	d ih n

g	gate	g ey t
f	fat	f ae t
v	vat	v ae t
th	thin	th ih n
dh	this	dh ih s
s	sip	s ih p
z	zip	z ih p
sh	ship	sh ih p
zh	vision	v ih zh ax n
hh	hot	hh aao t
ch	chance	ch ae n s
jh	giant	jh ay ax n t
m	form	f ao m
n	common	k aao m ax n
ng	young	y ah ng
r	road	r axuh d
l	large	l aa jh
y	yes	y eh s
w	what	w aao t
iy	heed	hh iy d
iya	beer	b iya
ih	hid	hh ih d
ey	fate	f ey t
eya	bear	b eya
eh	head	hh eh d
ae	had	hh ae d
aa	pa	p aa
aao	cot	k aao t
ao	caught	k ao t
axuwc	hoe	hh axuhc
uh	hood	hh uh d
uha	tour	t uha
uwc	food	f uwc d
ah	hut	hh ah t

ax	suppose	s ax p axuwc z
ay	hide	hh ay d
aeuwc	bound	b aeuwc n d
oy	boy	b oy
er	heard	hh er d

---

### Interaction Analyzer Phoneme Table Extension - English, Great Britain (en-GB)

Phoneme	Word example	Phonetic spelling
p	pedal	p eh d ax l
t	tilt	t ih l t
k	closure	k l ow zh ax
b	ban	b ae n
d	deer	d iya
g	gander	g ae n d ax
f	fine	f ay n
v	vine	v ay n
th	thunder	th ah n d ax
dh	they	dh ey
s	sign	s ay n
z	zero	z iya r ow
sh	shack	sh ae k
zh	seizure	s iy zh ax
hh	hope	h ow p
ch	church	ch er ch
jh	judge	jh ah jh
m	me	m iy
n	knee	n iy
ng	sing	s ih ng
r	rent	r eh n t
l	leaf	l ey f
y	yes	y eh s
w	went	w eh n t
iy	beet	b iy t

iya	earlobe, real	iya l ow b, r iya l
ih	bit	b ih t
ey	bay	b ey
eh	bet	b eh t
eha	cares	k eha z
ae	bat	b ae t
aa	father	f aa dh ax
aow	caught/court	k aow t, k aow t
ao	cot	k ao t
ow	coat	k ow t
uh	book	b uh k
uha	pure, actual	p j uha, ae k ch uha l
uw	boot	b uw t
ah	up	ah p
ax	append	ax p eh n d
ay	island	ay l ax n d
aw	out	aw t
oy	oil	oy l
er	fir	f er

---

### Interaction Analyzer Phoneme Table Extension - French, Canada (fr-CA)

Phoneme	Word example	Phonetic spelling
p	placard	p l aa k ae r
t	table	t aa b l
k	kérosène	k ey r ow z eh n
b	baguette	b aa g eh t
d	débat	d ey b ae
g	grosse	g r ow s
ts	tunnel	ts iy n eh l
dz	dire	dz iy r
f	fabricant	f aa b r iy k aan
v	vaccination	v aa tsh iy n aa s j aon
s	stations	s t a s j aon
z	zombies	z aon b i

sh	champion	sh aan p y aon
zh	génération	zh ey n ey r aa s j aon
m	modifier	m ao dz iy f j ey
n	narrations	n aa r aa s y aow
ny	alignait	aa l iy ny eh
ng	d'Arlington	d aa r l iy ng t aon
l	langue	l aan g
r	restaurant	r eh s t ao r aan
y	yogourt	y ao g uw r
yr	huit	yr iy t
w	oiseau	w aa z ow
iy	histoire	iy s t w ae r
iyr	ultimatum	iyr l ts i m aa t ao m
ey	éclipse	ey k l iy p s
eyr	Europe	eyr r ao p
eh	air	eh r
ehn	impatient	ehn p aa s y aan
ehr	heure	ehr r
ehm	commun	k ao m ehm
ae	délicate	d ey l iy k ae t
ah	appartenant	aa p aa r t ah n aan
aa	active	aa k ts iy v
aan	ambulance	aan b iyr l aan s
ao	audience	ao d y aan s
aon	option	ao p s y aon
ow	augment	ow g m aan t ey
uw	coupe	k uw p

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### Interaction Analyzer Phoneme Table Extension - French, France (fr-FR)

Phoneme	Word example	Phonetic spelling
p	plant	p l aan
t	table	t aa b l ah
k	kérosène	k ey r ao z eh n



b	bacon	b aa k aon
d	débâcle	d ey b aa k l ah
g	grotesque	g r ao t eh s k
f	fade	f aa d
v	vaccination	v aa k s ih n aa s j aon
s	scorpions	s k ow r p j aon
z	zombies	z aon b i
sh	choir	sh w aa r
zh	génération	zh ey n ey r aa s j aon
m	modifier	m ao dz iy f j ey
n	nasal	n aa z aa l
ny	gnome	ny ow m
l	lumen	l iyr m eh n
r	restaurant	r eh s t ao r aon
y	yard	y aa r
yr	huit	yr iy t
w	oui	w iy
iy	hypnoses	iy p n ao z
iyr	ultimatum	iyr l t i m aa t ao m
ey	éclipse	ey k l iy p s
eyr	europe	eyr r ao p
eh	air	eh r
ehn	impatient	ehn p aa s y aan
ehr	heur	ehr r
ehm	shunt	sh ehm t
ah	éligible	ey l iy zh iy b l ah
aa	alibi	aa l iy b iy
aan	embouchure	aan b uw sh iyr r
ao	audience	ao d y aan s
aon	once	aon s
ow	augment	ow g m aan
uw	outrages	uw t r aa zh

Phoneme	Word example	Phonetic spelling
p	pein	p ay n
b	bein	b ay n
t	teich	t ay shp
d	deich	d ay shp
k	kunst	k uh n s t
g	gunst	g uh n s t
pf	pfahl	pf aal l
ts	zahl	ts aal l
ch	deutsch	d oy ch
f	fast	f aa s t
v	was	v aa s
s	tasse	t aa s ax
z	hase	hh aal z ax
sh	waschen	v aa sh ax n
zh	genie	zh ax n iyl
shp	sicher	z ih shp ah
x	buch	b uwl x
hh	hand	hh aa n t
m	mein	m ay n
n	nein	n ay n
ng	ding	d ih ng
l	leim	l ay m
rr	reim	rr ay m
y	jahr	y aa ah
iyl	lied	l iyl t
iyrl	hübsch	h iyr p sh
iyrl	süß	z iyrl s
ih	sitz	z ih ts
eyl	beet	b eyl t
eyrl	blöd	b l eyrl t
eh	gesetz	g ax z eh ts
ehl	spät	sh p ehl t
ehr	plötzlich	p l ehr ts l ih shp

ax	bitte	b ih t ax
ah	besser	b eh s ah
aa	satz	z aa ts
aal	tat	t aal t
ao	trotz	t rr ao ts
owl	rot	rr owl t
uh	schutz	sh uh ts
uwl	blut	b l uwl t
ay	eis	ay s
aw	haus	h aw s
oy	kreuz	k r oy ts

## Interaction Analyzer Phoneme Table Extension - Italian, Italy (it-IT)

Phoneme	Word example	Phonetic spelling
p	pera	p ey r a
t	torre	t ow r ey
k	caldo	k aa l d ow
b	botte	b ow tt ey
d	dente	d eh n t ey
g	gatto	g aa tt ow
f	faro	f aa r ow
v	via	v iy aa
s	sole	s ow l ey
z	peso	p ey s ow
sh	sci	sh iy
ts	zitto	ts iy tt ow
dz	zero	dz eh r ow
ch	pece	p ey ch e
jh	magia	m aa jh iy aa
m	mano	m aa n ow
n	nave	n aa v ey
ny	legna	l ey ny ny aa
ng	languor	l aa ng g w ow r iy
l	palo	p aa l ow
ly	soglia	s ao ly aa
r	faro	f aa r ow
y	piume	p y uw m ey
w	quando	k w aa n d o
iy	spinoso	s p iy n ow z o
ey	veloce	v ey l ow ch ey
eh	belpaese	b eh l p a ey z ey
aa	vaiolo	v aa y ao l ow
ow	polsino	p ow l s iy n ow
ao	norditalia	n ao r d iy t aa l y aa
uw	puntale	p uw n t aa l ey

## Interaction Analyzer Phoneme Table Extension - Japanese, Japan (ja-JP)

Phoneme	Word example	Phonetic spelling
p	ポット	p aa tt ao
t	トクモ	t aa k uwu m aa sh iy k uwu
k	カク	k aa k aa r uwu
pp	パン	aa pp aa r ey n aa
tt	タタ	aa g aa tt ey
kk	トクモ	iy t aa ch iy g ao kk ao
b	バー	b aa r ey r uwu
d	ダー	d aa r aol ao n aa
g	ギャ	g y ao z aa
f	フク	f uwu k aa f uwu k aa
s	サー	s aa ey z uwu
z	ザ	z aa r uwu (some pronounce this as an affricate dz)
sh	シャ	sh aa b ao n
zh	ジャ	zh iy k iy (some pronounce this as an affricate jh)
hh	ハイ	hh iy m ao
ts	ツ	ts uwu iy
ch	チュ	ch iy k uwu w aa
cch	チュ	aa cch iy
m	マ	m aa k aa s ey
n	ナ	n aa iy sh iy
ng	ン	ng k aa
r	ラク	r aa sh iy k uwu n aa iy
w	ワット	w aa k aa tt eyl t aa
y	ヤ	y aa g aa t ey
iy	イク	iy k aa g aa
iyI	イク	iyI n aal
ey	エ	ey r aa k uwu
eyI	エ	k eyl z aa iy
aa	ア	aa g aa r uwu
aal	ア	hh aa d aal r ey
ao	ア	ao iy sh iyI

owl	ㄨㄛㄌ	sh owl k aa iy s uwu r uwu
uwu	ㄨㄨㄨ	uwu z uwul z uwu
uwul	ㄨㄨㄨㄌ	uwu z uwul z uwu

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### Interaction Analyzer Phoneme Table Extension - Mandarin Chinese, China (zh-CN)

Phoneme	Word example	Phonetic spelling
b	ㄅ	b aa y
d	ㄉ	d aa w
g	ㄍ	g ao ng
p	ㄆ	p iy n
t	ㄊ	t aa
k	ㄎ	k aa n
dz	ㄉㄗ	dz aa y
dzpl	ㄉㄗㄆㄌ	dzpl iy n
jhr	ㄐㄏㄖ	jhr ax
ts	ㄊㄙ	ts iyc
tspl	ㄊㄙㄆㄌ	tspl iy
chr	ㄐㄏㄖ	chr ax n
f	ㄈ	f aa
s	ㄙ	s iyc
x	ㄒ	x ax
spl	ㄙㄆㄌ	spl y eh
shr	ㄕㄏㄖ	shr ao w
m	ㄇ	m ax n
n	ㄋ	n y aa n
ng	ㄍ	shr aa ng
l	ㄌ	l iy
r	ㄖ	r uw
y	ㄩ	y ao ng
w	ㄨ	w ax n
yw	ㄩㄨ	yw aa n
iy	ㄧ	p iy n
iyr	ㄩㄖ	yw iyr
uw	ㄨ	r uw

eh	☐	w eh y
ax	☐	w ax ng
ao	☐	shr ao w
aa	☐	n y aa n
iy	☐	ts iyc
er	☐	er

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### Interaction Analyzer Phoneme Table Extension - Polish, Poland (pl-PL)

Phoneme	Word example	Phonetic spelling
p	piknik	p iy k ny iy k
t	test	t eh s t
k	kitu	k iy t uw
b	bitwą	b y iy t f aon
d	dozą	d ao z aon
g	gem	g eh m
f	fana	f aa n aa
v	wilka	v iy l k aa
s	synu	s ihc n uw
spl	siąść	spl aon spl tspl
shr	szyje	shr ihc y eh
z	zero	z eh r ao
zpl	źle	zpl l eh
zhr	żywo	zhr ihc v ao
x	hymn	x ihc m n
tspl	cichu	tspl iy x uw
ts	cykl	ts ihc k l
chr	czym	chr ihc m
dzpl	dzieć	dzpl aa tspl
jhr	dżinsy	jhr iy n s ihc
dz	dzwonię	dz v ao ny y ehn
l	luk	l uw k
m	machnął	m aa x n ao w
ny	niebo	ny y eh b ao

n	nasz	n aa shr
ng	banknotów	b aa ng k n ao t uw f
r	rykiem	r ihc k y eh m
y	jak	y aa k
w	łykną	w ihc k n aon
iy	pit	p iy t
ihc	typ	t ihc p
ehn	gęsty	g ehn s t ihc
eh	ekip	eh k iy p
aa	akcje	aa k ts y eh
aon	brąz	b r aon s
ao	obaleń	ao b aa l eh ny
uw	ubaw	uw b aa f

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### Interaction Analyzer Phoneme Table Extension - Portuguese, Brazil (pt-BR)

Phoneme	Word example	Phonetic spelling
p	pai	p aa y
t	tenho	t ey ny uw
k	com	k own
b	barco	b aa rr k uw
d	doce	d ow s iy
g	grande	g r aan jh iy
f	falo	f aa l uw
v	verde	v ey rr jh iy
s	céu	s eh w
z	casa	k aa z aa
sh	chapéu	sh aa p eh w
zh	jóia	zh ao iy aa
ch	timão	ch iyn m aan wn
jh	abdicar	aa b jh iy k aa rr
m	mar	m aa rr
n	nada	n aa d aa
ny	vinho	v iyn ny uw
l	lanche	l aan sh iy



ly	trabalho	t r aa b aa ly uw
r	caro	k aa r uw
rr	rua	rr uw aa
y	faiança	f aa y aan s aa
yn	bufões	b uw f own yn s
w	calda	k aa w d aa
wn	cidadãos	s iy d aa d aan wn s
iy	vinte	v iyn ch iy
iyn	fim	f iyn
ey	fazer	f aa z ey rr
eyn	emprego	eyn p r ey g uw
eh	belo	b eh l uw
aa	falo	f aa l uw
aan	irmã	iy rr m aan
ao	ontem	own t eyn yn
ow	lobo	l ow b uw
own	bom	b own
uw	futuro	f uw t uw r uw
uwn	um	uwn

## Interaction Analyzer Phoneme Table Extension - Spanish, Spain (es-ES)

Phoneme	Word example	Phonetic spelling
p	padre	p aa dh r ey
t	tomo	t ow m ow
k	casa	k aa s aa
b	vino	b iy n ow
d	donde	d ow n d ey
g	gato	g aa t ow
ch	mucho	m uw ch ow
jhp	alyona	aa l jhp ow n aa
bf	escriba	ey s k r iy bf aa
dh	condado	k ow n d aa dh ow
th	cinco	th iy n k ow
gf	amigo	aa m iy gf ow
f	fácil	f aa th iy l
s	sala	s aa l aa
x	mujer	m uw x ey r
m	mismo	m iy s m ow
n	nunca	n uw n k aa
ny	año	aa ny ow
l	lejos	l ey x ow s
ll	caballo	k aa bf aa ll ow
r	puro	p uw r ow
rr	torre	t ow rr ey
y	pie	p y ey
w	abuela	aa bf w ey l aa
iy	pico	p iy k ow
ey	pero	p ey r ow
aa	valle	b aa ll ey
ow	toro	t ow r ow
uw	duro	d uw r ow

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**Interaction Analyzer Phoneme Table Extension - Spanish, United States (es-US)**

Phoneme	Word example	Phonetic spelling
p	padre	p aa d r ey
b	vino	b iy n ow
t	tomo	t ow m ow
d	donde	d ow n d ey
k	casa	k aa s aa
g	gata	g aa t aa
ch	mucho	m uw ch ow
fb	escriba	ey s k r iy fb aa
fd	condado	k ow n d aa fd ow
fg	amigo	aa m iy fg ow
f	fácil	f aa s iy l
s	sala	s aa l aa
hh	mujer	m uw hh ey r
m	mismo	m iy s m ow
n	nunca	n uw n k aa
ny	año	aa ny ow
l	lejos	l ey hh ow s
ll	caballo	k aa b aa ll ow
r	puro	p uw r ow
rr	torre	t ow rr ey
y	pie	p y ey
w	deuda	d ey w d aa
iy	pico	p iy k ow
ey	pero	p ey r ow
aa	valle	b aa ll ey
ow	toro	t ow r ow
uw	duro	d uw r ow

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**Interaction Analyzer Phoneme Table Extension - Turkish, Turkey (tr-TR)**

Phoneme	Word example	Phonetic spelling
p	plan	p uwu l aa n

t	tablo	t aa b l ow
kp	keçi	kp ey ch iy
k	kabak	k aa b aa k
b	bağırarak	b aal rr aa jh aa k
d	dangalaklar	d aa ng g aa l aa k l aa rh
gp	genç	gp ey n ch
g	gurubundan	g uw rr uw b uw n d aa n
ch	seçim	s ey ch iy m
jh	cam	jh aa m
f	faktör	f aa k t eyr rh
v	ver	v ey rh
s	ses	s ey s
z	zevk	z ey w k
sh	şaptım	sh aa p t uwu m
zh	jantın	zh aa n t uwu n
hh	hasta	hh aa s t aa
m	müjde	m iyr zh d ey
n	nalbur	n aa l b uw rh
ng	ankara	aa ng k aa rr aa
lp	liderlik	lp iy d ey rr lp iy k
l	lojmanın	l ow zh m aa n uwu n
rr	raflı	rr aa f l uwu
w	aktivite	aa k t iy w iy t ey
y	hurdaya	hh uw rr d aa y aa
iy	ibret	iy b rr ey t
iyrl	iğrenç	iyrl rr ey n ch
iyrl	ücret	iyrl jh rr ey t
iyrl	büyüdüğü	b iyr y iyr d iyrl
ey	edalar	ey d aa l aa rh
eyl	eğer	eyl rh
eyr	öbür	eyr b iyr rh
eyrl	öğlen	eyrl lp ey n
aa	abicim	aa b iy jh iy m
aal	abinin	aal b iy n iy n

ow	ocakta	ow jh aa k t aa
owl	ođlak	owl l aa k
uw	uçacađım	uw ch aa jh aa uwu m
uwl	uđra	uwl rr aa
uwu	ihlamur	uwu hh l aa m uw rh
uwul	ırak	uwul rr aa k

# Methods for Creating Keyword Definitions

Following are methods that you can use to ensure that you are gathering the most important keywords and phrases for your contact center. For more information, see [Other Considerations for Defining Keywords](#).

## Understand the purpose of your contact center

One factor that you must take into account is purpose of your contact center. What is it supposed to achieve? Different contact centers are designed for different purposes:

Technical support/Customer support	Information services	Collections
Sales/Lead generation	Complaints	Notifications/Dispatching
Surveys/Market research	Donations/Charities	Screenings
Order taking/Event registrations	Appointment scheduling	

With all of the possibilities, you must determine the areas on which you want to focus. Do you want to monitor agent interactions to determine who is performing well and who is not? Do you want to monitor customer interactions to determine their concerns or if they are upset? Perhaps, you want to monitor both sides of the interaction to measure many different aspects of your contact center.

Regardless of these considerations, the most important thing that you can do is to define those factors upon which you determine the success or failure of your contact center.

## Create meaningful keywords

When thinking of possible keywords and phrases, determine some often-used keywords, but also determine what information the keyword provides to you.

For example, for a technical support contact center, you could track the word "problem." However, doesn't everyone who calls into that contact center have a problem? What other information does it provide? Instead, try to identify keywords that define the nature of the problem. Is there a specific problem that most customers are having? Does this problem affect customer retention or repeat business?

Careful analysis of recorded interactions and listening to live conversations helps you identify what keywords are most often said, which have the most impact to your business, and which of these keywords differentiate some interactions from important interactions.

## Determine problems and effectiveness

In your contact center, there are many factors for you to consider that determine the effectiveness of your contact center and how your business is meeting customer needs. The following list of factors provides you some insight into what keyword categories you could monitor:

- **Customer satisfaction** - Are your customers happy at the end of a call? Are they going to be repeat customers? What do they think about your company, product, or service?
- **Customer problems** - What negative words are customers using in interactions? What products or services do customers mention? Do customers threaten legal action? What common problems are customers experiencing? What questions do customers most often ask?
- **Customer loss** - Do your customers mention competitors or their products? Are customers canceling accounts or stopping service? Do customers demand refunds? Do customers keep calling back?
- **Agent effectiveness** - Are your agents using positive words? Are the agents using the provided script? Do customers praise the agents that helped them? Do agents use words and phrases that indicate apathy to customer problems? Do customers ask to speak to managers or supervisors?
- **Agent satisfaction** - Are some agents getting too many difficult calls? Are agents using positive words that indicate their own satisfaction? Are agents using negative words when becoming frustrated? Do customers thank agents for their help?
- **Agent training** - Are agents using personalized language when addressing customers? Do agents use the same words as the customers? Do agents know what to say to customers? Do agents know the solutions to problems? Are agents retaining customers or losing them?

What keywords are involved in the answers to these factors? What would a customer likely say in these situations? What would an agent say? Do you want to track every indication of someone using words that indicate emotion? The answers vary based not only on the purpose of your contact center, but also in what you determine to be important.

## Gather keywords from other areas of your business

To maximize the value of Interaction Analyzer for your business, consider what other words or phrases are important to other departments. For example, are customers asking questions about a certain product? If so, these calls could be valuable sales leads or indicate the success of a marketing campaign.

Other business units can benefit greatly from the keywords that you define. Consider asking for input from these other units and ensure that the valuable customer information is conveyed to them. Customer satisfaction and successful sales are great but being able to repeat them through business intelligence and customer metrics is better.

## Ensure proper agent training

How well do you train your agents? Do they read from a script? Are they trained to use certain words and phrases in their interactions? Are the agents able to resolve customer problems or answer their questions? If you answer "yes" to any of these questions, you already have a set of indicative words that you can enter as keywords and monitor. Monitoring the use of these keywords and phrases can indicate the success of your training methods. Additionally, they can help determine which agents need refresher training when these keywords are not used in interactions.

## Listen to your customers

Determine which keywords and phrases are important to the direction of your business. Are customers asking for the same new features? Do customers complain about the same things? Are agents constantly defending the position of the company or a business practice?

Ensure that you define both positive and negative keywords. Monitoring positive customer keywords enables you to track the general happiness of your customers with your contact center. You also want to track negative customer interactions so that you can identify common problems and agent ineffectiveness.

Getting this information is valuable to your business. It indicates if your business is achieving or failing to meet customer needs. This data can inform you as to where your business must go and what services, products, or solutions it must offer.

## Use only the consistent keywords

When you have found some keyword phrases that you want to monitor, think about how that phrase can be said in different ways. One of the most important aspects in creating keyword phrases is to define only those words that are said consistently. The following examples show how some keyword phrases can be dissected to contain only consistent words. The inconsistent portions of these phrases are displayed within parentheses in the following list:

- (*They/The company/My boss*) didn't train me (*for/to/about*)
- I completely understand (*the situation/your concerns/the problem/the trouble*)
- (*Since/Because*) you are a valued (*customer/client/partner*)
- Your satisfaction is (*important/very important/our main concern/my goal*)
- Is there anything else (*I can do/I can help you with/giving you problems*)
- You're not listening (*to me/ to a word I say/at all*)

### Tip:

For an example list of keywords, see [Appendix A: Interaction Analyzer Keyword Examples](#).

## Other Considerations for Defining Keywords

In the process of determining keywords and the information that they can provide to your business, consider your organization and its ability to act upon the identified keywords.

### Do you have enough personnel?

Speech analytics enables you to identify issues or trends in real-time interactions and in recordings. To gain these benefits with Interaction Analyzer, your contact center requires sufficient quantities of trained people to define keywords, monitor interaction

statistics, review recordings containing keywords, and act on issues or trends that keywords indicate.

If you want contact center supervisors to listen, in real-time, to calls where a customer says keywords that indicate frustration, having one supervisor responsible for the real-time calls of 20 agents in a technical support contact center could be insufficient. The supervisor would not be able to join all of the calls that contain the specified keywords. Also, the supervisor would not have any time to do other tasks.

If you create too many keywords, you can quickly overload quality assurance personnel so that they cannot review all recordings or provide responses to all identified situations.

Remember that the purpose of speech analytics is to identify issues quickly when timely responses and actions provide the most benefit to your business.

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## Do you have the right personnel?

Most contact center administrators do not have experience in speech analytics. Because of this, Interaction Analyzer provides the most benefit to your business when you use speech analysts who can determine which keywords reflect the situations on which you want to act. You can hire people who are experienced speech analysts or use third-party services, which can save you a significant amount of time and effort in trying to become a speech analyst yourself.

Using real-time speech analysis allows supervisors to see and become involved in interactions more easily. This capability can require more supervisors to monitor and participate in interactions as compared to contact centers where supervisors are only involved through transfers and assistance requests from agents.

Interaction Analyzer inserts markers in recordings of interactions. These markers indicate the place in the recording where a specific keyword was identified. For any personnel who review recordings for quality, scoring, or business analysis, Interaction Analyzer can create significant efficiencies as these personnel can now quickly identify and prioritize recordings based on specific keywords and accumulated scores. It also enables these personnel to analyze the results of interactions containing specific keywords and to take necessary actions. Ensure that these personnel are trained to know what business goals you are trying to achieve through speech analytics and provide them with the tools and processes to support those goals.

Genesys is partnered with MainTrax, which provides speech analytics services to help your business provide better customer service and achieve goals. For more information, see [MainTrax](#).

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## When do you want to see action on identified keywords?

Consider the timeframes in which you want to use Interaction Analyzer and determine if you want immediate or delayed action in response to identified keywords.

Do you want supervisors to listen, coach, or take over calls in real time when a specific negative score threshold is reached? Do you want quality assurance personnel to review call recordings one or more days after they have been completed? Do you want to use a combination of real-time intervention and post-call reviews?

Determining when an action will occur can influence what keyword you need to use. For example, there is much less benefit in identifying which customers are canceling an account or service with your business after the call has completed than during the call. When you identify those customers during a call, you can offer special deals or advantages immediately and, possibly, retain their business.

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## What will happen when identification of a keyword occurs?

Determining how your organization will react to issues identified through keywords is as important as defining the keywords.

If your business does not have responsive actions to identified keywords, those keywords provide little value. Conversely, trying to react to keywords that are too common is wasteful and does not maximize the benefits of speech analytics.

For example, if you use the name of a competitor as a keyword, you must have well-defined actions when that keyword is identified:

- For marketing, you could decide that, if 33% of customer calls mention your competitor, you will expand the current marketing campaign or create a marketing campaign.
- For product development, you could decide that, if 25% of customer calls mention your competitor, you will conduct a feature analysis of your product and the latest product offerings from your competitors.
- For sales, you could decide that every call where the customer says the name of a competitor causes the computer monitor of the agent to display a list of your product's advantages.



## Example Table for Defining Scenarios, Keywords, and Actions

The following table is an example model to assist you in determining the situations you want to identify, the keywords that identify the situation, the action that you want to take, and what resources are necessary for that action.

Situation	Keywords	Actions	Resources
Customer wants to cancel account	<ul style="list-style-type: none"> <li>• Cancel my account</li> <li>• I want a refund</li> <li>• I demand a refund</li> <li>• Stop my service</li> </ul>	Display screen pop to agent with incentives to offer customer	<ul style="list-style-type: none"> <li>• Develop handler to generate screen pop</li> <li>• Get approved incentives from Sales department</li> <li>• Schedule follow-up call with customer</li> </ul>
Customer mentions competitor	<ul style="list-style-type: none"> <li>• Competitor product name</li> <li>• Competitor company name</li> </ul>	<ul style="list-style-type: none"> <li>• Display screen pop to agent listing benefits of our product</li> <li>• Product manager conducts feature comparison of products</li> </ul>	<ul style="list-style-type: none"> <li>• Develop handler to generate screen pop</li> <li>• Send email to product manager when 25% of calls mention competitor</li> </ul>
Angry customer	<ul style="list-style-type: none"> <li>• You're not listening</li> <li>• Unacceptable</li> <li>• Makes me so mad</li> <li>• Ridiculous</li> <li>• I don't have time</li> <li>• Wasting my time</li> </ul>	<ul style="list-style-type: none"> <li>• Display negative score in Interaction Supervisor</li> <li>• A supervisor joins the call when the customer score reaches -50</li> </ul>	<ul style="list-style-type: none"> <li>• Assign appropriate negative scores to these keywords</li> <li>• Ensure that there are enough supervisors to handle these situations</li> </ul>
Agent not following script	<ul style="list-style-type: none"> <li>• Hello my name is</li> <li>• Thank you for calling</li> <li>• How can I help you today</li> <li>• Is there anything else I can</li> </ul>	<ul style="list-style-type: none"> <li>• Schedule meeting with agent and show call scores</li> <li>• Schedule more training for agent</li> </ul>	<ul style="list-style-type: none"> <li>• Assign appropriate positive scores to these keywords</li> <li>• Quality Assurance reviewers log which calls do not meet an agent score of 20</li> </ul>

# Interaction Analyzer Licensing

Usage of Interaction Analyzer in your CIC environment requires licenses. The Interaction Analyzer licenses are then included in your CIC server license.

## Interaction Analyzer required licenses

Interaction Analyzer requires the following license items in your CIC license:

Usage license	I3_ACCESS_ANALYZER I3_ACCESS_RECORDER	
Feature license	I3_FEATURE_ANALYZER	
Feature licenses for languages (Minimum: 1)	Catalan	IC_FEATURE_ANALYZER_LANGUAGE_CA
	Dutch	I3_FEATURE_ANALYZER_LANGUAGE_NL
	English (US)	I3_FEATURE_ANALYZER_LANGUAGE_EN
	English (Australia)	I3_FEATURE_ANALYZER_LANGUAGE_EN_AU
	English (Great Britain)	I3_FEATURE_ANALYZER_LANGUAGE_EN_GB
	French (France)	I3_FEATURE_ANALYZER_LANGUAGE_FR
	French (Canada)	I3_FEATURE_ANALYZER_LANGUAGE_FR_CA
	German	I3_FEATURE_ANALYZER_LANGUAGE_DE
	Italian	I3_FEATURE_ANALYZER_LANGUAGE_IT
	Japanese	I3_FEATURE_ANALYZER_LANGUAGE_JA
	Mandarin Chinese	I3_FEATURE_ANALYZER_LANGUAGE_ZH_HANS
	Polish	I3_FEATURE_ANALYZER_LANGUAGE_PL
	Portuguese (Brazil)	I3_FEATURE_ANALYZER_LANGUAGE_PT_BR
	Spanish (Spain)	I3_FEATURE_ANALYZER_LANGUAGE_ES_ES
Spanish (US)	I3_FEATURE_ANALYZER_LANGUAGE_ES_US	
Turkish	I3_FEATURE_ANALYZER_LANGUAGE_TR	

## Licensing users and stations

For Interaction Analyzer to spot keywords in interactions, purchase and assign the following licenses to stations or users:

- Interaction Analyzer Access
- Interaction Recorder Access

Depending on the configuration of your contact center environment, you can use users, stations, or a combination of those two entity types. You can assign access licenses for Interaction Analyzer to both users and stations.

When you add these licenses to a station, CIC subtracts a license immediately from the number of licenses that you purchased. When you add a license to a user, you can specify the method as to how the license is used:

- **Assignable** - This method causes CIC to subtract a license immediately from the total number of purchased licenses for the feature when it is assigned to the user.
- **Concurrent** - This method allows you to assign licenses to any or all users. Only when a user logs on does CIC subtract a license from the total number of available, purchased licenses for the feature.

If you assign Interaction Analyzer access licenses to both stations and users, and a concurrent license user logs on to a licensed station, CIC does not remove both license instances from the total number of purchased licenses.

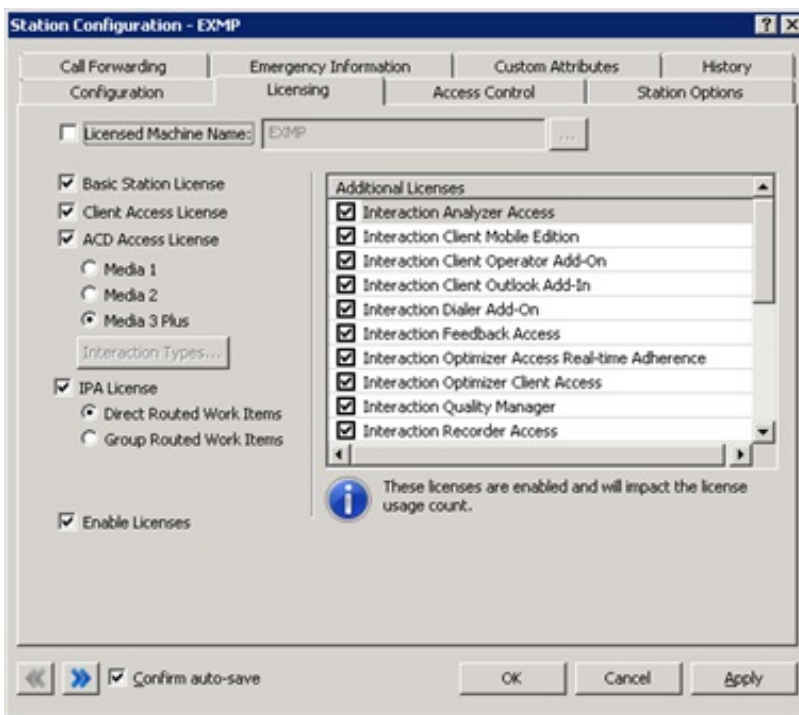
**Note:**

If you record and analyze calls that enter an Interactive Voice Response (IVR) system, such as Interaction Attendant, those calls do not use user or station licensing; only feature licensing. When the IVR call is routed to a user or station, CIC then validates Interaction Analyzer licensing for the user or station. If the call is then transferred to an unlicensed user or station, Interaction Analyzer continues to use the license of the previous, licensed user or station. This functionality preserves keyword spotting throughout the life of the call.

## Assign Interaction Analyzer licenses to a station

To assign Interaction Analyzer licenses to a station

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, click the **Stations** container. The list of defined stations appears in the right pane.
3. Double-click the station that you want to use Interaction Analyzer. The **Station Configuration** dialog box for the specified station appears.
4. Click the **Licensing** tab. The **Licensing** tab appears.

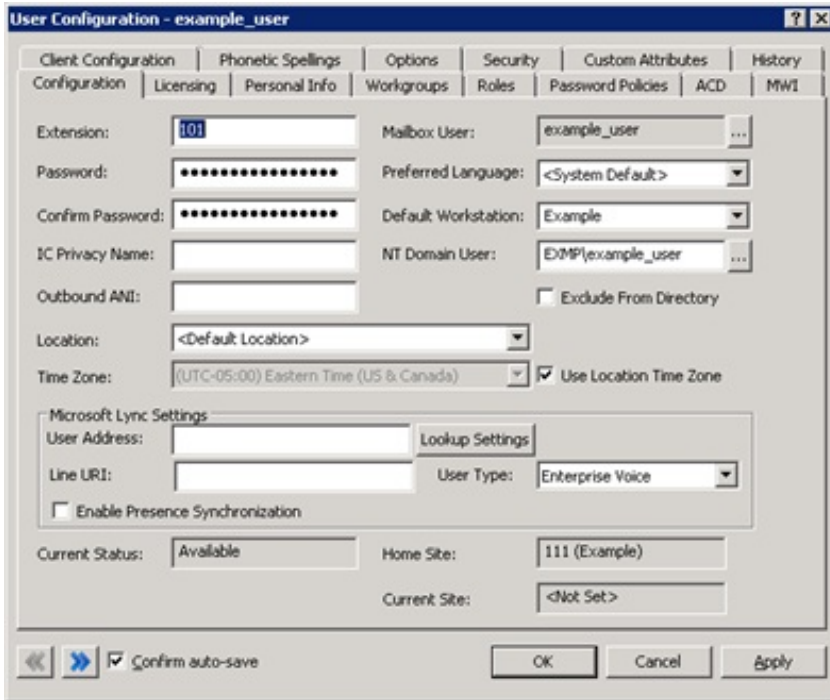


5. In the **Additional Licenses** list, select the check box for the following licenses:
  - o **Interaction Analyzer Access**
  - o **Interaction Recorder Access**
6. Click **OK**. Interaction Administrator saves the license changes to the specified station.

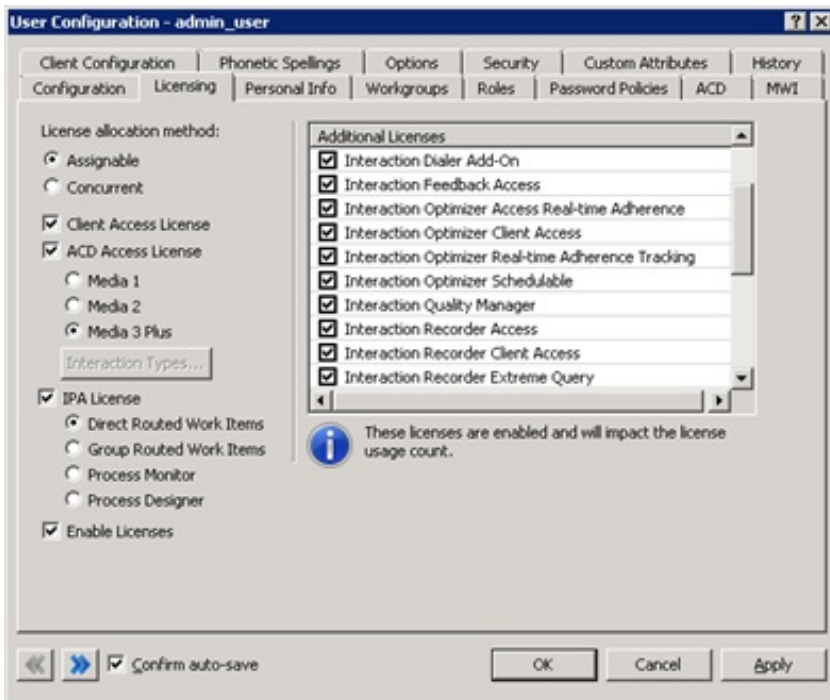
## Assign Interaction Analyzer licenses to a user

To assign Interaction Analyzer licenses to a user

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **People** container and then click the **Users** object. The list of defined users appears in the right pane.
3. Double-click a user that you want to use Interaction Analyzer. The **User Configuration** dialog box for the specified user appears.



4. Click the Licensing tab. The Licensing tab appears.



5. In the **Additional Licenses** list, select the check box for the following licenses:
  - **Interaction Analyzer Access**
  - **Interaction Recorder Access**
6. Click **OK**. Interaction Administrator saves the license changes to the specified user.

# Interaction Analyzer Permissions and Roles

To use Interaction Analyzer in your contact center environment, set the necessary roles and permissions through Interaction Administrator.

For more information, see:

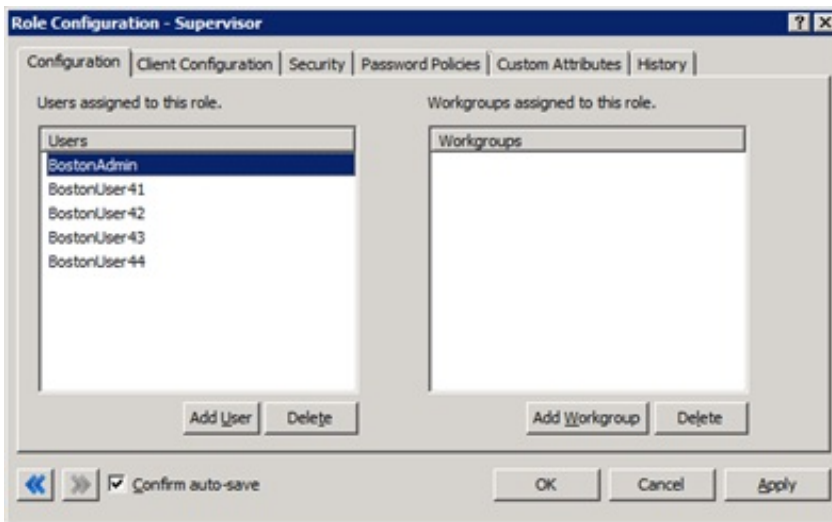
- [Allow a Supervisor Role to Create Keywords](#)
- [Allow Monitoring of Queues and Viewing of Statistics and Columns](#)
- [Allow View of Agent and Customer Score Columns](#)

## Allow a Supervisor Role to Create Keywords

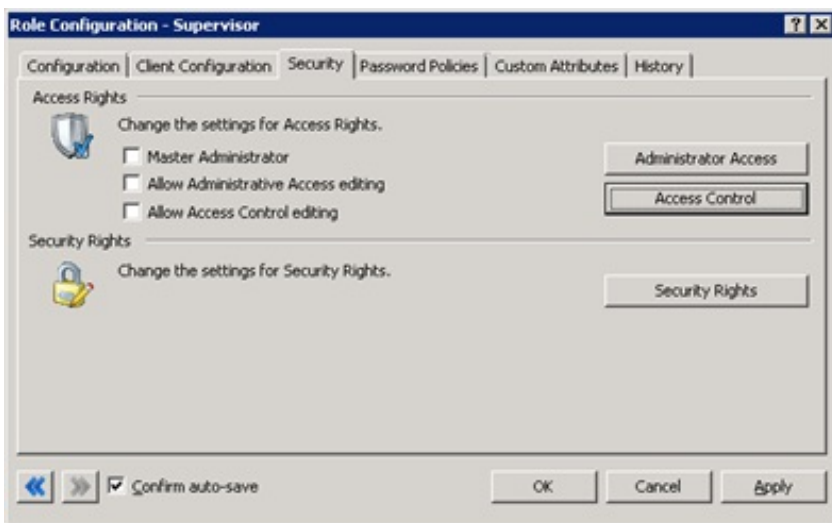
For a supervisor role to create keywords through Interaction Administrator, enable access to that interface.

To allow a supervisor role to create keywords

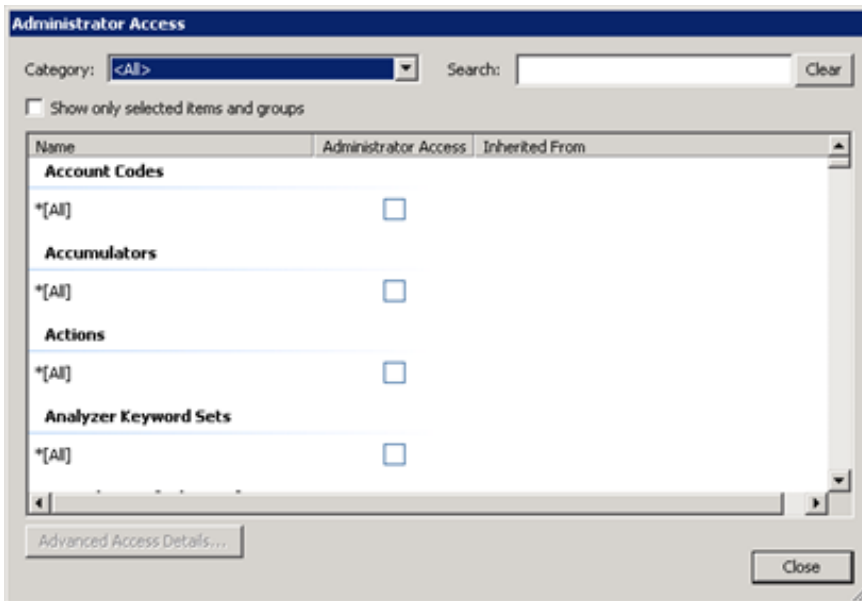
1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **People** container and then click the **Roles** object.
3. In the right pane, double-click the **Supervisor** role. The **Role Configuration** dialog box appears.



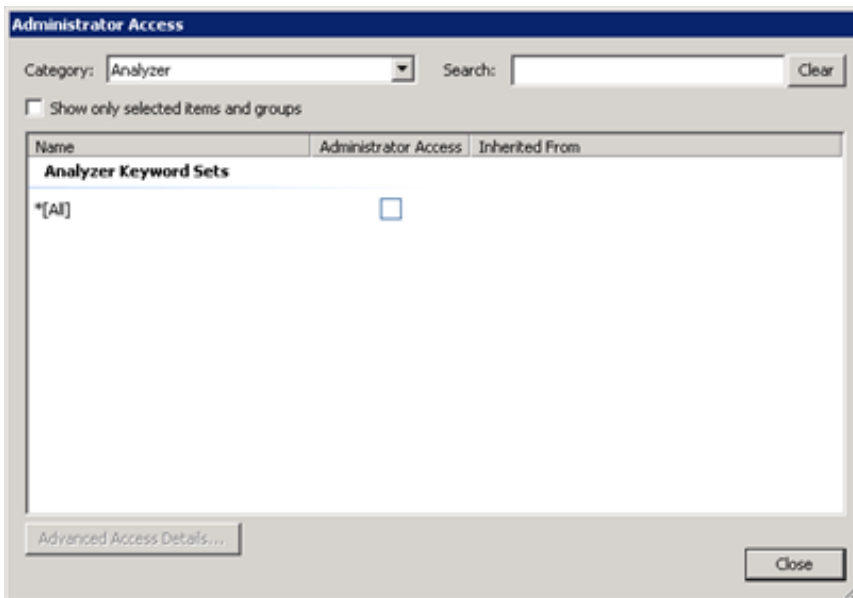
4. Click the **Security** tab. The **Security** tab appears.



5. Click **Administrator Access**. The **Administrator Access** dialog box appears.



- In the Category list box, click Analyzer. The Analyzer Keyword Sets group appears.



- Select the **\*[All]** check box to allow the Supervisor role to create new keyword sets.

**Note:**

To limit the keyword sets that the Supervisor role can modify, select the previously defined keyword sets. However, the Supervisor role can only create new keyword sets if you select the **\*[All]** check box.

- Click **Close**.
- In the **Role Configuration** dialog box, click **OK**.

**Tip:**

To set these access rights on a user-by-user basis, click the **Users** object in the **Interaction Administrator** window instead of the **Role** object when following this procedure.

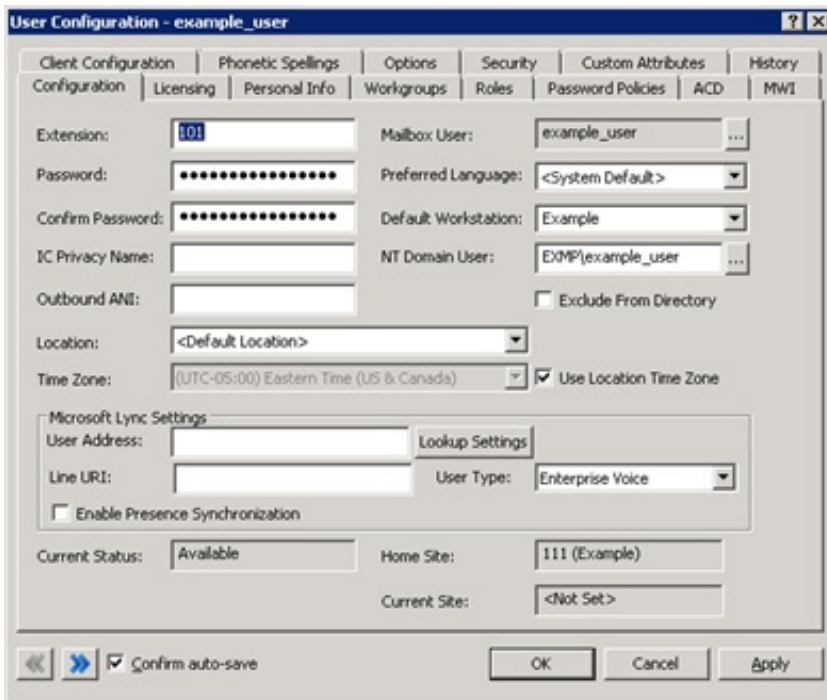
## Allow Monitoring of Queues and Viewing of Statistics and Columns

For a supervisor to use Interaction Supervisor to monitor queues and to see the Interaction Analyzer statistics and columns, enable the **Workgroup Supervisor Plug-In** feature license.

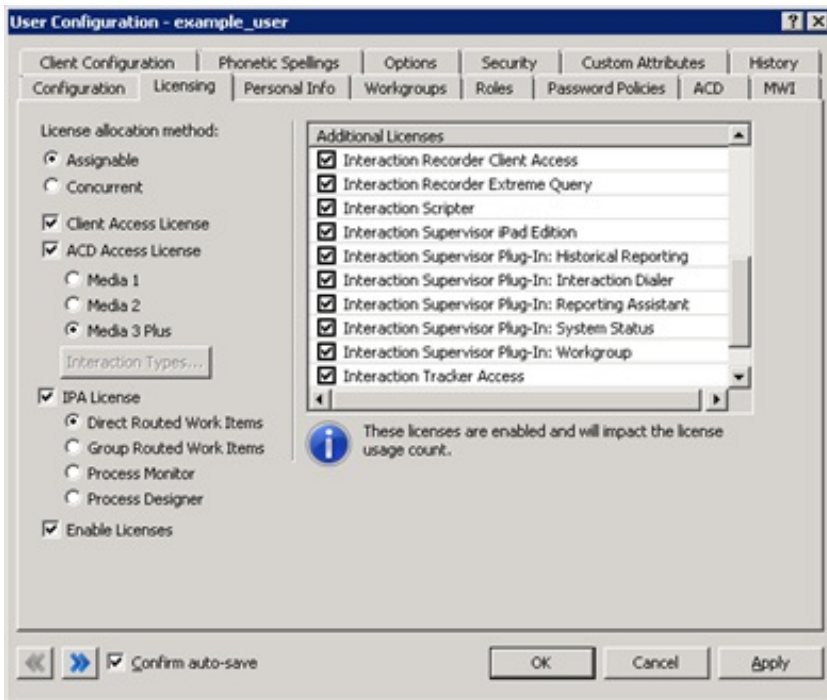
### To allow monitoring of queues and viewing of statistics and columns

- Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
- In the navigation pane, expand the **People** container and then click the **User** object.

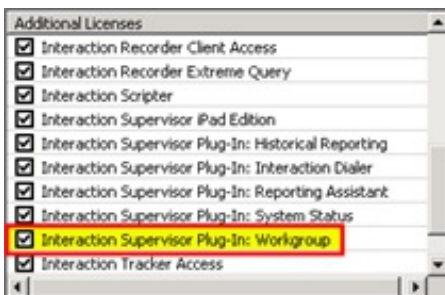
3. In the right pane, double-click the user for which to enable the Interaction Supervisor view. The User Configuration dialog box for the specified user appears.



4. Click the Licensing tab. The Licensing tab appears.



5. In the Additional Licenses list, ensure that the Interaction Supervisor Plugin-In: Workgroup check box is selected.





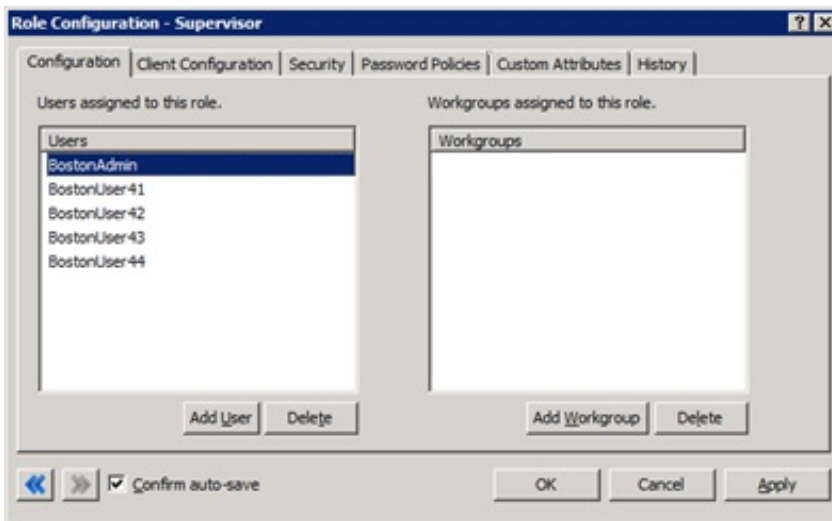
6. Click OK.
7. In the User Configuration dialog box, click OK.

## Allow View of Agent and Customer Score Columns

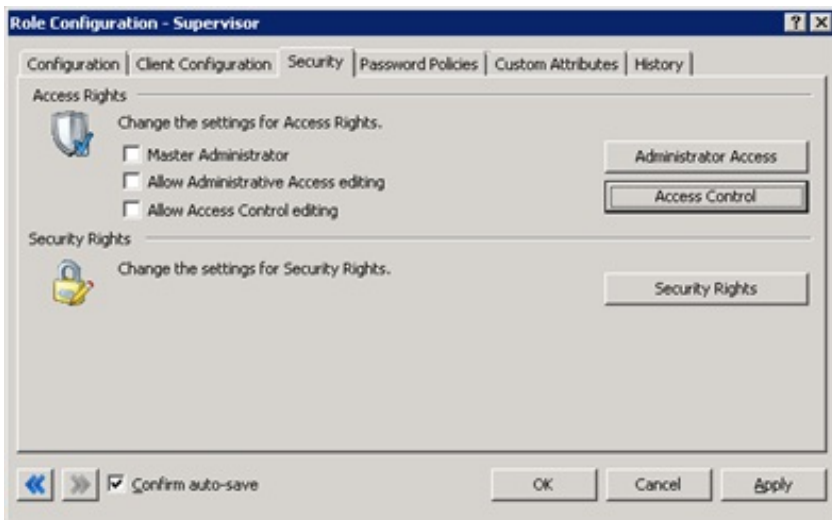
Before a supervisor can view the **Agent Score** and **Customer Score** columns through the Interaction Supervisor view of IC Business Manager, grant the supervisor role the permission to add those columns to the view.

### To allow view of agent and customer score columns

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **People** container and then click the **Roles** object.
3. In the right pane, double-click the **Supervisor** role. The **Role Configuration** dialog box appears.

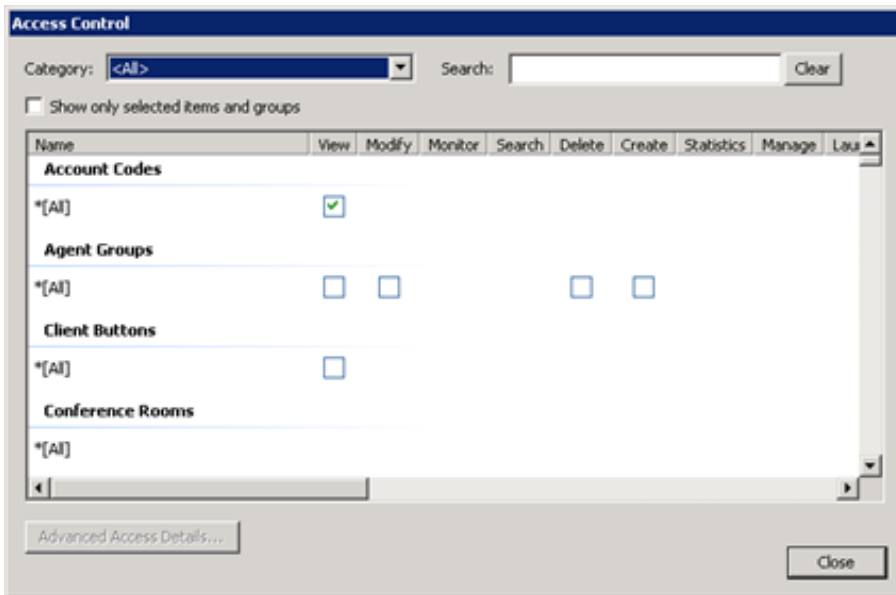


4. Click the Security tab. The Security tab appears.

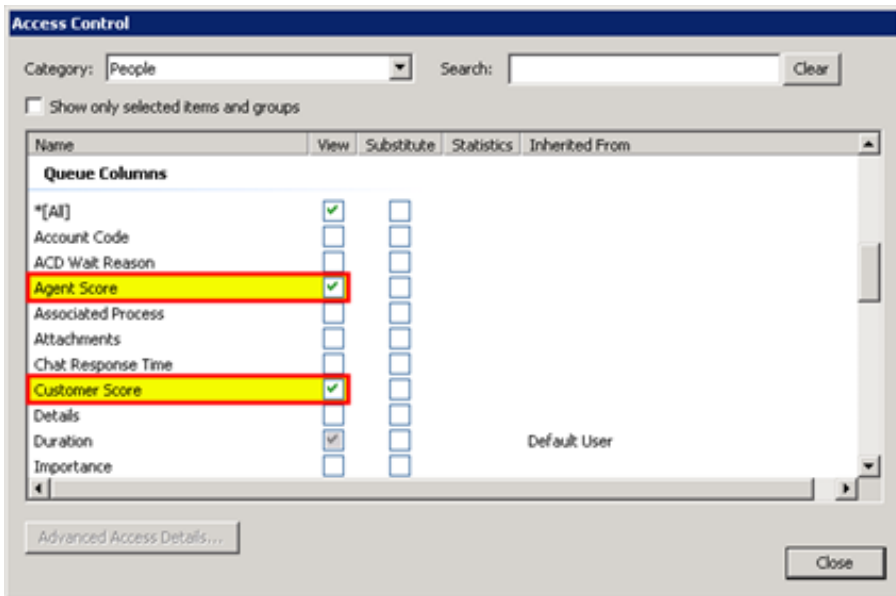


5. Click Access Control. The Access Control dialog box appears.





6. In the **Category** list box, click **People**. The subset of items for the specified category appears.



7. In the **Queue Columns** section, select the **Agent Score** and **Customer Score** check boxes.

8. Click **Close**.

9. In the **Role Configuration** dialog box, click **OK**.

**Tip:**

To set these permissions on a user-by-user basis, click the **User** object in the **Interaction Administrator** window and then double-click the necessary user definition when following this procedure.

# Language Support for Interaction Analyzer Keyword Spotting

Interaction Analyzer supports keyword spotting for the following languages.

Dutch, Netherlands (nl-NL)	French, France (fr-FR)	Polish, Poland (pl-PL)
English, United States (en-US)	German, Germany (de-DE)	Portuguese, Brazil (pt-BR)
English, Great Britain (en-UK)	Italian, Italy (it-IT)	Spanish, Spain (es-ES)
English, Australia (en-AU)	Japanese, Japan (ja-JP)	Spanish, United States (es-US)
French, Canada (fr-CA)	Mandarin Chinese, China (zh-CN)	Turkish, Turkey (tr-TR)

## Note:

To use Interaction Analyzer for keyword spotting in a specific language, purchase the appropriate Interaction Analyzer language feature licenses for your CIC license.

## To allow Interaction Analyzer to spot keywords for a language other than English (US)

1. Purchase and install CIC language packs.
2. Purchase and install Interaction Analyzer language feature licenses.
3. [Specify Language for Interaction Analyzer to Use.](#)
4. [Create Interaction Analyzer Keyword Definitions.](#)
5. Configure Interaction Attendant to set the `EIC_LANGUAGE` call attribute for inbound calls and configure CIC to set the `EIC_LANGUAGE` call attribute for outbound calls.

## Multiple language support in a single keyword set

A single keyword set in Interaction Analyzer supports keywords in multiple languages. This feature allows you to create a keyword set for a specific purpose for multiple languages. For example, to identify that an agent uses a required greeting, no matter the language, specify that greeting in multiple languages in a single keyword set.

Keyword set name	Keyword language	Keyword
Opening greeting	English (United States)	Hello and thank you for calling
	Spanish (United States)	Hola y gracias por llamar
	German (Germany)	Hallo und danke für den Aufruf

## Note:

Interaction Analyzer does not calculate keyword limits within a keyword set across multiple languages. For example, if you create a keyword set that contains 30 keywords in English (en-US) and 30 keywords in Spanish (es-US), Interaction Analyzer considers the keyword set to have only 30 keywords applied against the keyword limit. Interaction Analyzer allows this abundance of keywords because it processes keywords in only one language during a call.

# Interaction Analyzer Language Selection Methods for Interactions

For Interaction Analyzer to spot keywords for language, set the call attribute `EIC_LANGUAGE` through the following methods.

Inbound	<ul style="list-style-type: none"><li>• Interaction Attendant</li><li>• Handlers through Interaction Designer</li><li>• <b>Default Language</b> setting for the Customer Interaction Center server</li><li>• <b>Preferred Language</b> setting for the receiving <b>Workgroup</b> if set (This setting supersedes the default language settings for the Customer Interaction Center server.)</li><li>• <b>Preferred Language</b> setting for the receiving <b>User</b>, if set (This setting supersedes the workgroup and Customer Interaction Center server language settings.)</li></ul>
Outbound	<ul style="list-style-type: none"><li>• <b>Default Language</b> setting for the Customer Interaction Center server</li><li>• <b>Preferred Language</b> setting for the <b>Workgroup</b></li><li>• (This setting is used only if the outbound call is made on behalf of a workgroup. This setting supersedes the default language settings on the Customer Interaction Center server.)</li><li>• <b>Preferred Language</b> setting for the <b>User</b></li><li>• (This setting supersedes the workgroup and Customer Interaction Center server language settings.)</li><li>• Handlers through Interaction Designer</li></ul>

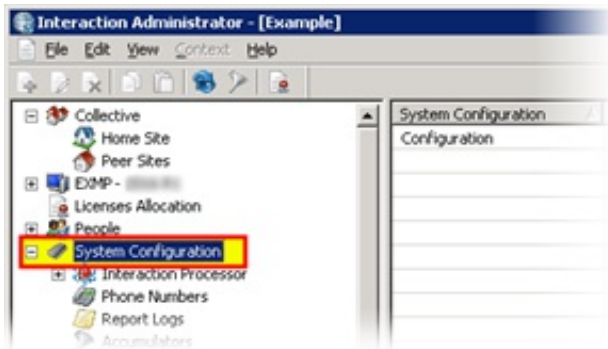
For more information about handlers and initiators in Interaction Designer, see [Interaction Designer Help](#).

## Specify Language for Interaction Analyzer to Use

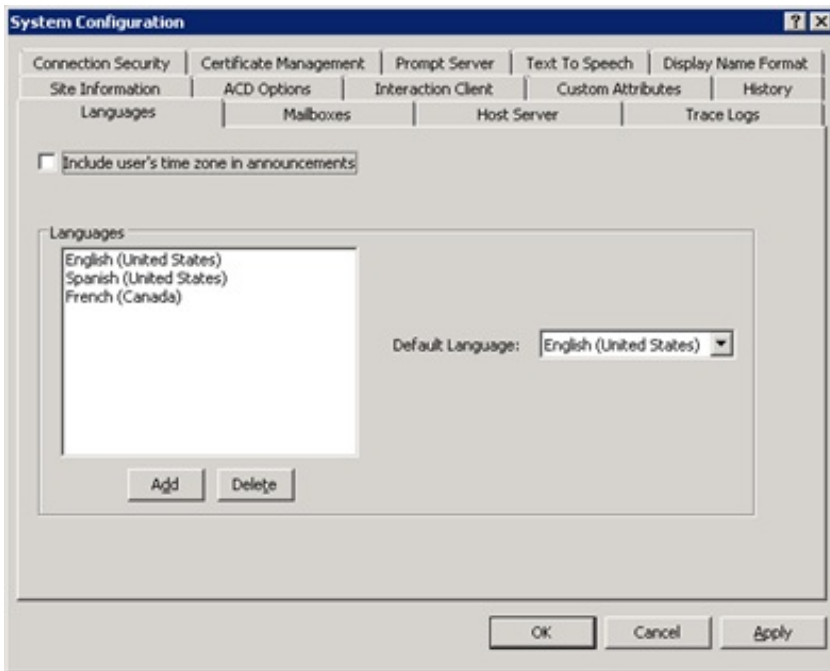
For Interaction Analyzer to spot keywords in a specific language, select the language in Interaction Administrator.

To specify languages for Interaction Analyzer to use

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, click the **System Configuration** object.



3. In the right pane, double-click the **Configuration** item. The **System Configuration** dialog box appears.
4. Click the **Languages** tab.



5. Click Add. The Languages dialog box appears.



6. Select the language to use with Interaction Analyzer and then click OK. The system adds the selected language to the Languages list box on the Languages tab of the System Configuration dialog box.

7. In the System Configuration dialog box, click OK.

**Tip:**

If you change the language specified in the **Default Language** list box, Interaction Analyzer uses this selection as the default language in keyword sets.

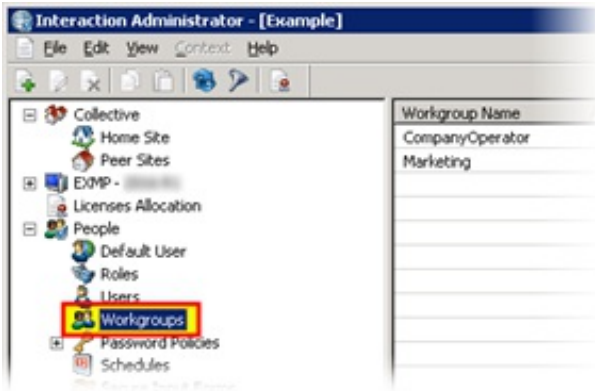
# Specify the Default Interaction Analyzer Language for a Workgroup

To analyze interactions on outbound calls placed on behalf of a workgroup, set the default language that Interaction Analyzer uses for keyword spotting.

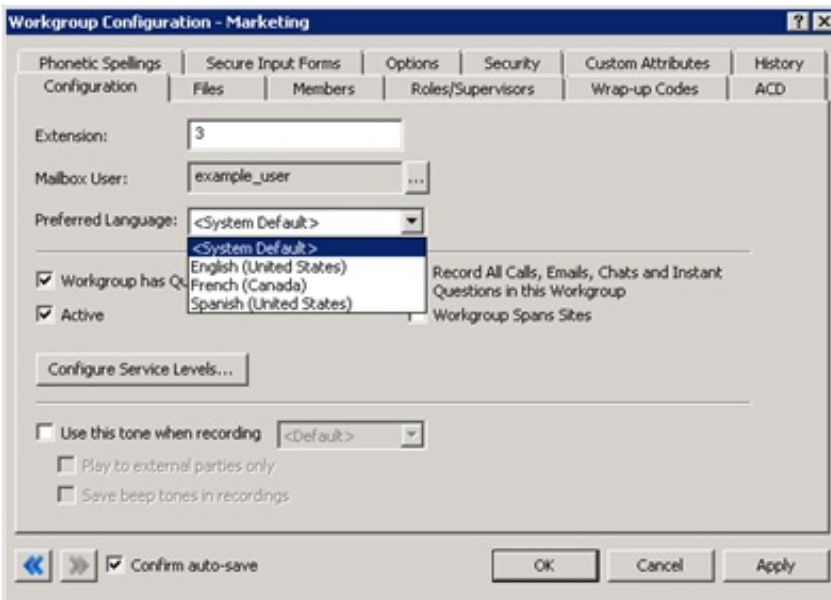
**Note:** If you are analyzing interactions on only inbound calls, set the language through Interaction Attendant or handlers and skip this procedure.

## To set the default Interaction Analyzer language for a workgroup

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **People** container and then click the **Workgroups** object.



3. In the right pane, double-click the workgroup for which to set a preferred language. The **Workgroup Configuration** dialog box appears.
4. Click the **Configuration** tab.
5. In the **Preferred Language** list box, click the language to set as the default for the workgroup.



6. Click **OK**. Interaction Administrator saves the language selection and closes the dialog box.

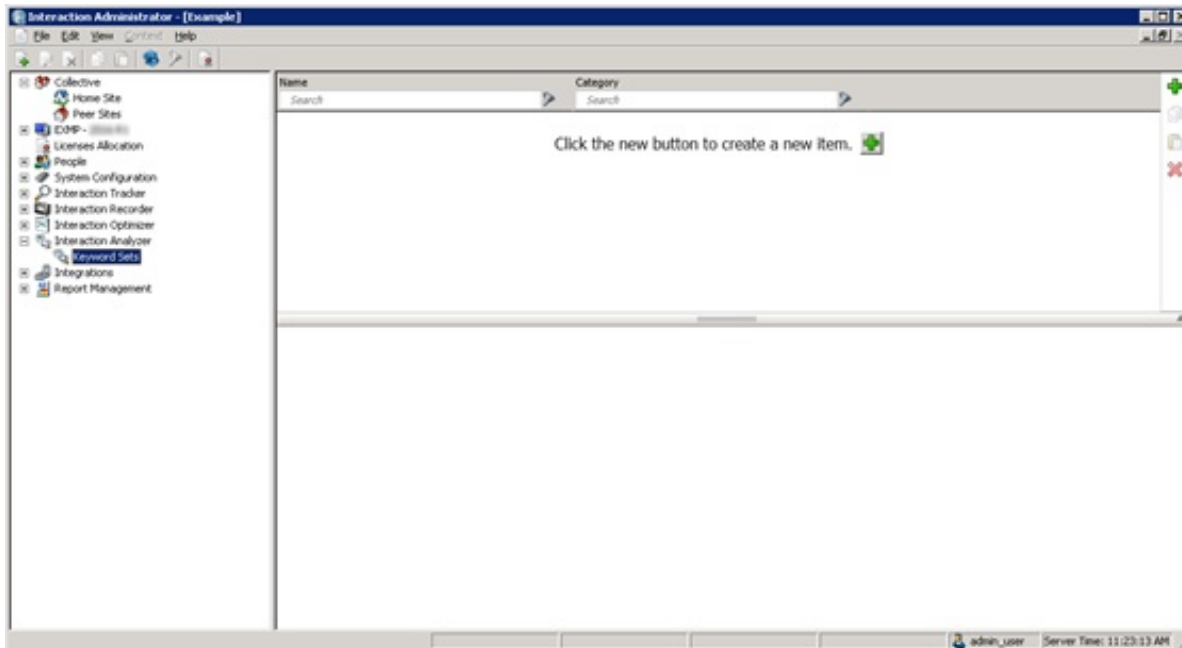
# Create Interaction Analyzer Keyword Definitions

## Important!

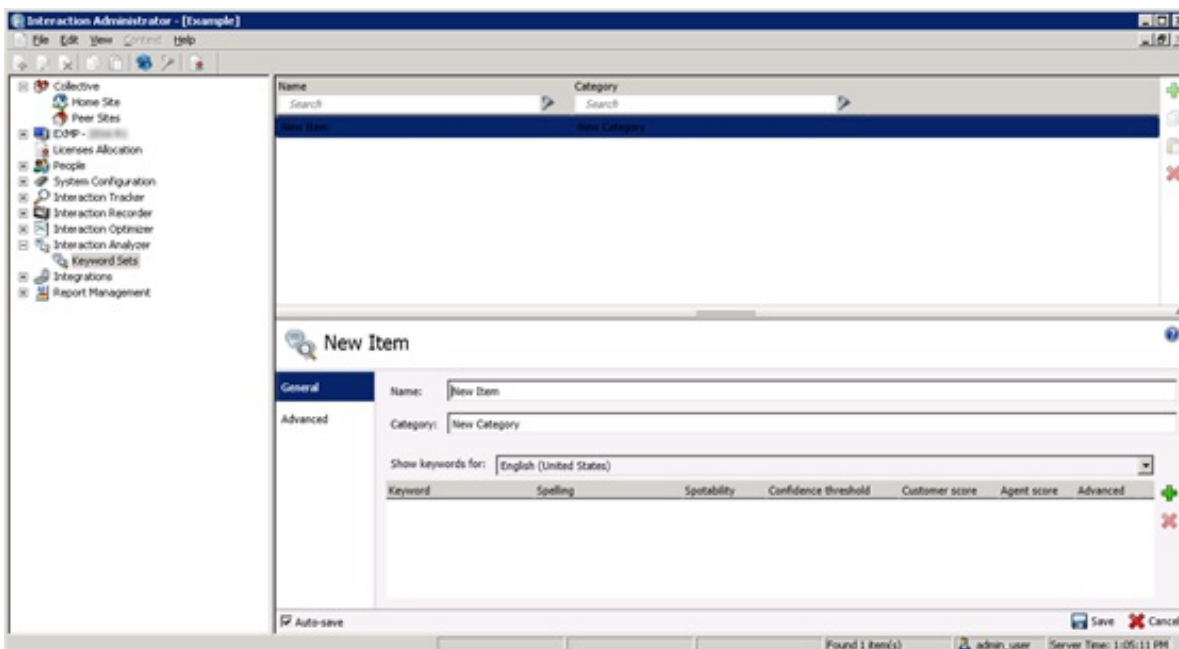
Genesys recommends that you define your keywords, keyword set names, and categories before you specify keywords in Interaction Analyzer. This process saves you a great deal of time as opposed to specifying keywords without having a defined structure or business goals.

### To create Interaction Analyzer keyword definitions

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **Interaction Analyzer** container and then click the **Keyword Sets** object. The Interaction Analyzer interface appears in the right pane.



3. Click the green **Add** icon. A **New Item** appears in the right pane. This new item is a keyword set, which allows you to specify multiple keywords and phrases.



4. In the **Name** box, type a unique and descriptive name to assign to this keyword set.

#### Note:

The keyword set name must be unique from other keyword set names and descriptive enough to allow you to identify the types of keywords that it contains.

- In the **Category** box, type the name of the category to assign to this keyword set.

**Note:**

You must assign the keyword to a category. Category names must contain fewer than 128 characters.

For more information about categories, their purpose, and how Interaction Analyzer uses them, see [Interaction Analyzer Categories](#).

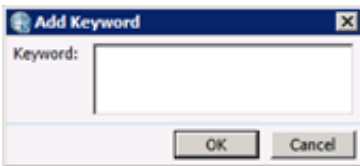
- To define a keyword for a different language other than the default, select it from the **Show keywords for** list box.

**Tip:**

You can define keywords for multiple languages in a single keyword set.

For more information about supported languages for keyword spotting, see [Language Support for Interaction Analyzer Keyword Spotting](#).

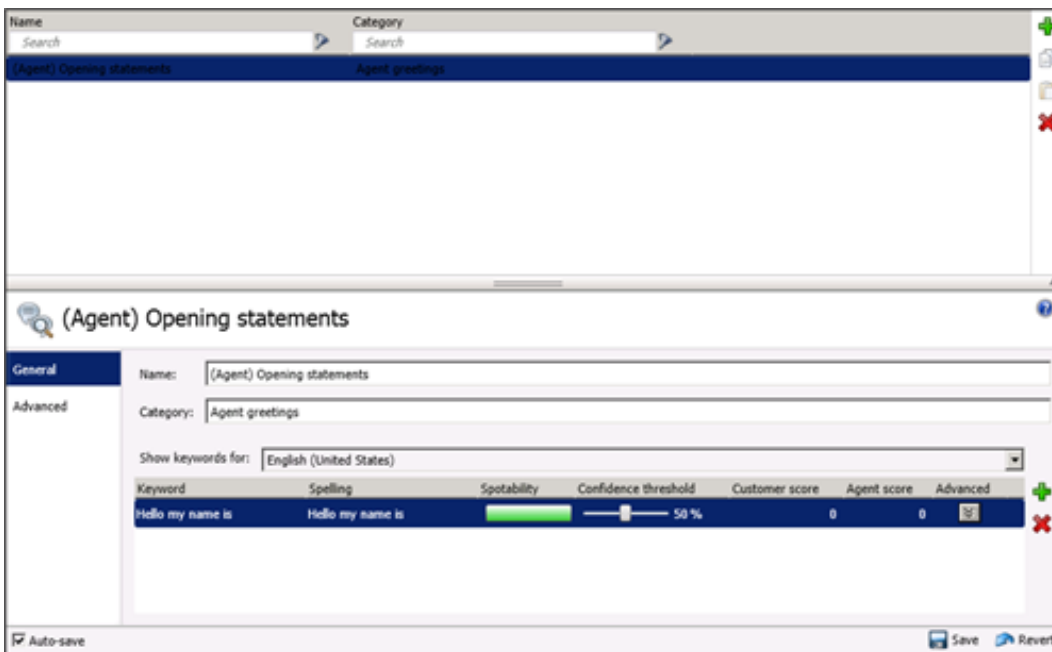
- Click the **Add** icon. The **Add Keyword** dialog box appears.



- Type a keyword or phrase that you want Interaction Analyzer to monitor and then click **OK**. Interaction Administrator adds the keyword to the keyword set.

**Note:**

You can add the same keyword to multiple keyword sets. For example, you can add "thank you for calling" to keyword sets, such as agent greetings and agent closings. You can assign both keyword sets to the interaction through an Interaction Recorder policy. When an agent says the keyword, Interaction Analyzer identifies that the keyword belongs to multiple keyword sets and marks the recording with that information.



**Note:**

By default, Interaction Recorder policies that start analysis of interactions are limited to 50 keywords across both the agent and customer channels. Interaction Analyzer does not allow you to save a keyword set with more than 50 keywords for one language, which include anti-spellings and pronunciations. For more information about keyword limits, see [Keyword Limits](#).

- Add more keywords as necessary.
- Click **Save**.

**Note:**

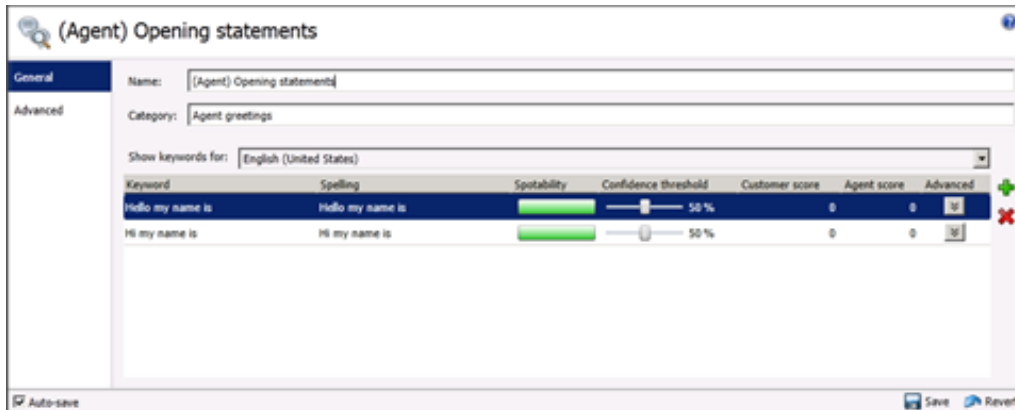
You cannot create another keyword set until you save the current keyword set.

# Set the Score for a Keyword

It is through keyword scores that Interaction Supervisor displays score statistics for interactions, including the largest positive and negative scores and the cumulative score in the real-time workgroup queue view.

## To set the score for a keyword

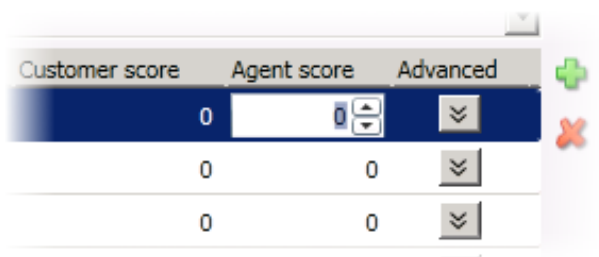
1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **Interaction Analyzer** container and then click the **Keyword Sets** object. The Interaction Analyzer interface appears in the right pane.
3. Click the keyword set that contains the keyword for which to set a score.
4. Locate the keyword for which to set a score.



5. Next to the keyword entry, click the **0** (zero) in the **Customer score** or **Agent score** column. The scoring box appears in edit mode.

### Tip:

If you assign the keyword set to only one channel, it is not necessary for you to set a score for both channels.



6. Type or select a score to assign and then click **Save**. Interaction Administrator assigns the score to the keyword and saves the keyword set.



# Set the Confidence Threshold for a Keyword

The *confidence threshold* feature allows you to specify how much certainty Interaction Analyzer uses in reporting an instance of the defined keyword. For more information about confidence thresholds, see "Interaction Analyzer confidence threshold" in [Introduction to Interaction Analyzer Keyword Spotting](#).

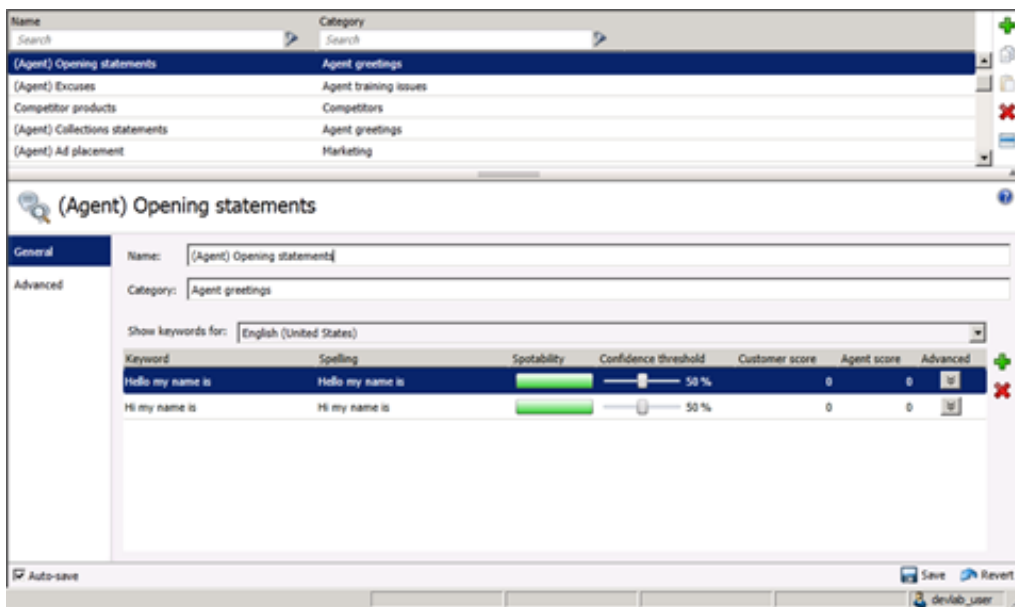
## Important!

The confidence threshold does not affect the spotability factor of a keyword. The feature only informs Interaction Analyzer how certain it must be to report an identification during real-time analysis of the interaction.

Confidence thresholds use a percentage value to determine the amount of scrutiny that Interaction Analyzer uses to identify keywords. A high percentage value causes Interaction Analyzer to report the associated keyword if it matches perfectly. A low percentage value causes Interaction Analyzer to report the associated keyword if it matches that keyword loosely. The default percentage value for any newly defined keyword is 50%.

## To set the confidence threshold for a keyword

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **Interaction Analyzer** container and then click the **Keyword Sets** object. The Interaction Analyzer interface appears in the right pane.
3. Click the keyword set name that contains the keyword definition to modify.



4. Click the keyword definition for which to set the confidence threshold.
5. In the **Confidence threshold** column, use the slider to either increase or decrease the confidence threshold.
6. Click **Save**.

# Modify Advanced Keyword Definition Settings

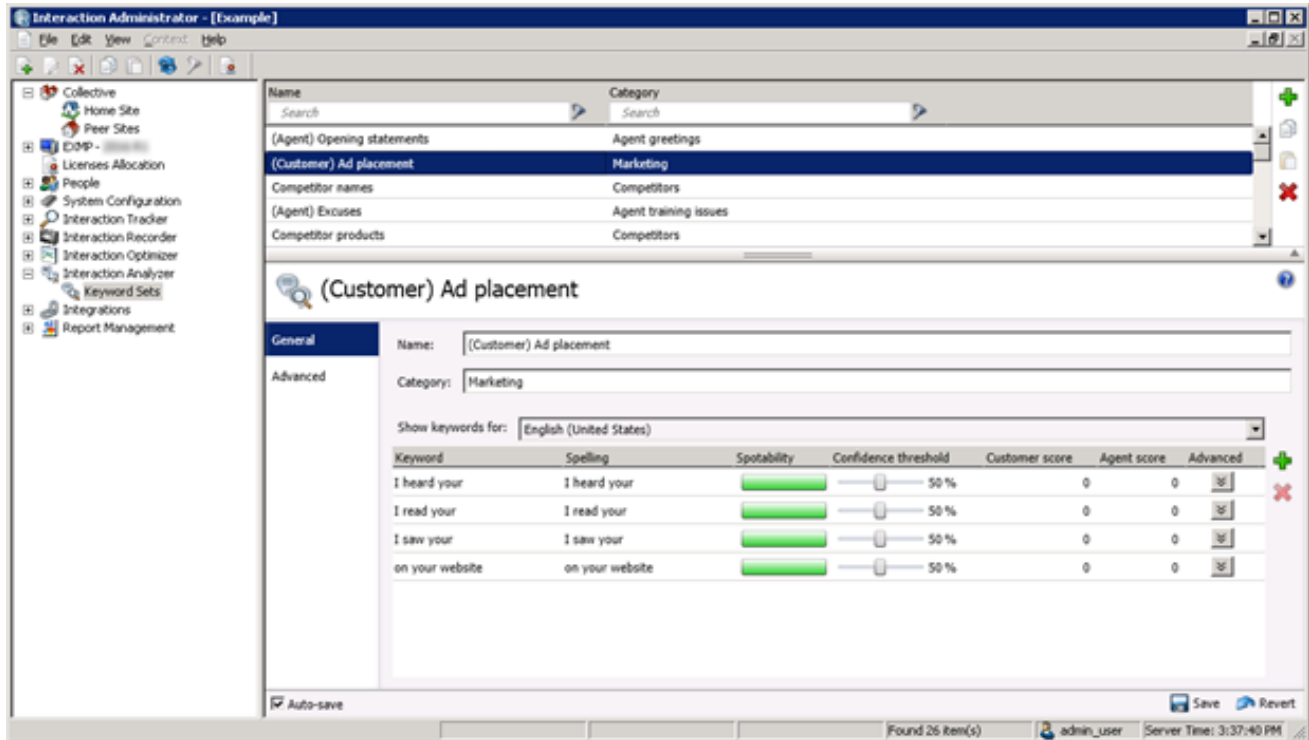
After you define a keyword, you can add more settings for that keyword, such as more accurate spellings and anti-spellings of the keyword.

## Important!

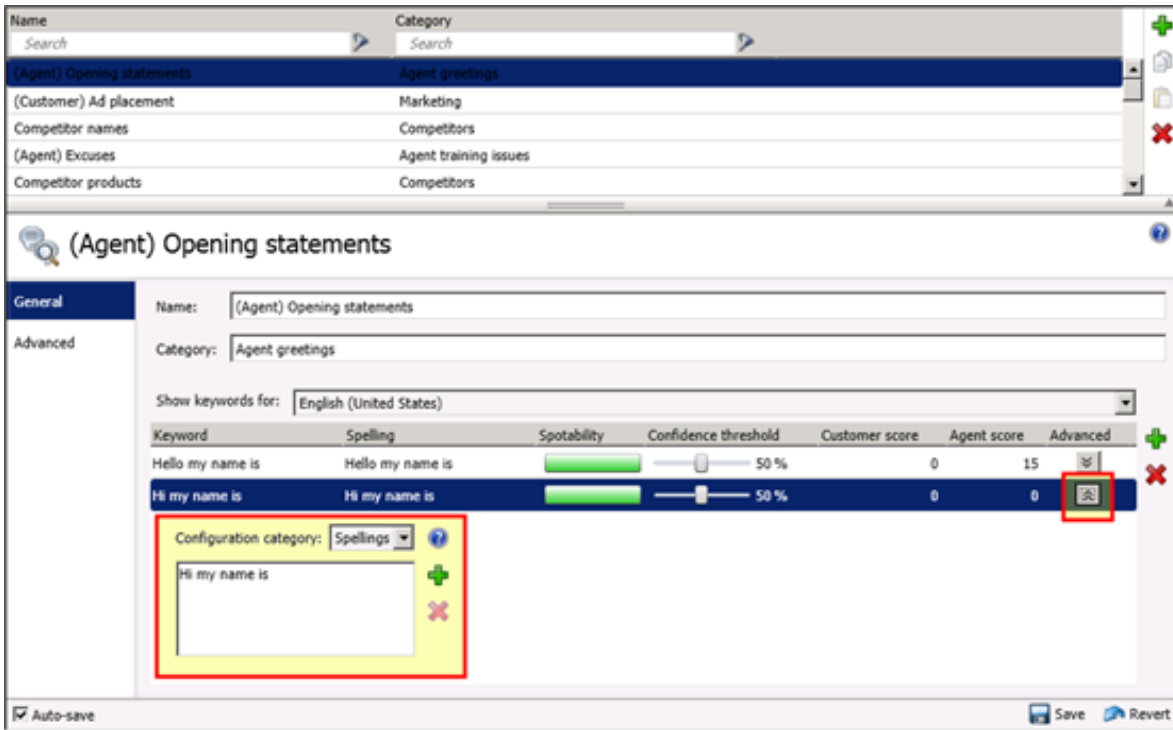
Do not use these advanced features unless Interaction Analyzer is having difficulty identifying the keyword or is mistaking other words for the keyword. Only through careful analysis can you determine what to adjust for the keyword definition.

### To modify advanced keyword definition settings

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **Interaction Analyzer** container and then click the **Keyword Sets** object. The Interaction Analyzer interface appears in the right pane.



3. Click the keyword set name that contains the keyword to modify.
4. Click the Edit icon in the **Advanced** column for the keyword definition to modify. A dialog box appears under the selected keyword definition.



5. In the **Configuration category** list box, click the advanced feature to modify:
  - **Spellings** - Allows you to specify an alternative spelling for the defined keyword. For example, if the keyword is "read the fine print," you can type a new spelling of "reed the fine print" to ensure that Interaction Analyzer does not identify the alternative pronunciation of "red the fine print."
  - **User-Defined Pronunciations** - Allows you to specify the phonetic spelling of the keyword as defined through phonemes. For more information about phonemes, see [Interaction Analyzer Keyword User-defined Pronunciations](#).

**Note:**

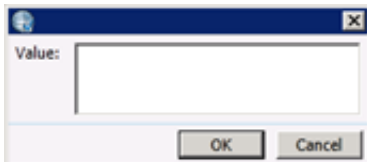
When you enter a pronunciation that consists of more than one word, you must enter a wd character string between each word. For more information about defining multiple words in a pronunciation, see "Defining multiple words in pronunciations" in [Interaction Analyzer Keyword User-defined Pronunciations](#).

- **Anti-Spellings** - Allows you to specify spellings that Interaction Analyzer must not mistake for the keyword. For example, if the keyword is "lawyer," you can type "employer" as an anti-spelling if Interaction Analyzer is mistaking that word for the keyword.
- **User-Defined Anti-Pronunciations**- Allows you to specify phonemes as a series of sounds that Interaction Analyzer must not mistake for the keyword. For example, if the keyword is "lawyer" and an anti-spelling of "employer" has not corrected the misinterpretation of the keyword, you can type eh m p l oy er in the box. For more information about phonemes, see [Interaction Analyzer Keyword User-defined Pronunciations](#).

**Important!**

For each advanced configuration item that you add, the keyword count for this definition increases. For example, if you defined a keyword without any advanced configuration, Interaction Analyzer counts it as one keyword. For each spelling, user-defined pronunciation, anti-spelling, or user-defined anti-pronunciation item that you add, Interaction Analyzer increments the cost by 1.

6. To add an value for the selected advanced feature, click the green **Add** icon. A dialog box appears.



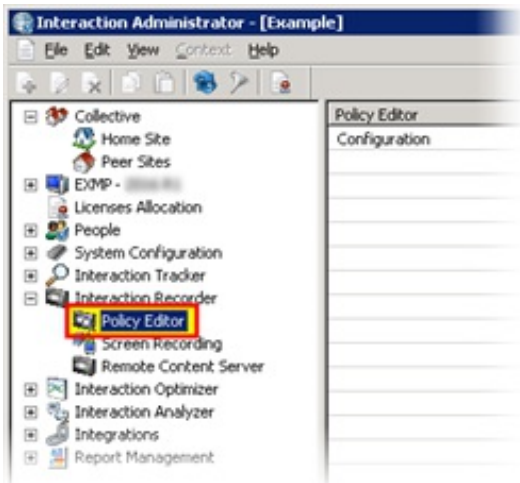
7. In the **Value** box, type the value to add and then click **OK**. Interaction Administrator adds the value to the selected advanced feature.
8. Click **Save**.

# Create an Interaction Analyzer Initiation Policy in Interaction Recorder

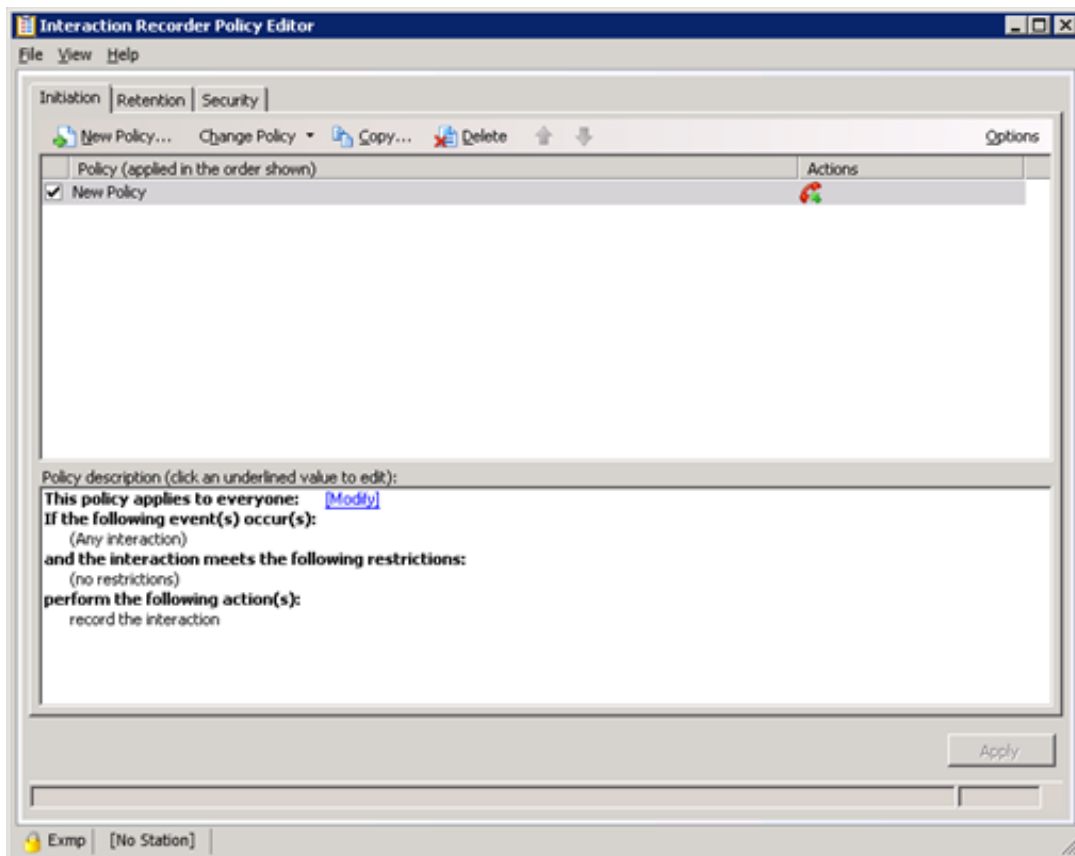
Before Interaction Analyzer can identify keywords, you must create an *initiation policy* in the Interaction Recorder interface of Interaction Administrator. This initiation policy determines when to record incoming calls, outgoing calls, or any types of calls.

## To create an Interaction Analyzer initiation policy

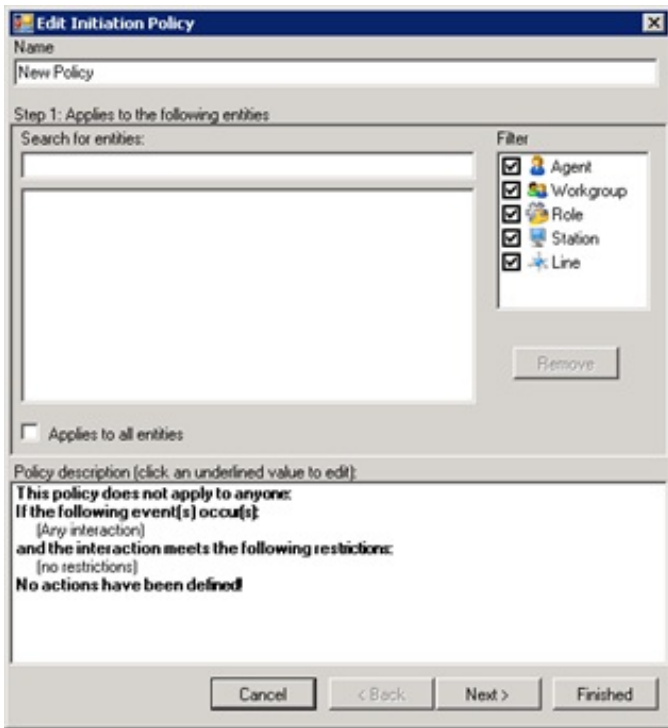
1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the **Interaction Recorder** container and then click the **Policy Editor** object.



3. In the right pane, double-click the **Configuration** item. The **Interaction Recorder Policy Editor** window appears.



4. In the toolbar on the **Initiation** tab, click **New Policy**. The **Edit Initiation Policy** dialog box appears.



5. In the **Name** box, type a descriptive name for this policy.
6. In the **Filter** box, select the check box for each entity to include in this policy.
7. In the **Search for entities** box, type the name of the entity to include for this policy.

**Tip:**

If you do not remember the name of the entity, you can type the first letter of the name in the **Search for entities** box. All entity names that begin with that letter and that are selected in the **Filter** box appear.



8. From the displayed list, click the entity for which to use keyword spotting.
9. Click **Next**. The **Step 2: Restrict to these event(s)** interface appears.
10. Select the check box for each interaction type to record and analyze.

**Note:**

Interaction Analyzer supports the following interaction types:

- Inbound call connected
- Outbound call connected
- Intercom call connected

For intercom calls, Interaction Analyzer uses the keyword sets for the receiving party only. For more information, see [Keyword Spotting for Intercom Calls](#).

11. Click **Next**. The **Step 3: Select criteria** interface appears.
12. To specify detailed criteria for the initiation of this policy, such as time ranges or the location from which a call originated, select the appropriate check box and specify the necessary values.

**Note:**

For inbound calls, the location is the one that contains the SIP line on which the call entered the system. For outbound calls, the location is the one that contains the station that started the call. If a call transfers, the location setting for the call doesn't change..

13. Click **Next**. The **Step 4: Select actions** interface appears.

14. Select one of the following check boxes:

- record agent side only
- record the remote side only
- record the interaction

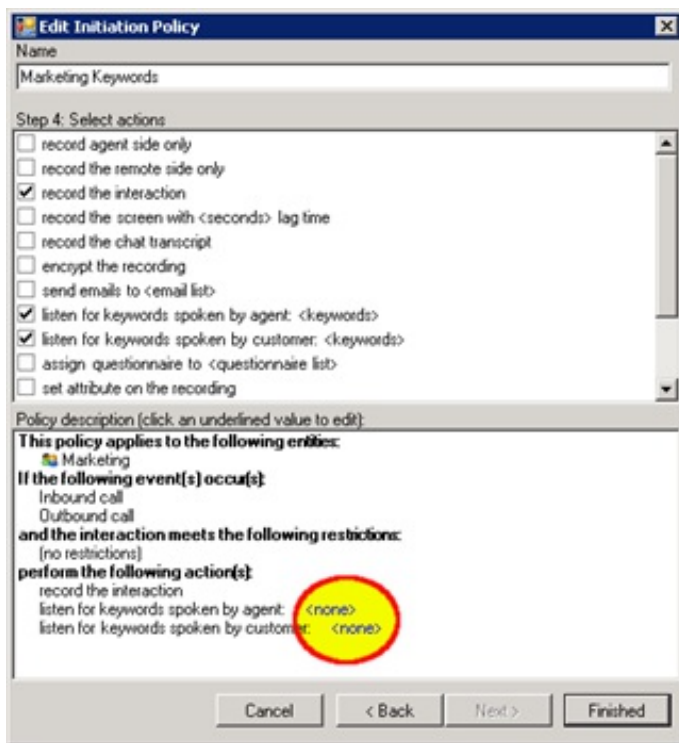
**Important!**

Interaction Analyzer cannot analyze non-recorded interactions.

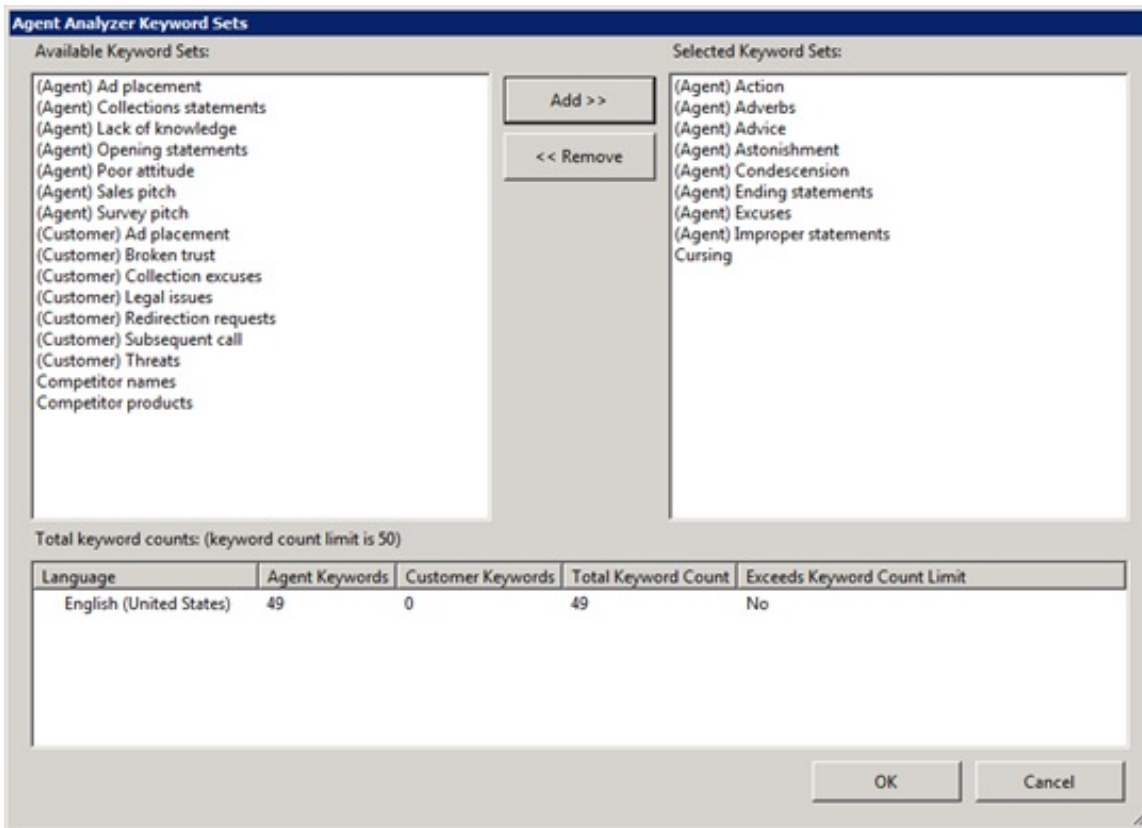
15. Select one or both of the following:

- listen for keywords spoken by agent: <keywords>
- listen for keywords spoken by customer: <keywords>

16. In the **Edit Initiation Policy** dialog box, click the <none> hyperlinks to assign existing keyword sets to the associated channel.



The **Analyzer Keyword Sets** dialog box for the selected channel appears.



**Note:**

Ensure that you do not assign keyword sets to the wrong channel. For example, do not assign keyword sets intended for customer speech to the agent channel.

- In the **Available Keyword Sets** list box, click one or more keyword sets.

**Tip:**

To select multiple keyword sets, use the **Ctrl** or **Shift** key in combination with the left mouse button.

- Click **Add>>**. The selected keyword sets move to the **Selected Keyword Sets** list box.
- In the **Total keyword counts** box, ensure that the total number of keywords for all sets does not exceed the maximum number allowed.

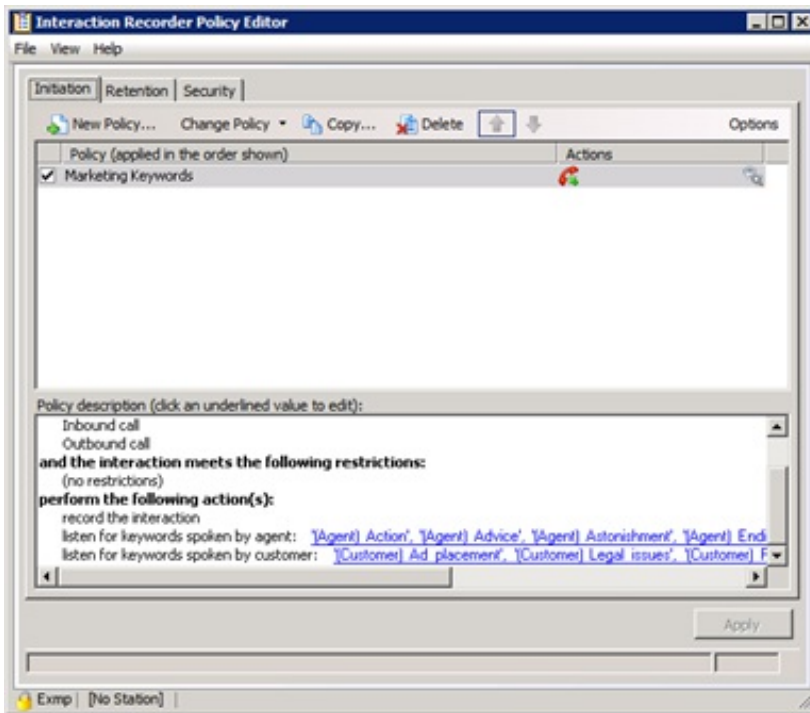
**Important!**

The number of keywords that Interaction Analyzer uses during its processing of interactions directly impacts the processing power of Interaction Media Server. For this reason, you are limited to a maximum of 50 keywords (default number) that you can assign to both channels in a policy. If you exceed the maximum number of keywords allowed, Interaction Analyzer does not do any keyword spotting for qualifying interactions. For more information about the maximum number of allowed keywords, see [Keyword Limits](#).

**Note:**

Interaction Analyzer identifies keywords only in the language of the call. Because of this design, the keyword count limit for a keyword set (50, by default) is separate for each language. For example, you can create keyword sets that contain 50 English (en-US) keywords, 50 Spanish (es-US) keywords, and 50 German (de-DE) keywords without exceeding the default keyword count limit.

- After you add the necessary keyword sets in the **Analyzer Keyword Sets** dialog box, click **OK**.
- Assign other keyword sets as necessary and then, in the **Edit Initiation Policy** dialog box, click **Finished**.
- In the **Interaction Recorder Policy Editor** window, click **Apply**. Interaction Administrator saves the new policy.



**Note:**

Interaction Recorder policies that use keyword spotting display the following icon on the rightmost side of each policy entry:



23. Close the Interaction Recorder Policy Editor window.

**Note:**

If an agent transfers an analyzed call, CIC checks Interaction Recorder policies to see whether keyword spotting is allowed for the new recipient. If keyword spotting is allowed for the new recipient, Interaction Analyzer uses the keyword sets specified in the new policy. If the new policy does not define keyword sets, Interaction Analyzer uses the keyword sets from the previously applied policy. The accumulated scores are also transferred and continue accumulating.



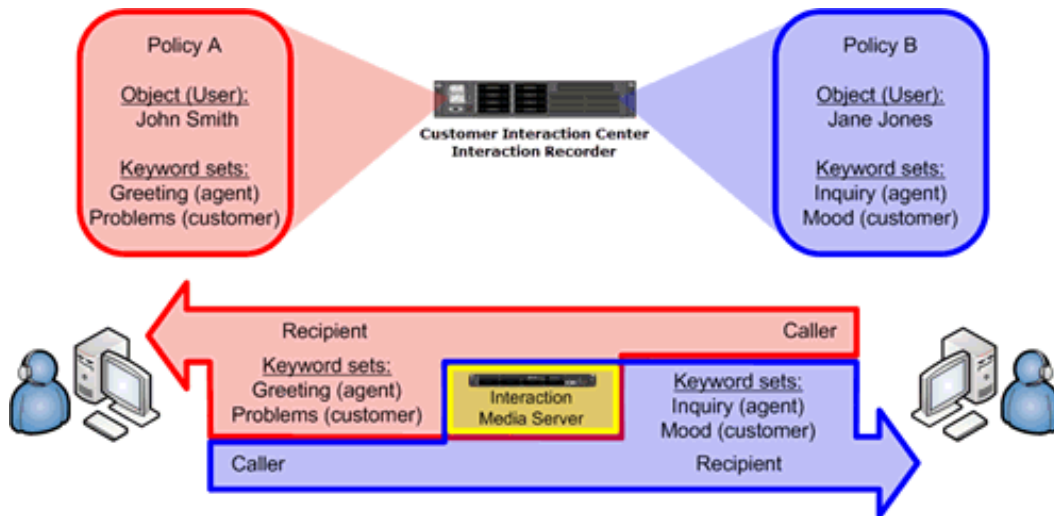
# Keyword Spotting for Intercom Calls

Interaction Analyzer has the ability to spot keywords in calls between two users within the CIC environment. This type of call is an intercom call. Keyword spotting for intercom calls is important when you have internal departments that service the rest of the company, such as an Information Technology support center or a Human Resources department.

## Functional overview

The method of selecting keyword sets for intercom calls differs somewhat from the method used in interactions with external participants. For intercom calls, both parties (stations or users) can have Interaction Recorder policies assigned to them. If Interaction Analyzer uses the policies assigned for both parties, the system creates two identical recordings with all the assigned keyword sets .

To avoid having multiple and identical recordings, Interaction Analyzer uses the keyword sets in the Interaction Recorder policy assigned to the party receiving an intercom call.

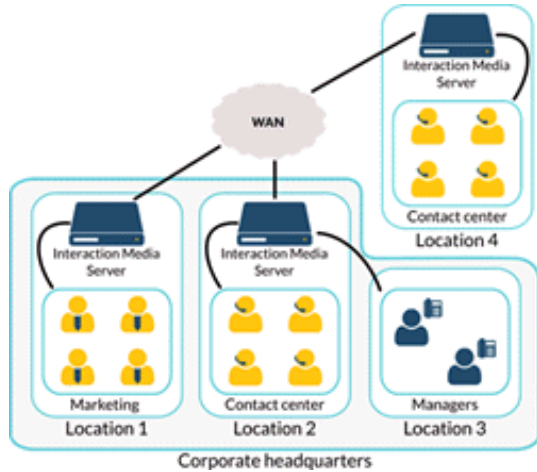


# Keyword Spotting for Specific Locations

Using Interaction Administrator, you can divide your PureConnect servers and devices into locations. You can use this feature to set different configurations for an entire location instead of configuring each device separately. Interaction Recorder policies allow you to specify whether to use keyword spotting based on these defined locations.

## Overview of location-based keyword spotting

You could have situations where you do not want to use keyword spotting for interactions in different network locations as presented in the following image and table:



Location	Keyword spotting configuration
1	In this location, your marketing personnel are conducting interactions with business partners and representatives of other businesses. You can use keyword spotting in this location to ensure that your marketing employees are representing your company appropriately.
2	In this location, your customer service agents are interacting with direct customers, or purchasers of your products or services. This location is a vital area in which to use keyword spotting as it ensures that you are training your agents properly and verifying that your customers are satisfied.
3	In this location, your managers conduct interactions with their subordinates and other outside contacts. There is little reason to monitor these conversations.
4	In this location, remote contact center agents are in the same workgroup as the agents at your corporate headquarters. However, if the agents in this location speak a different language, are proven to provide the best customer support, or add too many interactions that can overload the Interaction Media Server, you can disable keyword spotting for this location.

## Set keyword spotting for a location

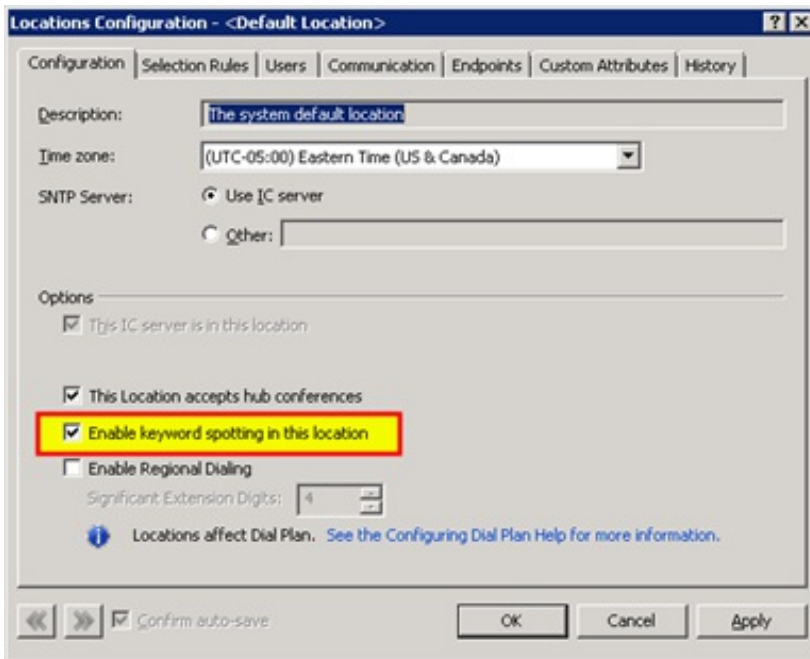
In Interaction Administrator, you can create *locations* that allow you to configure multiple aspects including supported codecs, time zones, and keyword spotting. You can turn on or off keyword spotting by Interaction Analyzer for an entire location.

1. Open Interaction Administrator, either remotely or directly on the CIC server. The **Interaction Administrator** window appears.
2. In the navigation pane, expand the container for your CIC server, if necessary.
3. In the navigation pane, expand the **Regionalization** container and then click the **Locations** object.



The right pane displays a list of all defined locations.

4. Double-click a location for which to turn on or off keyword spotting by Interaction Analyzer. The **Locations** dialog box appears.



5. Do one of the following:

- To turn on keyword spotting in this location, select the **Enable keyword spotting in this location** check box.
  - To turn off keyword spotting in this location, clear the **Enable keyword spotting in this location** check box.
- Click OK.

# View Interaction Analyzer Call Statistics in a Workgroup Queue

After you configure Interaction Analyzer and define your keywords, you can display the scoring of calls in the current workgroup queue.

**Note:**

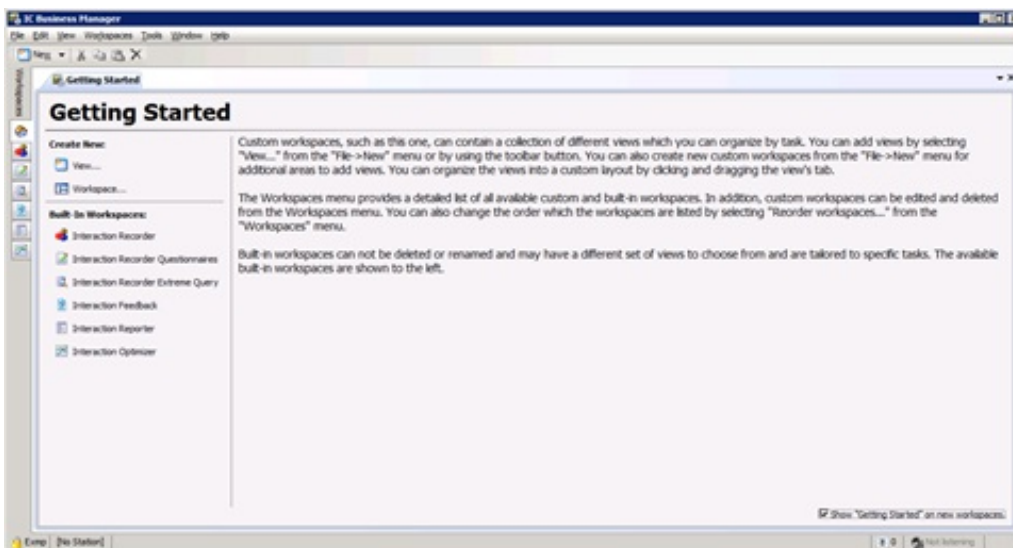
To view Interaction Analyzer scores for agents and customers, a user ID must have the View permission for the Agent Score and Customer Score queue columns. For more information, see [Allow View of Agent and Customer Score Columns](#).

To view Interaction Analyzer call statistics in a workgroup queue

1. Open IC Business Manager. The IC Business Manager logon dialog box appears.



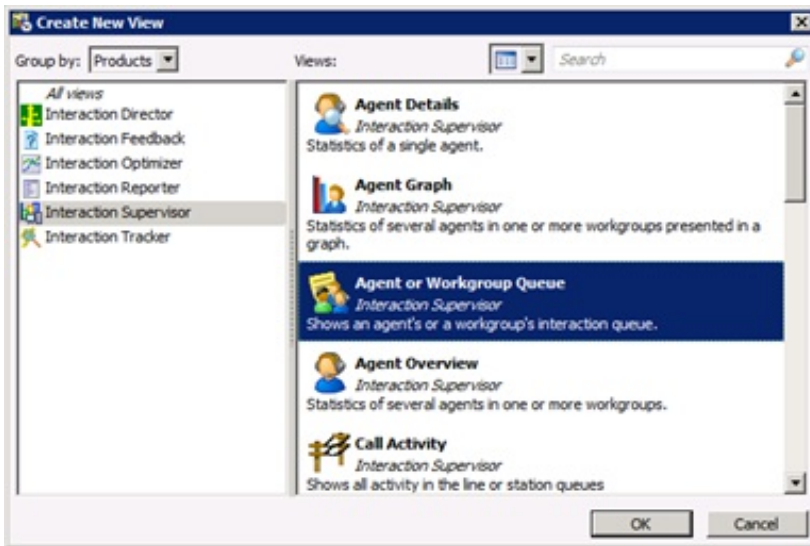
2. Type your credentials, specify the authenticating server, and then click **Logon**. The **IC Business Manager** window appears.



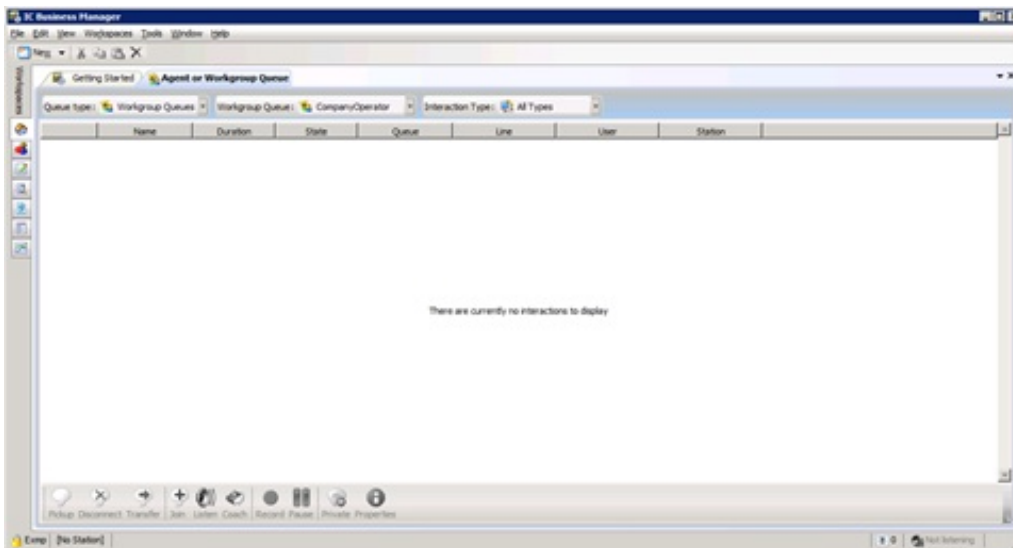
3. Click the **Default Workspace** tab, which appears as a house icon.
4. In the toolbar, click **New > View**. The **Create New View** dialog box appears.

**Tip:**

You can also press **Ctrl+Shift+N** to create a view.



5. In the navigation pane, click **Interaction Supervisor**.
6. In the right pane, click **Agent or Workgroup Queue** and then click **OK**. An **Agent or Workgroup Queue** tab appears in the default workspace.



7. In the toolbar of the tab, do the following:
  - a. Click **Queue Type** and then click **Workgroup Queue**.
  - b. Click **Workgroup Queue** and then click a workgroup for which you assigned one or more keyword sets.
  - c. Click **Interaction Type** and then click **Call**.
 The statistics and interaction details now appear in this tab.
8. Do the following:
  - To add customer scoring to the view, right-click the column heading row and in the resulting menu, click **Customer Score**.
  - To add agent scoring to the view, right-click the column heading row and in the resulting menu, click **Agent Score**.

**Important!**

To select and add the **Customer Score** and **Agent Score** columns, you must have the **Supervisor** role permission. For assistance, contact your system administrator.

## Keyword spotting information in Interaction Supervisor

Interaction Supervisor displays keyword spotting information in the **Customer Score** and **Agent Score** columns. This information includes a numeric score, the number of keywords spotted, and an icon that specifies the current state of the keyword spotting process.

Displayed information		Description				
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td>N/A</td> <td>N/A</td> </tr> </table>	Agent Score	Customer Score	N/A	N/A		Keyword spotting is not active in either channel of the interaction.
Agent Score	Customer Score					
N/A	N/A					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input type="radio"/> 0 (0 words)</td> <td><input type="radio"/> 0 (0 words)</td> </tr> </table>	Agent Score	Customer Score	<input type="radio"/> 0 (0 words)	<input type="radio"/> 0 (0 words)		Keyword spotting is active for the interaction but no words have been identified.
Agent Score	Customer Score					
<input type="radio"/> 0 (0 words)	<input type="radio"/> 0 (0 words)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input type="radio"/> 0 (1 word)</td> <td><input type="radio"/> 0 (1 word)</td> </tr> </table>	Agent Score	Customer Score	<input type="radio"/> 0 (1 word)	<input type="radio"/> 0 (1 word)		Keyword spotting is active for the interaction, words have been identified, but no scores have accumulated.
Agent Score	Customer Score					
<input type="radio"/> 0 (1 word)	<input type="radio"/> 0 (1 word)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input checked="" type="radio"/> 5 (2 words)</td> <td><input checked="" type="radio"/> 5 (2 words)</td> </tr> </table>	Agent Score	Customer Score	<input checked="" type="radio"/> 5 (2 words)	<input checked="" type="radio"/> 5 (2 words)		Keyword spotting is active for the interaction, words have been identified, and both channels have positive scores.
Agent Score	Customer Score					
<input checked="" type="radio"/> 5 (2 words)	<input checked="" type="radio"/> 5 (2 words)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input checked="" type="radio"/> -5 (1 word)</td> <td><input checked="" type="radio"/> -5 (1 word)</td> </tr> </table>	Agent Score	Customer Score	<input checked="" type="radio"/> -5 (1 word)	<input checked="" type="radio"/> -5 (1 word)		Keyword spotting is active for the interaction, words have been identified, and both channels have negative scores.
Agent Score	Customer Score					
<input checked="" type="radio"/> -5 (1 word)	<input checked="" type="radio"/> -5 (1 word)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input type="radio"/> 0 (0 words)</td> <td><input type="radio"/> 0 (0 words)</td> </tr> </table>	Agent Score	Customer Score	<input type="radio"/> 0 (0 words)	<input type="radio"/> 0 (0 words)		Keyword spotting was active for both channels but is now paused. No keywords were spotted when analysis was enabled.
Agent Score	Customer Score					
<input type="radio"/> 0 (0 words)	<input type="radio"/> 0 (0 words)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input type="radio"/> 0 (1 word)</td> <td><input type="radio"/> 0 (1 word)</td> </tr> </table>	Agent Score	Customer Score	<input type="radio"/> 0 (1 word)	<input type="radio"/> 0 (1 word)		Keyword spotting was active for both channels but is now paused. Keywords were spotted when analysis was enabled but no scores were accumulated.
Agent Score	Customer Score					
<input type="radio"/> 0 (1 word)	<input type="radio"/> 0 (1 word)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input checked="" type="radio"/> 10 (1 word)</td> <td><input checked="" type="radio"/> 10 (1 word)</td> </tr> </table>	Agent Score	Customer Score	<input checked="" type="radio"/> 10 (1 word)	<input checked="" type="radio"/> 10 (1 word)		Keyword spotting was active for both channels but is now paused. Keywords were spotted when analysis was enabled and both channels accumulated positive scores.
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<input checked="" type="radio"/> 10 (1 word)	<input checked="" type="radio"/> 10 (1 word)					
<table border="1"> <tr> <td>Agent Score</td> <td>Customer Score</td> </tr> <tr> <td><input checked="" type="radio"/> -5 (1 word)</td> <td><input checked="" type="radio"/> -5 (1 word)</td> </tr> </table>	Agent Score	Customer Score	<input checked="" type="radio"/> -5 (1 word)	<input checked="" type="radio"/> -5 (1 word)		Keyword spotting was active for both channels but is now paused. Keywords were spotted when analysis was enabled and both channels accumulated negative scores.
Agent Score	Customer Score					
<input checked="" type="radio"/> -5 (1 word)	<input checked="" type="radio"/> -5 (1 word)					

The following CIC call attributes indicate the state of keyword spotting for an interaction:

- Eic\_KwsAgentChannelAnalyzed
- Eic\_KwsCustomerChannelAnalyzed

These call attributes support the following values:

- No value - Keyword spotting was never available for this channel of the call.
- A - Keyword spotting is active for this channel of the call.
- S - Keyword spotting is not active currently but was active previously for this channel of the call.

# View Interaction Analyzer Statistics for an Agent

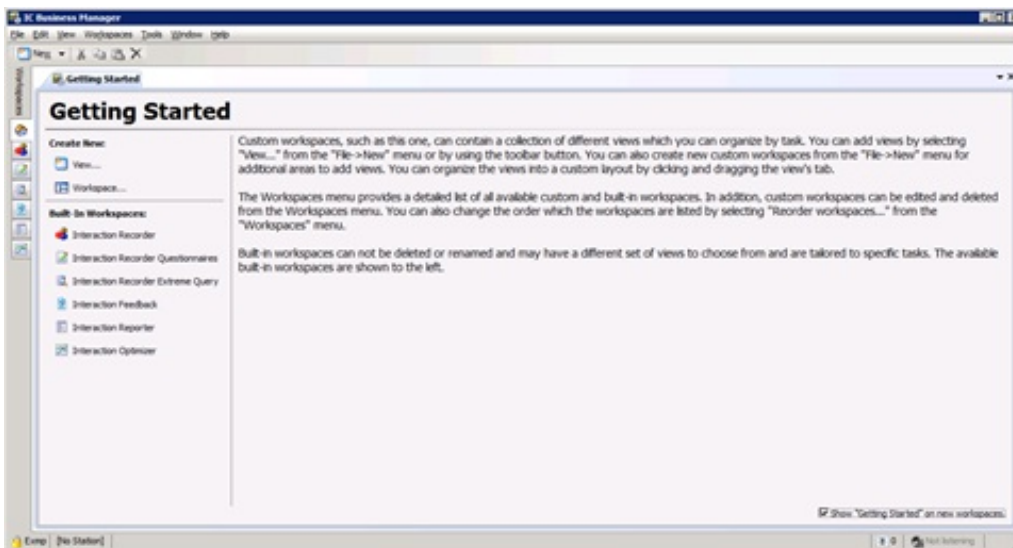
You can view the Interaction Analyzer average statistics for a single agent. These statistics provide you with the average positive and negative scores that the agent accumulates during interactions.

To view Interaction Analyzer statistics for an agent

1. Open IC Business Manager. The IC Business Manager logon dialog box appears.

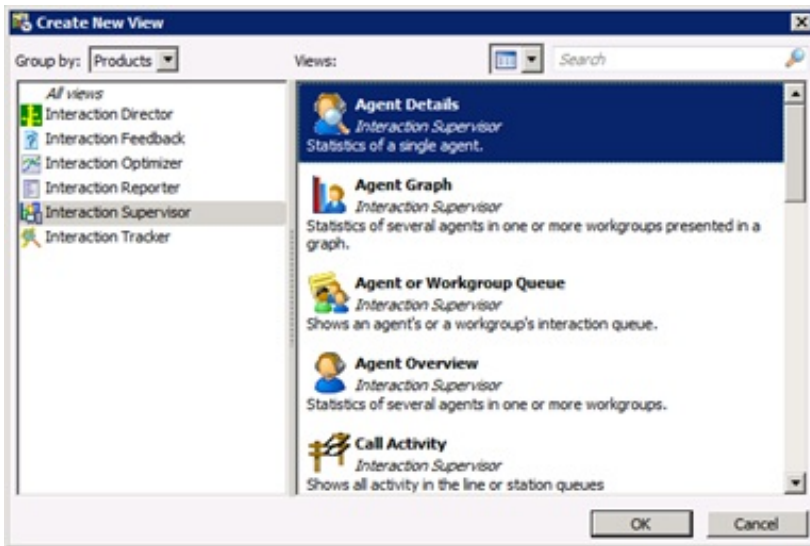


2. Type your credentials, specify the authenticating server, and then click **Logon**. The IC Business Manager window appears.



3. Click the **Default Workspace** tab, which appears as a house icon.
4. In the toolbar, click **New > View**. The **Create New View** window appears.
5. In the navigation pane, click **Interaction Supervisor**.
6. In the right pane, click **Agent Details**.





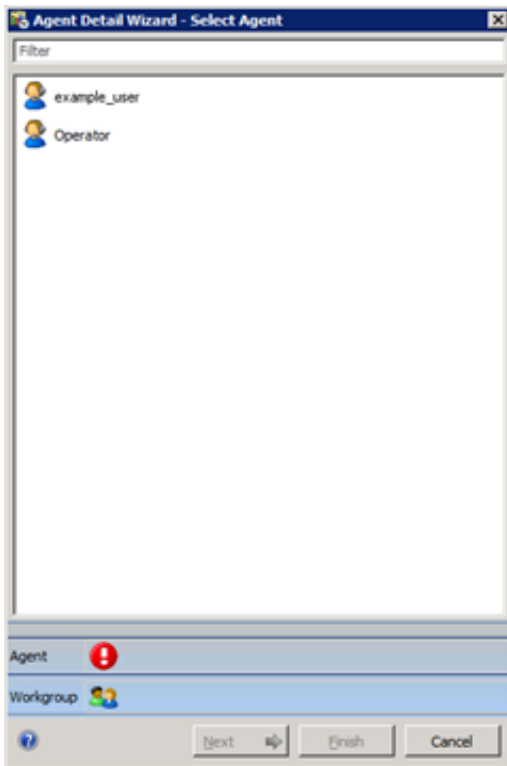
**Tip:**

You can also view Interaction Analyzer statistics for a workgroup by selecting **Workgroup Details** instead of **Agent Details**.

**Important!**

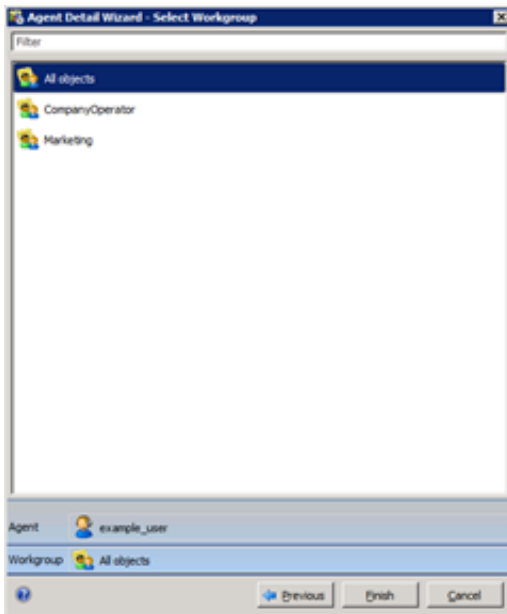
If an agent makes an outbound call on behalf of a workgroup or responds to a callback request, any Interaction Analyzer scores for that call are not included in the workgroup or queue statistics, such as **Lowest Active Agent Negative Score** and **Average Customer Positive Score**. This behavior is intended as CIC does not route those outbound calls through the ACD. However, for such outbound calls, Interaction Analyzer still analyzes the call, displays scores in any views of current interactions, and flags keywords appropriately in the resulting recordings.

7. Click OK. The **Agent Detail Wizard - Select Agent** dialog box appears.

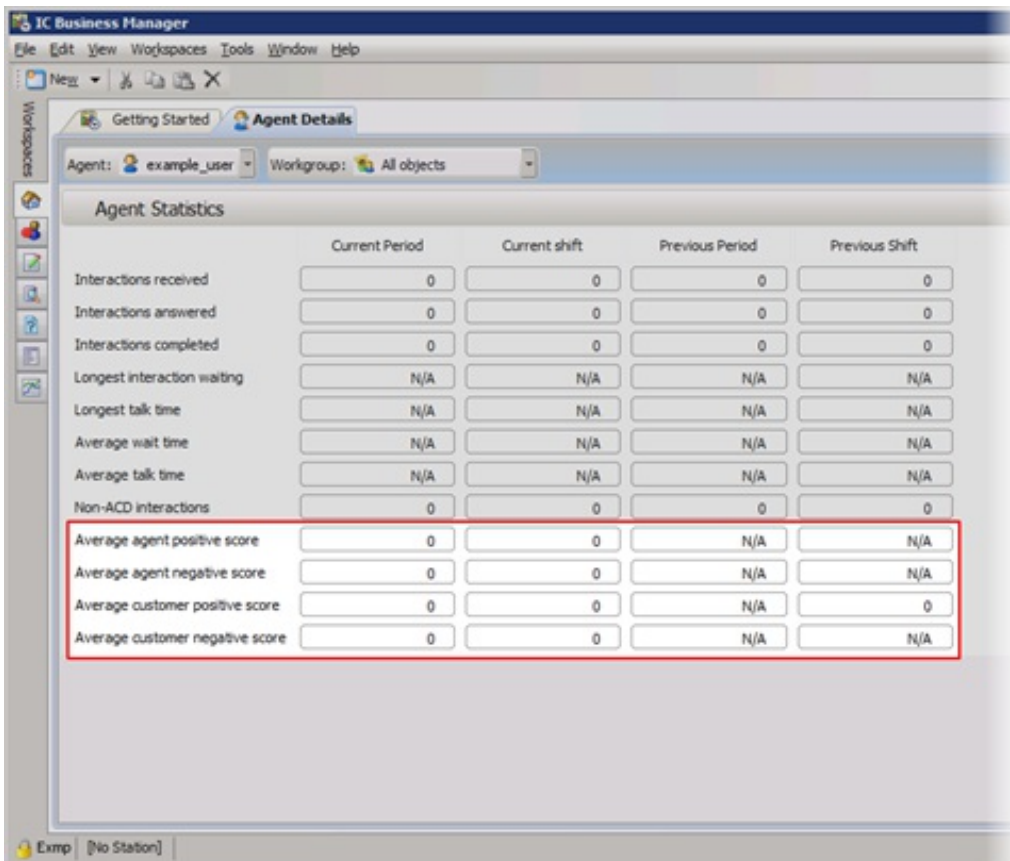


8. Click the agent for which to view the associated Interaction Analyzer statistics.
9. Click Next. The **Agent Detail Wizard - Select Workgroup** dialog box appears.





10. Click **All objects**.  
**Important!**  
 Averages for the selected agent calculate across all assigned workgroups only.
11. Click **Finish**. The **Agent Details** view appears for the selected agent.



**Tip:**

For descriptions of the agent statistics, see "Interaction Analyzer Agent Details Statistics" in [Interaction Analyzer Statistics Reference](#).

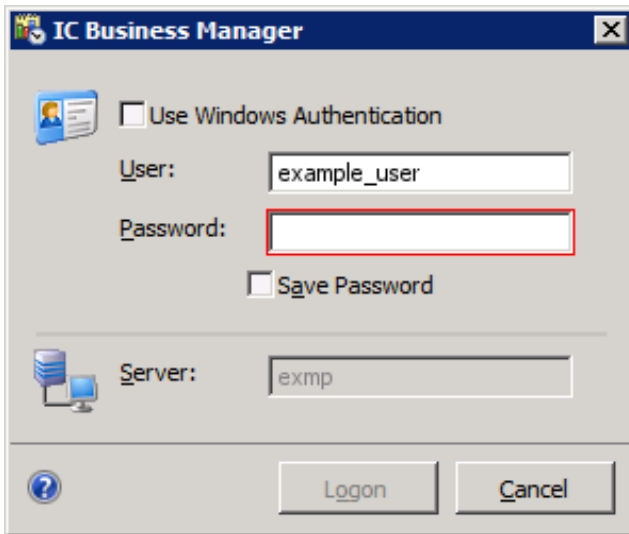
12. To view the statistics for a different agent, select that agent from the **Agent** list box.

# View Interaction Analyzer Statistics in a Line Graph

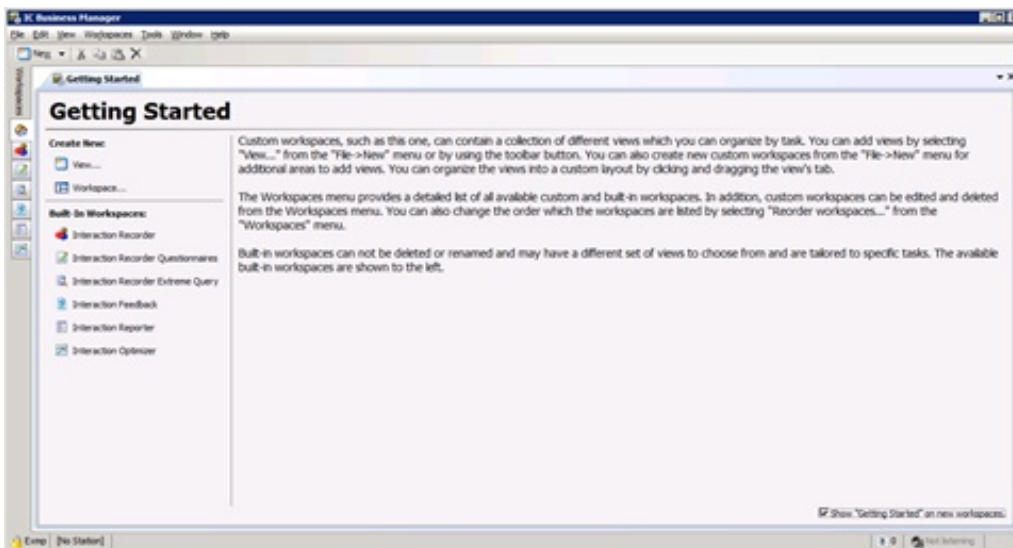
Interaction Supervisor allows you to view Interaction Analyzer statistics for a workgroup queue or a group of agents in a line graph. This line graph shows trends during periods and shifts.

To view Interaction Analyzer statistics in a line graph

1. Open IC Business Manager. The IC Business Manager logon dialog box appears.



2. Type your credentials, specify the authenticating server, and then click **Logon**. The IC Business Manager window appears.



3. Click the **Default Workspace** tab, which appears as a house icon.
4. In the toolbar, click **New > View**. The **Create New View** window appears.
5. In the **Group By** list box, click **Products**.
6. In the navigation pane, click **Interaction Supervisor**.
7. In the right pane, click one of the following views:
  - **Agent Graph**
  - **Workgroup Graph**
8. Click **OK**.
9. In the resulting dialog boxes, select the objects to view in the graph and then click **Next**.
10. Another dialog box in this selection process allows you to add statistics to the graph. Click the statistics to view and then click **Add**.

**Note:**

Interaction Analyzer statistics for graph reports are:

- **Average agent positive score** (agent)
- **Average agent negative score** (agent)
- **Average customer positive score** (agent)
- **Average customer negative score** (agent)
- **Lowest active agent negative score** (workgroup)
- **Lowest active customer negative score** (workgroup)

11. Click **Finish**. The graph appears.

# Interaction Analyzer Statistics Reference

Following are the definitions of the Interaction Analyzer statistics.

## Notes:

- The memory footprint (RAM Utilization) of StatServerAgent.exe has increased by 14% (~ 0.4 GB) because of the addition of the following Agent statistics:

Agent Keyword Spotted	Customer Keyword Spotted
Average Agent Negative Score	Total Agent Negative Score
Average Agent Positive Score	Total Agent Positive Score
Average Customer Negative Score	Total Customer Negative Score
Average Customer Positive Score	Total Customer Positive Score

- Since CIC does not route outbound calls through the ACD, the Interaction Analyzer workgroup statistics do not contain scores for outbound calls made on behalf of a workgroup or responses to callback requests.
- Transferred calls retain the scores generated for the first recipient of the interaction and accumulate based on the keyword sets of the second recipient. If the second recipient does not have keyword sets, Interaction Analyzer continues using the keyword sets of the first recipient.

## Interaction Analyzer queue columns

- **Agent Score** - Cumulative score, including positive and negative values for the agent in each interaction. If you place the cursor over the score, a tooltip appears that presents the positive score, the negative score, and keywords that Interaction Analyzer identified.
- **Customer Score** - Cumulative score, including positive and negative values for the customer in each interaction. If you place the cursor over the score, a tooltip appears that presents the positive score, the negative score, and keywords that Interaction Analyzer identified.

## Interaction Analyzer workgroup statistics

- **Highest active agent negative score** – Highest negative score that an agent has accumulated in an active interaction in this workgroup. This cumulative score does not include positive scores that occurred during the interaction.
- **Highest active customer negative score** – Highest negative score that a customer has accumulated in an active interaction in this workgroup. This cumulative score does not include positive scores that occurred during the interaction.
- **Highest active agent positive score** – Highest positive score that an agent has accumulated in an active interaction in this workgroup. This cumulative score does not include negative scores that occurred during the interaction.
- **Highest active customer positive score** – Highest positive score that a customer has accumulated in an active interaction in this workgroup. This cumulative score does not include negative scores that occurred during the interaction.
- **Lowest active agent negative score** – Lowest negative score that an agent has accumulated in an active interaction in this workgroup. This cumulative score does not include positive scores that occurred during the interaction.
- **Lowest active customer negative score** – Lowest negative score that a customer has accumulated in an active interaction in this workgroup. This cumulative score does not include positive scores that occurred during the interaction.
- **Lowest active agent positive score** – Lowest positive score that an agent has accumulated in an active interaction in this workgroup. This cumulative score does not include negative scores that occurred during the interaction.
- **Lowest active customer positive score** – Lowest positive score that a customer has accumulated in an active interaction in this workgroup. This cumulative score does not include negative scores that occurred during the interaction.

## Interaction Analyzer workgroup details statistics

- **Average agent negative score** - Average negative cumulative score for agent interactions in this workgroup. This cumulative score does not include positive scores that occurred during the interactions.
- **Average agent positive score** - Average positive cumulative score for agent interactions in this workgroup. This cumulative score does not include negative scores that occurred during the interactions.
- **Average customer negative score** - Average negative cumulative score for customer interactions that this workgroup handled. This cumulative score does not include positive scores that occurred during the interactions.

- **Average customer positive score** - Average positive cumulative score for customer interactions in this workgroup. This cumulative score does not include negative scores that occurred during the interactions.

**Note:**

The previous statistics are affected only when the calls are in this workgroup queue. If a transferred call originally had negative scores but only has positive scores while in this workgroup queue, these statistics display high positive scores.

- **Total agent negative score** – Total negative cumulative score for agent interactions in this workgroup. This cumulative score does not include positive scores that occurred during the interactions.
- **Total agent positive score** – Total positive cumulative score for agent interactions in this workgroup. This cumulative score does not include negative scores that occurred during the interactions.
- **Total customer negative score** – Total negative cumulative score for customer interactions that this workgroup handled. This cumulative score does not include positive scores that occurred during the interactions.
- **Total customer positive score** – Total positive cumulative score for customer interactions in this workgroup. This cumulative score does not include negative scores that occurred during the interactions.

## Interaction Analyzer agent details statistics

- **Agent Keyword Spotted** – Last agent keyword spotted during the last interaction that this agent handled.
- **Average agent negative score** – Average negative score that this agent has accumulated in all interactions. This cumulative score does not include positive scores that occurred during the interactions.
- **Average agent positive score** – Average positive score that this agent has accumulated in all interactions. This cumulative score does not include negative scores that occurred during the interactions.
- **Average customer negative score** – Average negative cumulative score for customer interactions that this agent handled. This cumulative score does not include positive scores that occurred during the interactions.
- **Average customer positive score** – Average positive cumulative score for customer interactions that this agent handled. This cumulative score does not include negative scores that occurred during the interactions.
- **Customer Keyword Spotted** – Last customer keyword spotted during the last interaction that this agent handled.
- **Total agent negative score** – Total negative score that this agent has accumulated in all interactions. This cumulative score does not include positive scores that occurred during the interactions.
- **Total agent positive score** – Total positive score that this agent has accumulated in all interactions. This cumulative score does not include negative scores that occurred during the interactions.
- **Total customer negative score** – Total negative score that this customer has accumulated in all interactions. This cumulative score does not include positive scores that occurred during the interactions.
- **Total customer positive score** – Total positive score that this customer has accumulated in all interactions. This cumulative score does not include negative scores that occurred during the interactions.

# Locate and Review Analyzed Interaction Recordings

After an analyzed interaction completes, CIC saves the recording so that you can review it. You can search for analyzed interaction recordings using the following methods in IC Business Manager:

- [Search Interaction Analyzer Keyword Recordings by Score](#)
- [Search Interaction Analyzer Recordings by Analyzed Channel](#)
- [Search Interaction Analyzer Recordings by Category](#)
- [Search Interaction Analyzer Recordings by Keyword](#)

For more information, see:

- [Analyzed Recordings in Interaction Recorder Client](#)
- [CIC Database Fields and Values for Recordings With Interaction Analyzer](#)

## Search Interaction Analyzer Keyword Recordings by Score

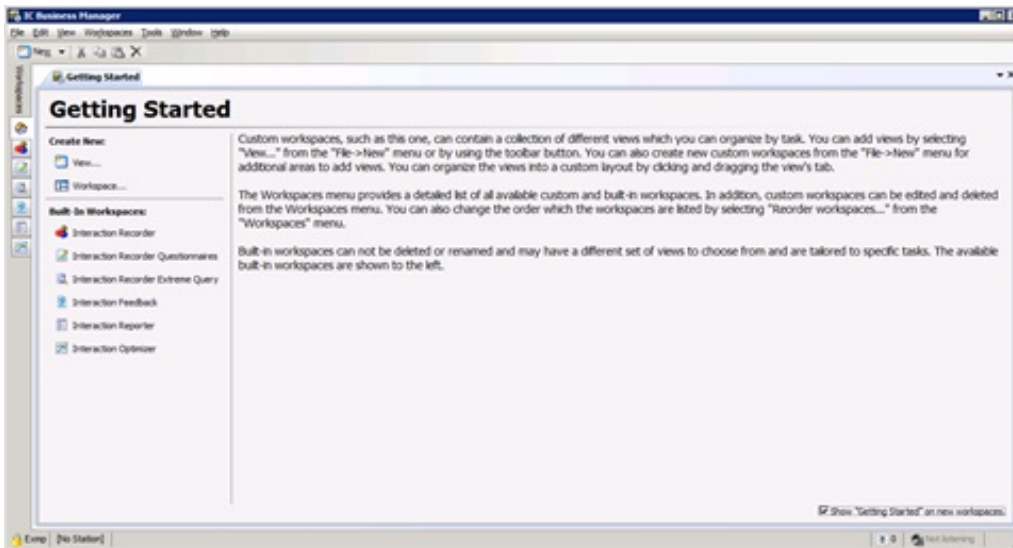
You can search all recordings of interactions where Interaction Analyzer inserted tags to identify the locations where defined keywords were spoken.

To use this feature, you must have the following product licenses activated:

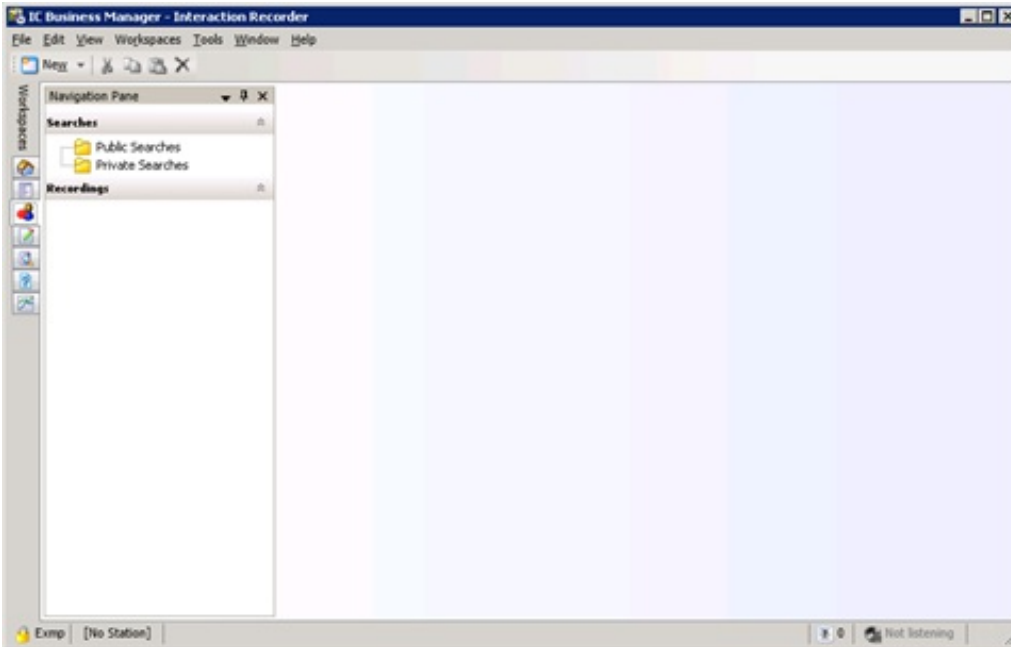
- Interaction Recorder
- IC Business Manager

To search Interaction Analyzer recordings by score

1. Open IC Business Manager and log on. The **IC Business Manager** window appears.



2. In the navigation pane, click the **Interaction Recorder** icon . The **Interaction Recorder** workspace appears.



3. In the **Navigation** pane, click the **Public Searches** or **Private Searches** folder.

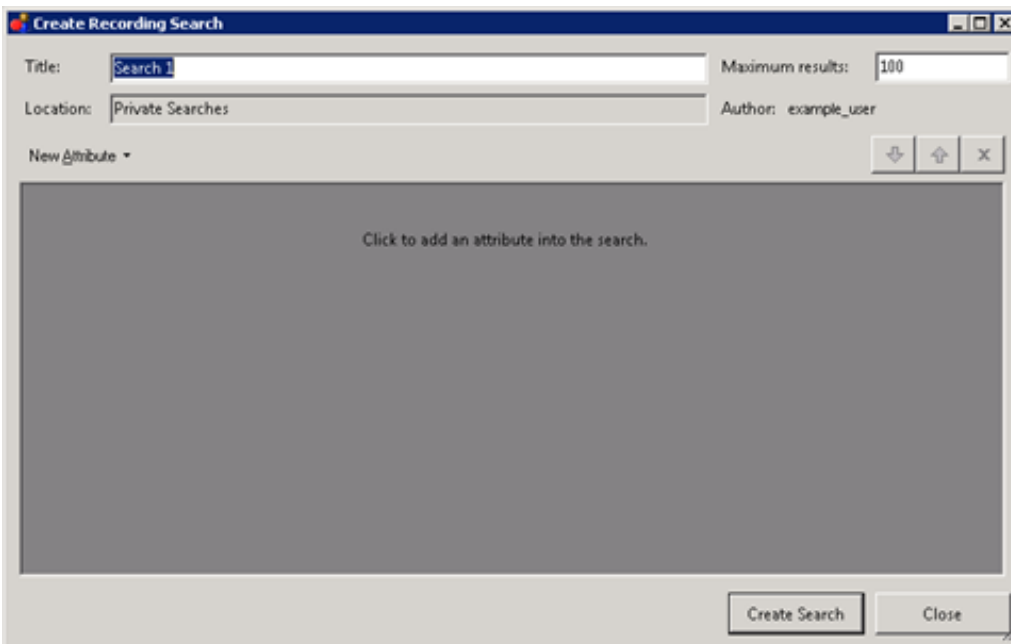
**Note:**

Both **Private Searches** and **Public Searches** are on the CIC server. Private searches are only available to the user who created them. Public searches are available for anyone who uses IC Business Manager in the CIC environment.

Public searches defined previously appear in the right pane. If there are no searches and you have the appropriate permissions to create searches, a **Create a search** hyperlink appears.

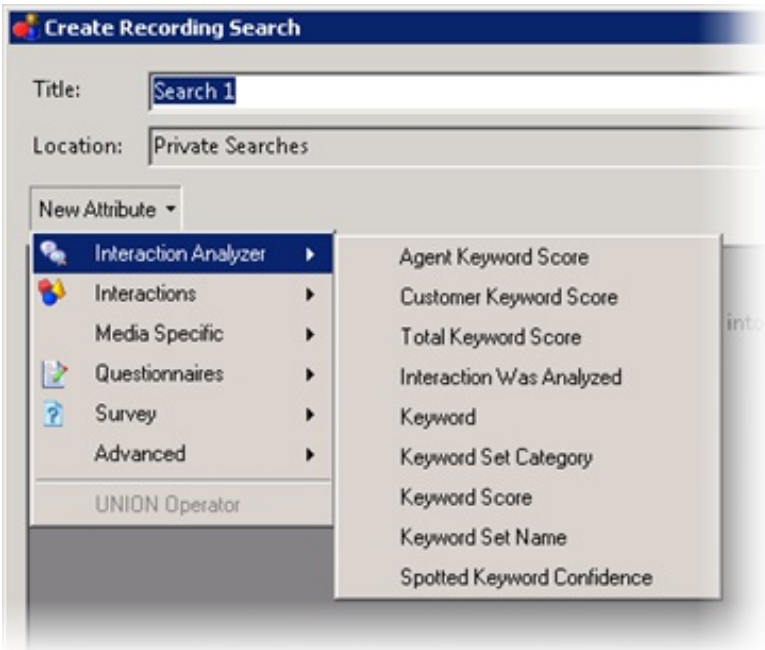
4. Do one of the following:
  - Right-click the **Public Searches** or **Private Searches** folder in the **Navigation** pane and then click **New > Recording Search** from the resulting shortcut menu.
  - If it is available in the right pane, click the **Create a search** hyperlink and then click **New Recording Search** from the resulting shortcut menu.

The **Create Recording Search** dialog box appears.

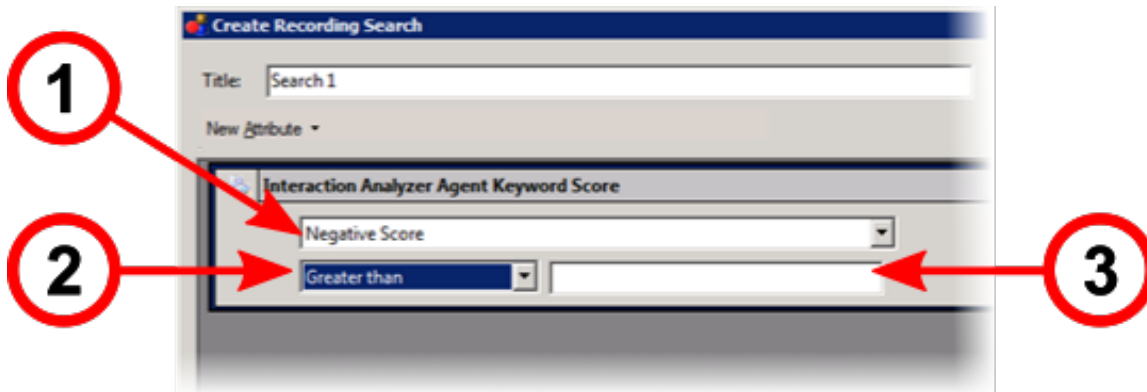


5. In the **Title** text box, type a name for this search.
6. In the **Maximum results** text box, type the number of records to retrieve.
7. Click **New Attribute** and then click one of the following options in the resulting shortcut menu:
  - **Interaction Analyzer > Agent Keyword Score**
  - **Interaction Analyzer > Customer Keyword Score**

- Interaction Analyzer > Keyword Score



A definition entry for the selected attribute appears.




- If you selected **Agent Keyword Score**, **Customer Keyword Score**, **Total Keyword Score**, or **Keyword Score**, in the **[Score Type]** list box, click one of the following:
  - Positive Score
  - Negative Score
  - Total Score
- 8. In the **[Operator]** list box, click the operator to use for this search.



<b>Contains</b>	Allows you to find recording category tags that contain a specific string. For example, if some of your category names contain "Agent," you can specify that string to find recordings where Interaction Analyzer found keywords in categories that contain "Agent" in the category name.
<b>Does not contain</b>	Allows you to find recording category tags that do not contain a specific string. For example, if your category names contain "Agent," you can specify that string to exclude recordings where Interaction Analyzer found keywords in categories that do not contain "Agent" in the category name.
<b>Equal to</b>	Allows you to find recording category tags that match the exact category name. For example, if you have a category of "Agent greetings - Bad," specify that exact string in the box to match the category name that is present in the available recordings.
<b>Is empty</b>	Allows you to display recordings that have no category name tags associated to the recordings.
<b>Is not empty</b>	Allows you to display recordings that have any category name tags associated with the recordings.
<b>Not equal to</b>	Allows you to find recording category tags that don't match the exact category name. For example, if you want to view all recordings of any category except "Cursing," specify "Cursing" in the box.

9. If necessary, type a score value in the **[Score Value]** box.**[Operator]**

**Tip:**

To add search criteria, click the Add icon .

10. Click **Create Search**. The recorded interactions that match your search criteria appear in the right pane, up to the maximum count that you specified previously.

11. To view an interaction, double-click it.

For more information about viewing an interaction recording, see [Analyzed Recordings in Interaction Recorder Client](#).

## Search Interaction Analyzer Recordings by Analyzed Channel

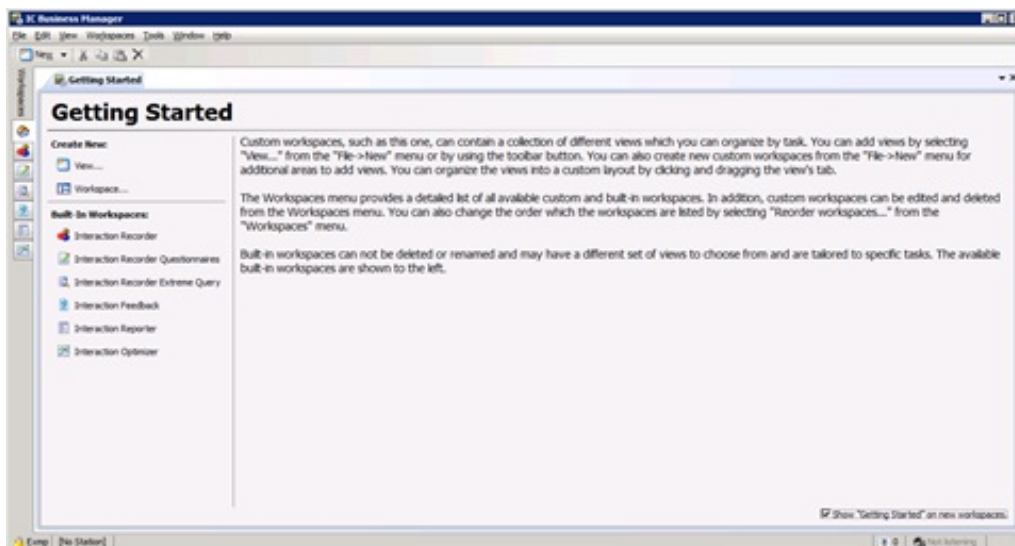
You can search all recordings of interactions where Interaction Analyzer processed one or both channels during the interaction.

To use this feature, you must have the following product licenses activated:

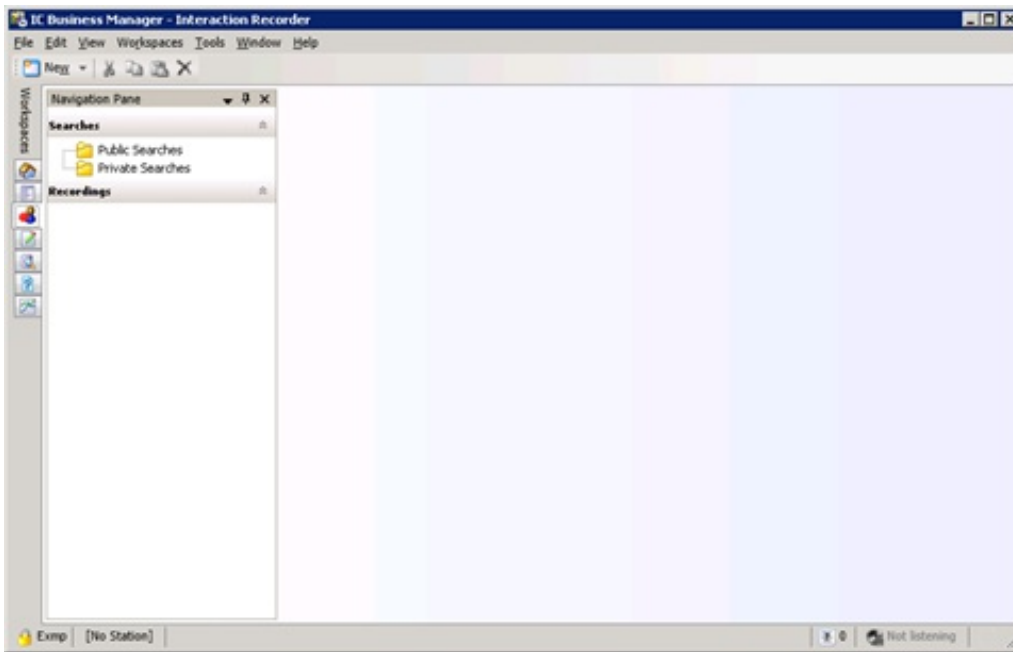
- Interaction Recorder
- IC Business Manager

To search Interaction Analyzer recordings by channel

1. Open IC Business Manager and log on. The **IC Business Manager** window appears.



2. In the navigation pane, click the **Interaction Recorder** icon . The **Interaction Recorder** workspace appears.



3. In the **Navigation** pane, click the **Public Searches** or **Private Searches** folder.

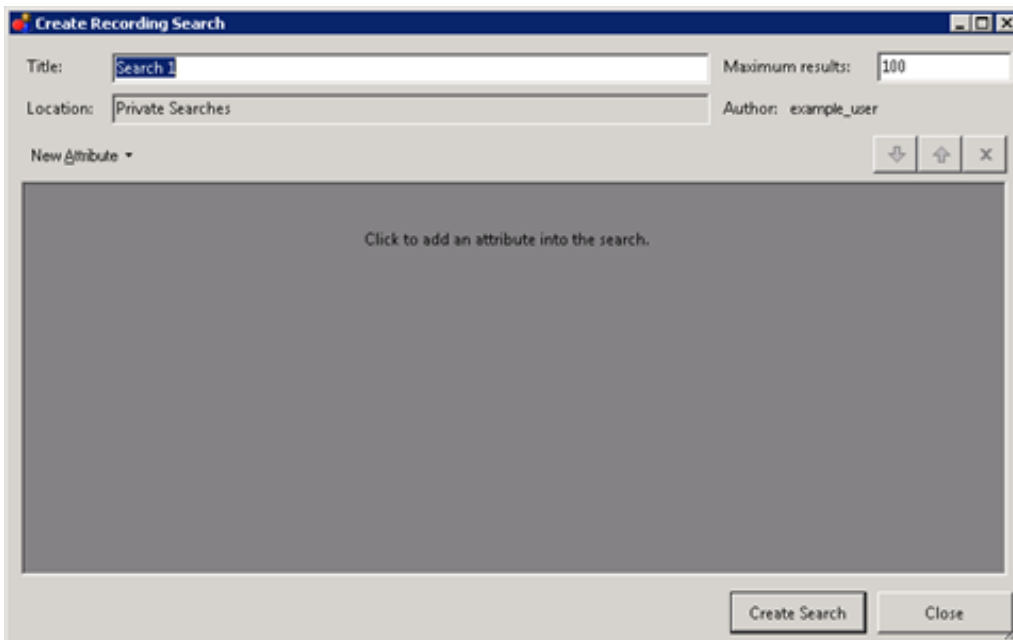
**Note:**

Both **Private Searches** and **Public Searches** are on the CIC server. Private searches are only available to the user who created them. Public searches are available for anyone who uses IC Business Manager in the CIC environment.

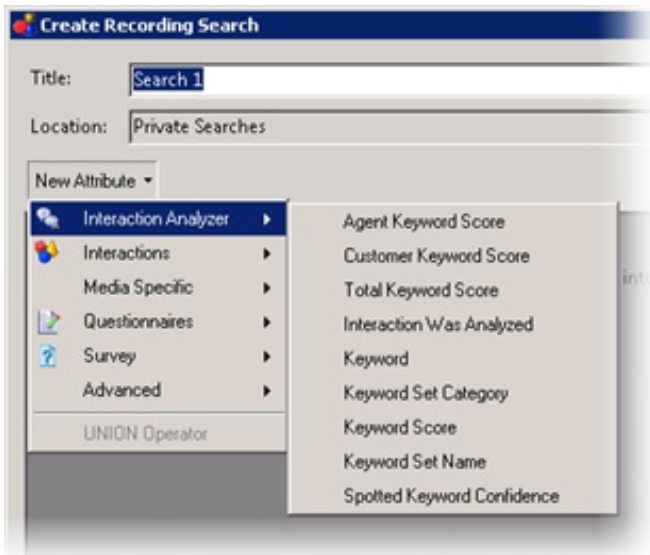
Public searches defined previously appear in the right pane. If there are no searches and you have the appropriate permissions to create searches, a **Create a search** hyperlink appears.

4. Do one of the following:
- Right-click the **Public Searches** or **Private Searches** folder in the **Navigation** pane and then click **New > Recording Search** from the resulting shortcut menu.
  - If it is available in the right pane, click the **Create a search** hyperlink and then click **New Recording Search** from the resulting shortcut menu.

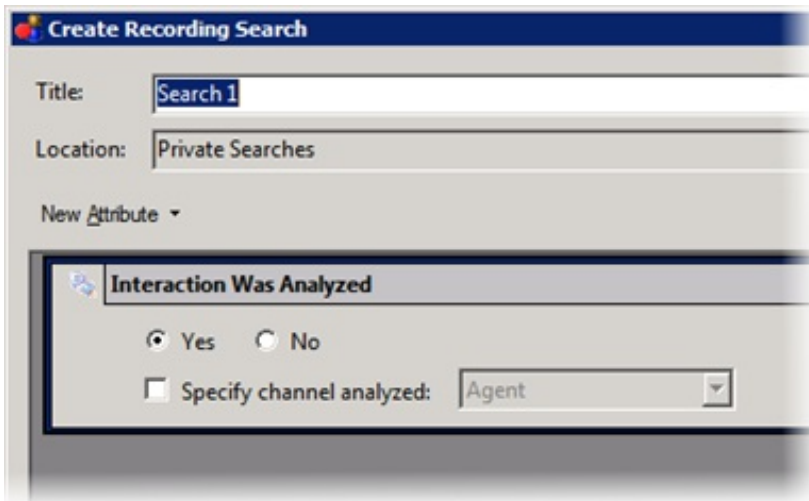
The **Create Recording Search** dialog box appears.



5. In the **Title** text box, type a name for this search.
6. In the **Maximum results** text box, type the number of records to retrieve.
7. Click **New Attribute** and then click **Interaction Analyzer > Interaction Was Analyzed**.



A definition entry for the selected attribute appears.



8. To display a list of recorded interactions that Interaction Analyzer processed for keywords, click the **Yes** option. Otherwise, click the **No** option.
9. Do one of the following:
  - To display a list of only those recorded interactions for a specific channel, select the **Specify channel analyzed** check box and then, in the list box click either **Agent** or **Customer**.
  - To display a list of recorded interactions where Interaction Analyzer processed both channels, clear the **Specify channel analyzed** check box and then, in the list box click either **Agent** or **Customer**.
10. Click **Create Search**. The recorded interactions that match your search criteria appear in the right pane, up to the maximum count that you specified previously.
11. To view an interaction, double-click it.

For more information about viewing an interaction recording, see [Analyzed Recordings in Interaction Recorder Client](#).

## Search Interaction Analyzer Recordings by Category

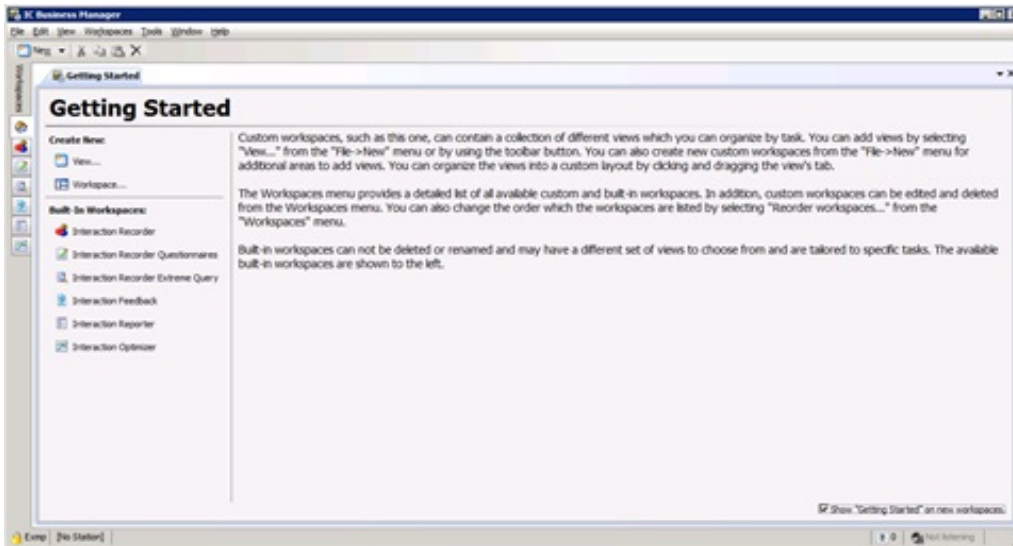
You can access recordings of interactions where Interaction Analyzer inserted tags to identify the locations in which defined keywords of a specific keyword set category were spoken.

To use this feature, you must have the following product licenses activated:

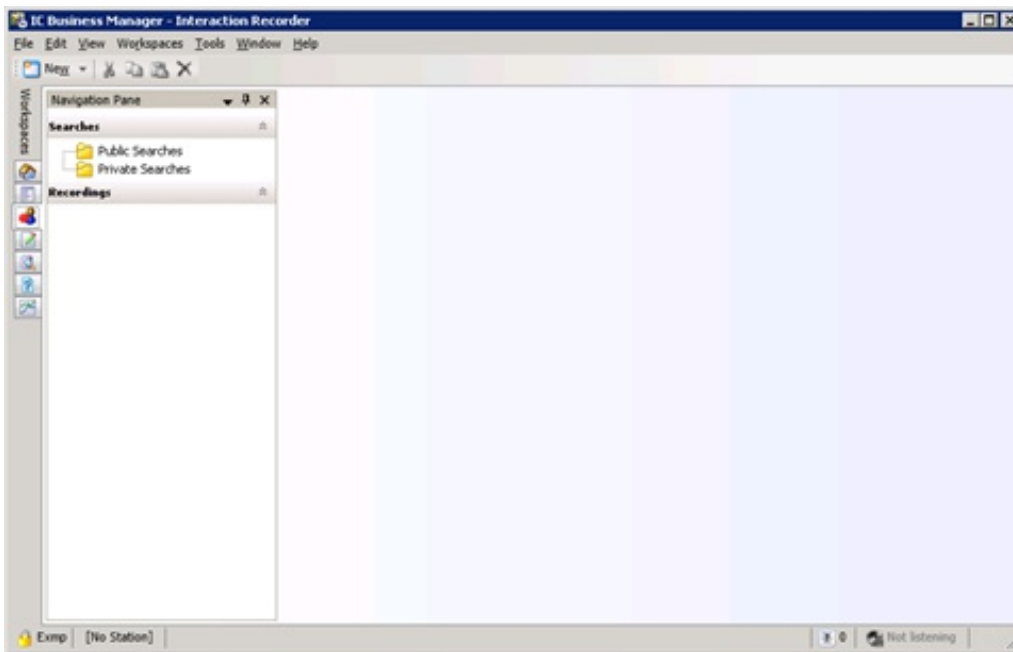
- Interaction Recorder
- IC Business Manager

**To search Interaction Analyzer recordings by category**

1. Open IC Business Manager and log on. The **IC Business Manager** window appears.



2. In the navigation pane, click the Interaction Recorder icon . The Interaction Recorder workspace appears.



3. In the **Navigation** pane, click the **Public Searches** or **Private Searches** folder.

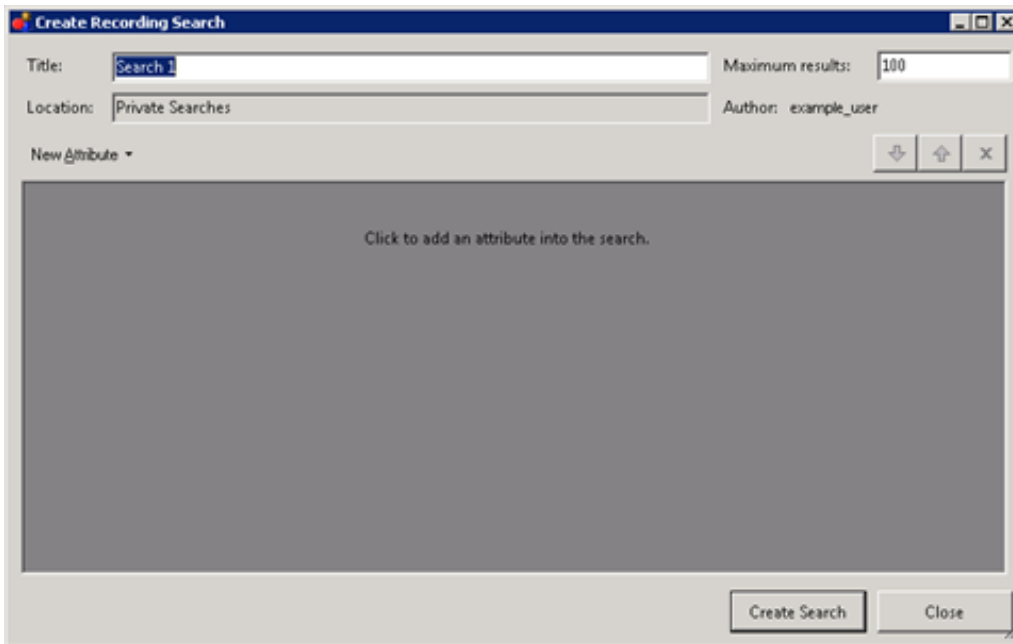
**Note:**

Both **Private Searches** and **Public Searches** are on the CIC server. Private searches are only available to the user who created them. Public searches are available for anyone who uses IC Business Manager in the CIC environment.

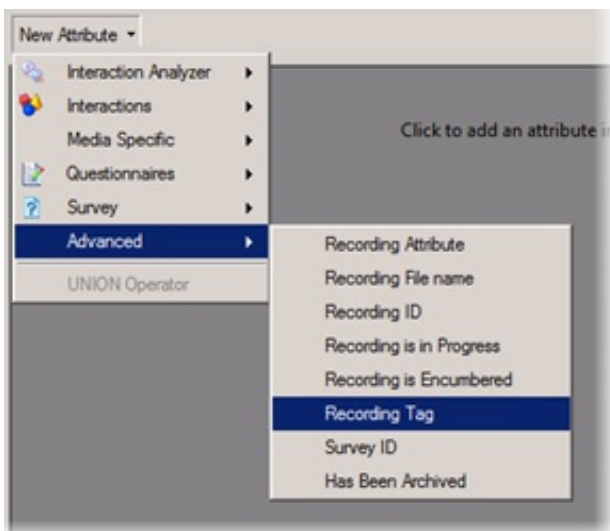
Public searches defined previously appear in the right pane. If there are no searches and you have the appropriate permissions to create searches, a **Create a search** hyperlink appears.

4. Do one of the following:
  - Right-click the **Public Searches** or **Private Searches** folder in the **Navigation** pane and then click **New > Recording Search** from the resulting shortcut menu.
  - If it is available in the right pane, click the **Create a search** hyperlink and then click **New Recording Search** from the resulting shortcut menu.

The **Create Recording Search** dialog box appears.



5. In the **Title** text box, type a name for this search.
6. In the **Maximum results** text box, type the number of records to retrieve.
7. Click **New Attribute** and then click **Advanced > Recording Tag**.



The **Recording Tag** attribute definition entry appears.



8. In **[Operator]** list box, click the operator to use for this search.

<b>Contains</b>	Allows you to find recording category tags that contain a specific string. For example, if some of your category names contain "Agent," you can specify that string to find recordings where Interaction Analyzer found keywords in categories that contain "Agent" in the category name.
<b>Does not contain</b>	Allows you to find recording category tags that do not contain a specific string. For example, if your category names contain "Agent," you can specify that string to exclude recordings where Interaction Analyzer found keywords in categories that do not contain "Agent" in the category name.
<b>Equal to</b>	Allows you to find recording category tags that match the exact category name. For example, if you have a category of "Agent greetings - Bad," specify that exact string in the box to match the category name that is present in the available recordings.
<b>Is empty</b>	Allows you to display recordings that have no category name tags associated to the recordings.
<b>Is not empty</b>	Allows you to display recordings that have any category name tags associated with the recordings.
<b>Not equal to</b>	Allows you to find recording category tags that don't match the exact category name. For example, if you want to view all recordings of any category except "Cursing," specify "Cursing" in the box.

- If a box is located to the right of the list box specifying the operator, enter the string that you want to use to include or exclude recordings.

**Note:**

The available categories are not displayed in the list for this box. Manually enter a string of characters that matches the name of the keyword set category.

- Click **Create Search**. The recorded interactions that match your search criteria appear in the right pane, up to the maximum count that you specified previously.
- To view an interaction, double-click it.

For more information about viewing an interaction recording, see [Analyzed Recordings in Interaction Recorder Client](#).

**Interaction Analyzer Technical Reference**

## Search Interaction Analyzer Recordings by Keyword

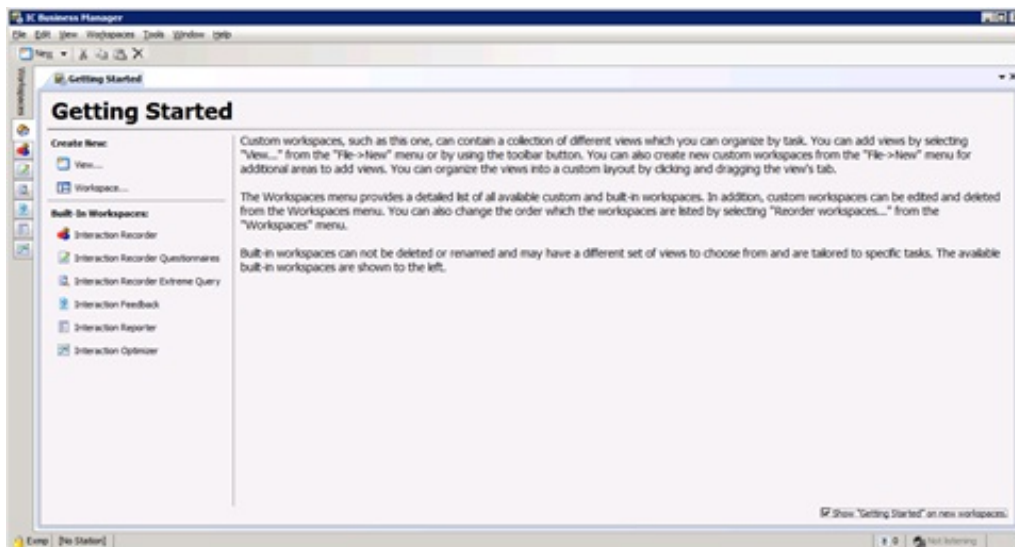
You can find spotted instances of specific keywords in all recordings of interactions that Interaction Analyzer processed.

To use this feature, you must have the following product licenses activated:

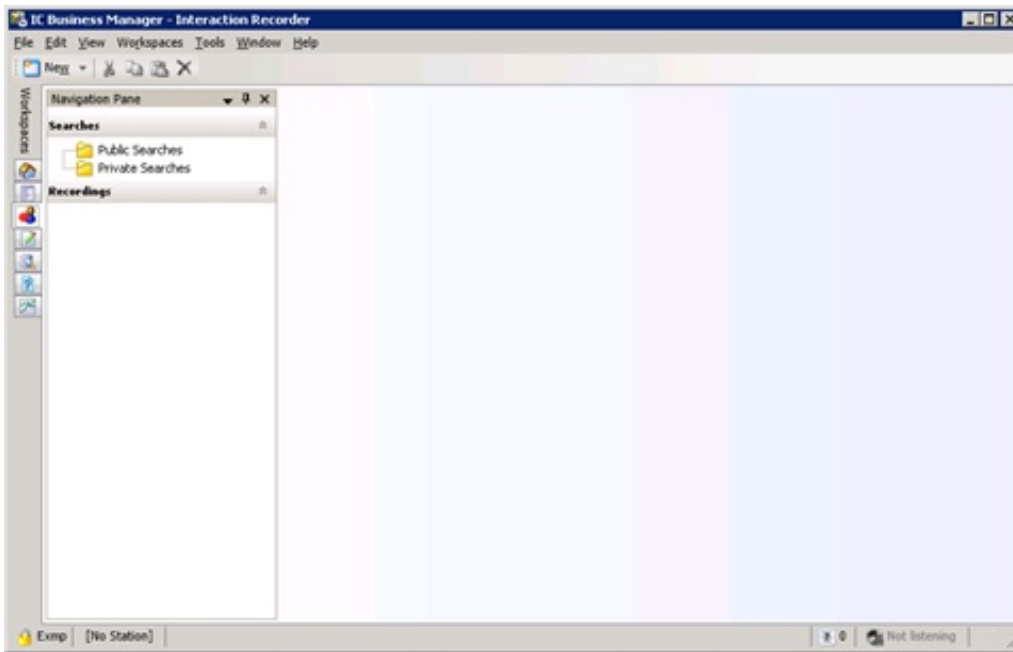
- Interaction Recorder
- Interaction Center Business Manager

To search Interaction Analyzer recordings by keyword

- Open IC Business Manager and log on. The **IC Business Manager** window appears.



2. In the navigation pane, click the **Interaction Recorder** icon . The **Interaction Recorder** workspace appears.



3. In the **Navigation** pane, click the **Public Searches** or **Private Searches** folder.

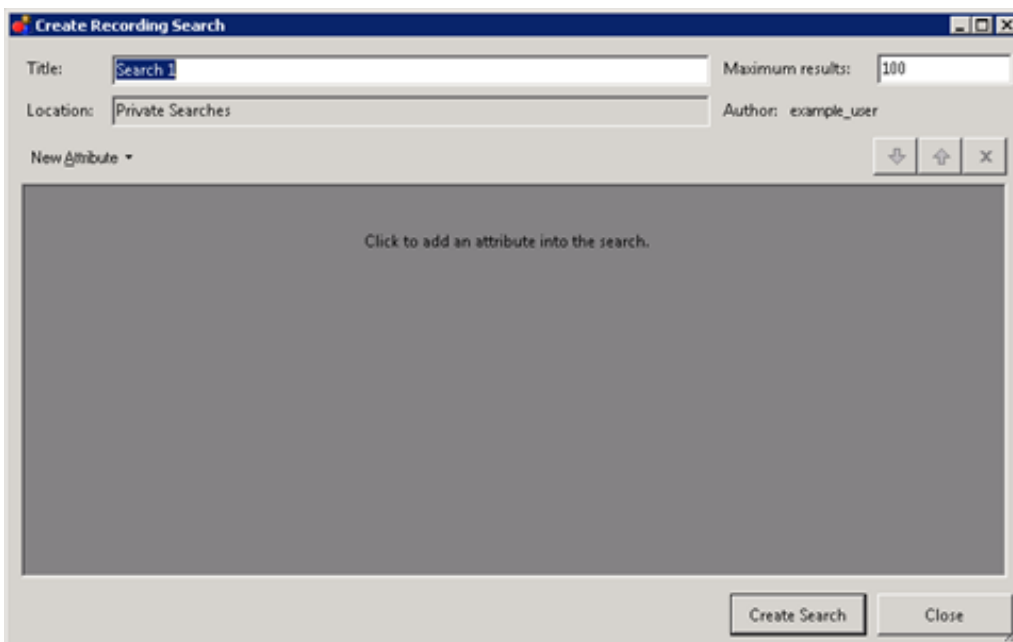
**Note:**

Both **Private Searches** and **Public Searches** are on the CIC server. Private searches are only available to the user who created them. Public searches are available for anyone who uses IC Business Manager in the CIC environment.

Public searches defined previously appear in the right pane. If there are no searches and you have the appropriate permissions to create searches, a **Create a search** hyperlink appears.

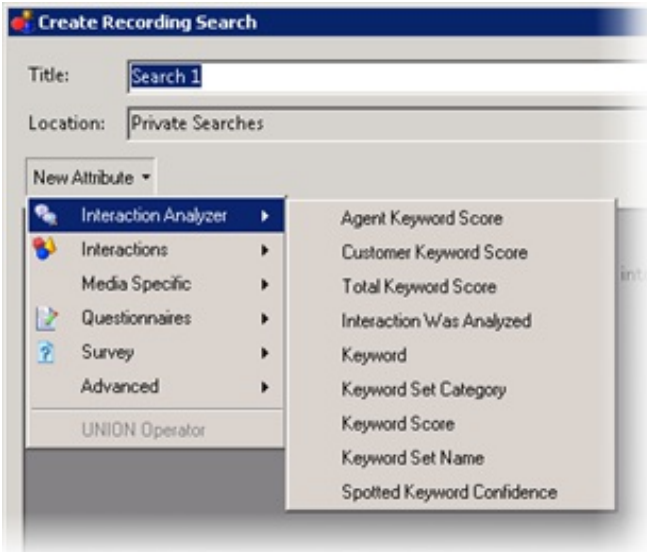
4. Do one of the following:
- Right-click the **Public Searches** or **Private Searches** folder in the **Navigation** pane and then click **New > Recording Search** from the resulting shortcut menu.
  - If it is available in the right pane, click the **Create a search** hyperlink and then click **New Recording Search** from the resulting shortcut menu.

The **Create Recording Search** dialog box appears.

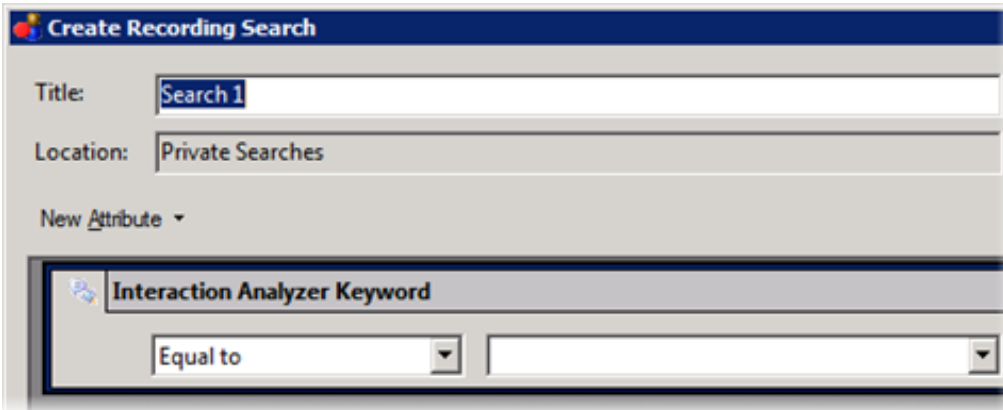


5. In the **Title** text box, type a name for this search.
6. In the **Maximum results** text box, type the number of records to retrieve.
7. Click **New Attribute** and then click **Interaction Analyzer > Keyword**.





A definition entry for the selected attribute appears.



8. In the [Operator] list box, click the operator to use for this search.

<b>Contains</b>	Allows you to find recording category tags that contain a specific string. For example, if some of your category names contain "Agent," you can specify that string to find recordings where Interaction Analyzer found keywords in categories that contain "Agent" in the category name.
<b>Does not contain</b>	Allows you to find recording category tags that do not contain a specific string. For example, if your category names contain "Agent," you can specify that string to exclude recordings where Interaction Analyzer found keywords in categories that do not contain "Agent" in the category name.
<b>Equal to</b>	Allows you to find recording category tags that match the exact category name. For example, if you have a category of "Agent greetings - Bad," specify that exact string in the box to match the category name that is present in the available recordings.
<b>Is empty</b>	Allows you to display recordings that have no category name tags associated to the recordings.
<b>Is not empty</b>	Allows you to display recordings that have any category name tags associated with the recordings.
<b>Not equal to</b>	Allows you to find recording category tags that don't match the exact category name. For example, if you want to view all recordings of any category except "Cursing," specify "Cursing" in the box.

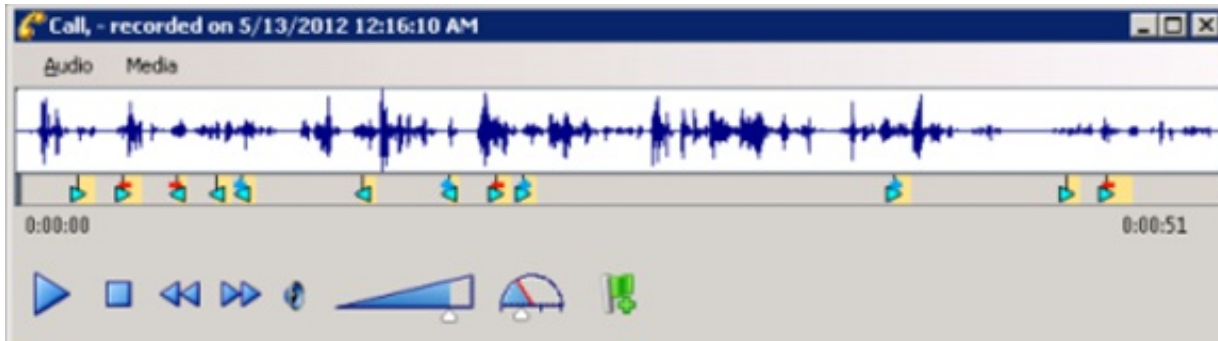
9. In the [Keyword] list box, type (up to 128 characters) or click the keyword for which to search. The list box displays all keywords in Interaction Analyzer keyword sets and those that exist in the CIC database.
10. Click **Create Search**. The recorded interactions that match your search criteria appear in the right pane, up to the maximum count that you specified previously.
11. To view an interaction, double-click it.

For more information about viewing an interaction recording, see [Analyzed Recordings in Interaction Recorder Client](#).



# Analyzed Recordings in Interaction Recorder Client

The Interaction Recorder Client appears with the selected recording.



**Tip:**

You can use the keyword triangle icons in Interaction Recorder client in the following methods:

- If you click a triangle icon, the cursor moves to the beginning of that keyword instance in the recording so that you can hear the keyword spoken in context.
- If you rest your mouse on a triangle icons, a tooltip appears with the identified keyword.

A light blue triangle icon identifies each instance of a spoken keyword. The triangle icons represent the speaker and the type of score associated to the keyword, as described in the following table:

Keyword icon	Description
	The agent said a keyword with a score of zero.
	The agent said a keyword with a negative score.
	The agent said a keyword with a positive score.
	The customer said a keyword with a score of zero.
	The customer said a keyword with a negative score.
	The customer said a keyword with a positive score.

## CIC Database Fields and Values for Recordings With Interaction Analyzer

CIC saves recordings of interactions, including those interactions that Interaction Analyzer processed. Statistics of those recordings are in the CIC database. The following table lists the database fields that are related to the customer channel in recordings that Interaction Analyzer processed.

CIC Database Field	Value
IR_RecordingMedia.KeywordCustomerScorePositive	<ul style="list-style-type: none"><li>A value of 0 (zero) indicates that Interaction Analyzer analyzed the channel of the interaction but didn't find any keywords.</li><li>A null (empty) value indicates that Interaction Analyzer didn't analyze the channel of the interaction.</li></ul>
IR_RecordingMedia.KeywordCustomerScoreNegative	
IR_RecordingMedia.KeywordAgentScorePositive	
IR_RecordingMedia.KeywordAgentScoreNegative	

# Interaction Analyzer Reports

CIC provides the following reports for Interaction Analyzer:

- Analyzer Scoring Detail Report
- Keyword Hit Report

**Note:**

For more information about these Interaction Analyzer reports, see the [Reporting Help](#).

## Analyzer Scoring Detail Report

The Analyzer Scoring Detail Report provides historical Analyzer scoring data on agent and customer cumulative scores for contact center management. The report provides insight into predominance of agent positive and negative keywords compared to customer positive and negative keywords.

For more information about this report, see the following topics in the *Reporting Help*.

- "Analyzer Scoring Detail Report"
- "Analyzer Scoring Detail Report Help"
- "Analyzer Scoring Detail Report Filter"

## Keyword Hit Report

The Keyword Hit report displays detail and summary views of keyword hits that Analyzer keyword categories identified over a specified period of time. A bar chart reporting on the percentage of recordings containing hits from Keyword categories and a chart showing the count and percent of recordings that contain keyword hits by category appear. The report has hyperlinks to drill down to a Keyword Detail view and an Interaction Detail view for more information on keyword hits within each call.

For more information about this report, see the following topics in the *Reporting Help*.

- "Keyword Hit Report"
- "Keyword Hit Report Help"
- "Keyword Hit Report Filter"

# Troubleshoot Interaction Analyzer

The following information provides guidance for specific issues with Interaction Analyzer.

## Interaction Analyzer diagnostic recordings

In some instances, Interaction Analyzer does not identify keywords. You can enable diagnostic recordings to help determine the accuracy problem as regular recordings mix both sides of the conversation, which can make it difficult to discern each channel.

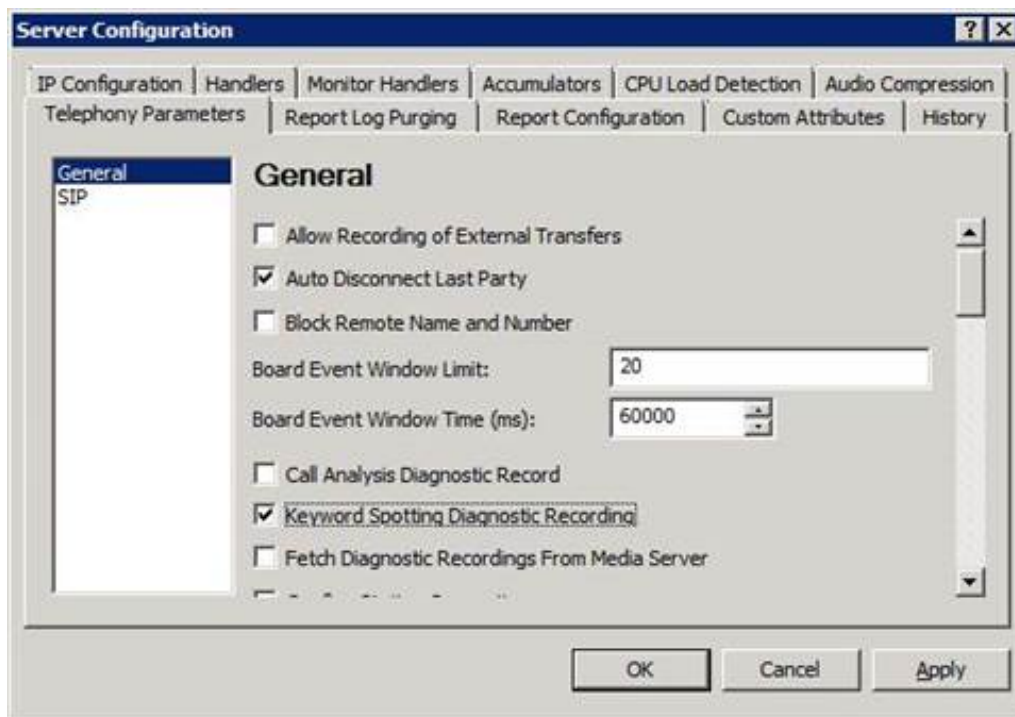
Diagnostic recordings, unlike typical recordings, are split into two channels—one for the agent and one for the customer—if Interaction Analyzer is identifying keywords on both channels. Located on Interaction Media Server as `.wav` files in audio/PCMU format, diagnostic recordings allow you to review a channel of the conversation to determine when keywords are said and what could be causing the lack of identification, such as specific pronunciations.

The diagnostic recordings are in the following location on Interaction Media Server:

```
\tracelogs
  \<date>
    \Diagnostics
      \<LastTwoDigitsOfCallID>
        \<CallID>_<16RandomHexCharacters>_ca.wav
```

If, during a diagnostic recording, an agent places the call on hold or transfers it, the current diagnostic recording ends and Interaction Analyzer starts a new diagnostic recording. If the storage device for diagnostic recordings has less than 15% free space, Interaction Analyzer suspends creation of diagnostic recordings.

To enable diagnostic recordings, select the **Keyword Spotting Diagnostic Recording** check box in the **Server Configuration** dialog box in Interaction Administrator.



## Failure to identify any keywords

If Interaction Analyzer does not identify any keywords in interactions, consider the following actions:

- Ensure that network port 8098 is open on all Interaction Media Servers, the CIC server, and any involved network nodes. These systems use port 8098 to deliver files that are necessary components of Interaction Analyzer. If port 8098 is blocked on any system, remove the port restriction and restart the affected Interaction Media Servers. The restart allows Interaction Media Server to retrieve Interaction Analyzer files from the CIC server.
- Ensure that the following files are present on the CIC server:

- <drive>:I3ICResources\i3ca\acoustic\_model.i3serialize
- <drive>:\I3\IC\Resources\i3ca\lexicon.i3serialize

If these files are not present, contact PureConnect Customer Care.

- Ensure that the language specified in the keyword set matches the `EIC_LANGUAGE` attribute for a call. If the language of a keyword set differs from the language call attribute, Interaction Analyzer does not identify any keywords. You can set the `EIC_LANGUAGE` call attribute through multiple methods. For more information about languages, see [Language Support for Interaction Analyzer Keyword Spotting](#).
- If you are attempting to spot keywords in a language other than en-US, ensure that you completed all the procedures in [Language Support for Interaction Analyzer Keyword Spotting](#).
- Ensure that the location where interactions are not analyzed is not prohibited from keyword spotting. For more information about location-based keyword spotting, see [Keyword Spotting for Specific Locations](#).
- Ensure that the number of keywords in the keyword sets that you assigned to the Interaction Recorder policy are less than 50. Interaction Analyzer does not analyze interactions where the number of keywords assigned to an Interaction Recorder policy exceeds 50. If you added keywords to a keyword set that you assigned to an Interaction Recorder policy previously, those added keywords could surpass the keyword limit. For more information, see [Keyword Limits](#).

## Failure to identify a specific keyword

If Interaction Analyzer cannot identify a specific keyword, consider the following items:

- There are words in the medical and scientific fields that are based on Latin and Greek, but have had the associated pronunciations transformed over centuries of use, such as *peritonitis*. For these words, if Interaction Analyzer has difficulty identifying the keyword based on the correct spelling, Genesys recommends that you specify user-defined pronunciations to ensure proper identification of those unique keywords. For more information, see [Modify Advanced Keyword Definition Settings](#).
- Language dialects could use pronunciations that do not match the Interaction Analyzer language models. For these keywords, provide alternate spellings or user-defined pronunciations to ensure a more accurate representation of how callers pronounce the keyword. For more information about alternate spellings and user-defined pronunciations, see [Modify Advanced Keyword Definition Settings](#).
- Ensure that the **Confidence threshold** setting for the keyword is not set too high. The default setting is 50%. If you change the setting to 100%, Interaction Analyzer identifies the keyword only when the speech pattern is an exact match of the language model. Reduce the **Confidence threshold** setting until Interaction Analyzer consistently identifies the keyword. For more information, see [Set the Confidence Threshold for a Keyword](#).

## Incorrect keyword identification

If Interaction Analyzer is identifying other words incorrectly as a keyword, known as a *false positive*, consider the following actions:

- Ensure that the **Confidence threshold** setting for the keyword is not set too low. The default setting is 50%. A low setting causes Interaction Analyzer to be more lenient in matching phonemes to the language model. For more information, see [Set the Confidence Threshold for a Keyword](#).

### Note:

Interaction Analyzer 2016 R2 and later includes a change that lowers the rejection rate of false positives before Interaction Analyzer evaluates confidence threshold scores defined in the keyword sets. Because of this change, upgrading to Interaction Analyzer version 2016 R2 or later may require you to raise the existing confidence threshold scores for some keywords.

- Ensure that the keyword is not used within other words. For example, if the keyword is *nation*, Interaction Analyzer recognizes that keyword when it is used within other words, such as *stagnation*, *consternation*, and, possibly, *information*. Redefine the keyword and provide more words that specify the context you seek, such as *my nation* or *nation building*. Providing more context increases the spotability of the keyword. For more information about spotability, see "Interaction Analyzer keyword spotability" in [Introduction to Interaction Analyzer Keyword Spotting](#).

## Inconsistent keyword identification

If Interaction Analyzer recognizes some instances of a keyword, but not other instances, consider the following actions:

- Reduce the **Confidence threshold** setting for the keyword. Slight variations in pronunciation of the keyword, such as dialects and low enunciation volume, could be causing Interaction Analyzer to disqualify a word. Reducing the **Confidence threshold** setting causes Interaction Analyzer to use less scrutiny when matching phonemes. For more information, see [Set the Confidence Threshold for a Keyword](#).
- Ensure that the keyword definition accounts for multiple pronunciations. Some words in the English language have multiple pronunciations, even within a country or specific region of that country. The following table provides some examples in English:

Word	Usage	Phonemes
read	I will read this book next week.	r iy d
	I read this book last week.	r eh d
dove	I dove into the water.	d ow v
	A white dove is a symbol of peace.	d ah v
present	This is your birthday present.	p r eh z ah n t
	I present this award to you.	p r iy z eh n t
close	Stand close to me.	k l ow s
	Please close the door.	k l ow z
number	The anesthetic is making my hand number.	n ah m er
	What is your telephone number?	n ah m b er
wind	Sails catch the power of the wind.	w ih n d
	Wind that wire around the pole.	w ay n d
Caribbean	CaribBEan	k eh r ih b iy ah n
	CaRIBbean	k er ih b iy ah n

If the keyword can be pronounced in multiple ways, define the phonemes for the alternate pronunciations in a user-defined pronunciation for the keyword. For more information about user-defined pronunciations and phonemes, see "Interaction Analyzer anti-spellings" in [Interaction Analyzer Keyword Entry](#) and [Modify Advanced Keyword Definition Settings](#).

# Appendix A: Interaction Analyzer Keyword Examples

The appendix includes some example keywords and phrases that you can use in Interaction Analyzer to spot their usage when spoken by agents, customers, or both. Use these examples to help you think about what keywords and phrases are important to your contact center or business and then create your own.

**Note:**

These keywords are only examples and do not represent a comprehensive collection of keywords that can achieve the goals for your contact center. Some example keywords are not appropriate for use in that they are too simplistic or short, and are difficult for Interaction Analyzer to detect.

For more information, see the following example keywords:

- [Example Keyword Set Category: Agent Greetings](#)
- [Example Keyword Set Category: Agent Training Issues](#)
- [Example Keyword Set Category: Call Conclusion](#)
- [Example Keyword Set Category: Call Escalation](#)
- [Example Keyword Set Category: Competitors](#)
- [Example Keyword Set Category: Cursing](#)
- [Example Keyword Set Category: First Call Resolution \(FCR\)](#)
- [Example Keyword Set Category: Marketing](#)
- [Example Keyword Set Category: Negative Statements](#)
- [Example Keyword Set Category: Positive Statements](#)
- [Example Keyword Set Category: Problem Identification](#)
- [Example Keyword Set Category: Problem Resolution](#)
- [Example Keyword Set Category: Sales](#)
- [Example Keyword Set Category: Service Improvement](#)
- [Example Keyword Set Category: Threats](#)
- [Example Keyword Set Category: Upset Customer](#)

## Example Keyword Set Category: Agent Greetings

Keyword Set Name	Keywords
(Agent) Collections Statements	<ul style="list-style-type: none"> <li>• This is your final</li> <li>• You are obligated to</li> <li>• Garnish</li> <li>• We will send this account to collections</li> <li>• We are demanding full payment on this account</li> <li>• Forfeiture of discount</li> <li>• Final deadline</li> <li>• Offer expires</li> <li>• Last chance</li> <li>• No choice but to</li> <li>• Shut off</li> <li>• Suspended</li> </ul>
(Agent) Opening Statements	<ul style="list-style-type: none"> <li>• Hi my name is</li> <li>• Hello my name is</li> <li>• How are you today</li> <li>• My goal is to</li> </ul>
(Agent) Sales Pitch	<ul style="list-style-type: none"> <li>• You will be able to enjoy</li> <li>• You will only be charged</li> <li>• We have a variety of</li> <li>• It's a wonderful service</li> <li>• Won't take much of your time</li> <li>• For special customers like you</li> <li>• What can I do to get you to</li> <li>• All I need is your</li> <li>• Could I have your credit card number</li> <li>• What would convince you</li> <li>• You can't go wrong</li> </ul>
(Agent) Survey Pitch	<ul style="list-style-type: none"> <li>• What is the reason for your call today</li> <li>• How do you like</li> <li>• How would you rate</li> <li>• What is the most important</li> </ul>



## Example Keyword Set Category: Agent Training Issues

Keyword Set Name	Keywords
(Customer) Broken Trust	<ul style="list-style-type: none"> <li>• You said</li> <li>• You told me</li> <li>• Wait a minute</li> <li>• Wait a second</li> <li>• Ask me that before</li> <li>• Asked me that before</li> <li>• You even listening</li> <li>• You listening</li> <li>• You're not listening</li> <li>• Don't know what you're doing</li> <li>• I don't care</li> <li>• Don't give me</li> <li>• You don't understand</li> <li>• Report you</li> <li>• I didn't get my</li> <li>• I did not receive</li> </ul>
(Agent) Excuses	<ul style="list-style-type: none"> <li>• I just work here</li> <li>• It's not my job</li> <li>• I'm just doing my job</li> <li>• I'm new here</li> <li>• I just started here</li> <li>• They didn't train me</li> </ul>
(Agent) Improper Statements	<ul style="list-style-type: none"> <li>• Calm down</li> <li>• Hold on</li> <li>• Can't do that</li> <li>• Lost your record</li> <li>• Lost your file</li> <li>• File is lost</li> <li>• Shut up</li> </ul>
(Agent) Lack of Knowledge	<ul style="list-style-type: none"> <li>• I don't know</li> <li>• Beats me</li> <li>• Let me get back to you later</li> <li>• Let me call you back later</li> <li>• I guess so</li> </ul>

## Example Keyword Set Category: Call Conclusion

Keyword Set Name	Keywords
(Agent) Ending Statements	<ul style="list-style-type: none"> <li>• Have a great day</li> <li>• Again, my name is</li> </ul>

## Example Keyword Set Category: Call Escalation

Keyword set name	Keywords
(Customer) Redirection Requests	<ul style="list-style-type: none"><li>• Your supervisor</li><li>• A supervisor</li><li>• Your manager</li><li>• A manager</li><li>• Let me speak to</li><li>• Let me talk to</li><li>• I want to talk</li><li>• I want to speak</li><li>• Transfer me to someone who</li><li>• I demand</li></ul>

## Example Keyword Set Category: Competitors

Keyword Set Name	Keywords
Competitor Names	<ul style="list-style-type: none"><li>• <i>X Y Z Company</i></li><li>• <i>111 Corporation</i></li><li>• <i>A B C Incorporated</i></li></ul>
Competitor Products	<ul style="list-style-type: none"><li>• <i>Product Name 1</i></li><li>• <i>Product Name 2</i></li><li>• <i>Product Name 3</i></li></ul>

## Example Keyword Set Category: Cursing

Keyword Set Name	Keywords
Cursing	<ul style="list-style-type: none"><li>• Darn</li><li>• Heck</li><li>• Freak</li><li>• Crap</li><li>• Sucks</li><li>• Shove it</li></ul>

## Example Keyword Set Category: First Call Resolution (FCR)

Keyword Set Name	Keywords
(Customer) Subsequent Call	<ul style="list-style-type: none"><li>• Last time</li><li>• Called before</li><li>• Calling again</li><li>• Calling back</li><li>• Called back</li><li>• Keep calling</li><li>• Time I've called</li></ul>

## Example Keyword Set Category: Marketing

Keyword Set Name	Keywords
(Agent) Ad Placement	<ul style="list-style-type: none"> <li>• How did you hear about</li> <li>• What referred you to our</li> <li>• How you heard about</li> <li>• Did you see our</li> </ul>
(Customer) Ad Placement	<ul style="list-style-type: none"> <li>• I saw your</li> <li>• I heard your</li> <li>• I read your</li> <li>• On your website</li> </ul>

## Example Keyword Set Category: Negative Statements

Keyword Set Name	Keywords
(Agent) Astonishment	<ul style="list-style-type: none"> <li>• You're kidding me</li> <li>• Got to be kidding</li> <li>• That's unbelievable</li> <li>• You're putting me on</li> <li>• No way</li> </ul>
(Agent) Condescension	<ul style="list-style-type: none"> <li>• You're not the only one</li> <li>• How I feel</li> <li>• That's too bad</li> <li>• Aren't you just</li> <li>• Why are you so</li> </ul>
(Agent) Poor Attitude	<ul style="list-style-type: none"> <li>• I don't care</li> <li>• I don't believe you</li> <li>• Sucks to be you</li> <li>• I'd hate to be you</li> <li>• Tell someone who cares</li> <li>• I can't handle this</li> <li>• Out of luck</li> <li>• You should call back</li> <li>• That isn't my responsibility</li> <li>• Will tell you the same thing</li> </ul>
(Customer) Collection Excuses	<ul style="list-style-type: none"> <li>• Unemployed</li> <li>• Bankruptcy</li> <li>• I don't have a job</li> <li>• Lost my job</li> <li>• Was fired</li> <li>• Laid off</li> </ul>

## Example Keyword Set Category: Positive Statements

Keyword Set Name	Keywords
------------------	----------

(Agent) Action	<ul style="list-style-type: none"> <li>• Right away</li> <li>• I will make sure</li> <li>• I am going to</li> <li>• What we can do</li> <li>• I will address this</li> <li>• The best thing I can do</li> <li>• What I will do for you</li> </ul>
(Agent) Adverbs	<ul style="list-style-type: none"> <li>• Definitely</li> <li>• Absolutely</li> <li>• Surely</li> <li>• Certainly</li> <li>• Quickly</li> <li>• Positively</li> </ul>
(Agent) Advice	<ul style="list-style-type: none"> <li>• I would suggest</li> <li>• I recommend</li> <li>• Your best option is</li> <li>• As soon as you receive</li> <li>• To avoid this problem</li> <li>• All you need to do is</li> <li>• The best thing you can do</li> </ul>
(Agent) Cooperation	<ul style="list-style-type: none"> <li>• Let's work on this together</li> <li>• We can resolve this</li> <li>• Let's figure out what</li> <li>• Let's look at this together</li> <li>• Let's go ahead and</li> <li>• Let's take care</li> <li>• We can fix this</li> </ul>
(Agent) Empathy	<ul style="list-style-type: none"> <li>• I see</li> <li>• I understand</li> <li>• Understand the inconvenience</li> <li>• I completely understand</li> <li>• How can I help you</li> <li>• I'm sorry to hear that</li> <li>• Sorry for the inconvenience</li> <li>• You are a valued</li> </ul>
(Agent) General	<ul style="list-style-type: none"> <li>• Please</li> <li>• Thank you</li> <li>• I appreciate your patience</li> </ul>
(Agent) Reassurance	<ul style="list-style-type: none"> <li>• Rest assured</li> <li>• I will try my best</li> <li>• More than glad</li> <li>• More than happy</li> <li>• Based on our experience</li> <li>• I will ensure that</li> <li>• I assure you that</li> <li>• Your satisfaction is</li> <li>• We value</li> <li>• Of course</li> <li>• Guarantee</li> </ul>

(Customer) Trust	<ul style="list-style-type: none"> <li>• Trust you</li> <li>• I can believe that</li> <li>• Straightforward</li> <li>• Honest with me</li> <li>• Honest with you</li> </ul>
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## Example Keyword Set Category: Problem Identification

Keyword Set Name	Keywords
(Customer) Account Identification	<ul style="list-style-type: none"> <li>• My account number is</li> <li>• My number is</li> <li>• My user name is</li> <li>• My customer I.D. is</li> <li>• My account is</li> </ul>
Product Identification	<ul style="list-style-type: none"> <li>• <i>Product name 1</i></li> <li>• <i>Product name 2</i></li> <li>• <i>Product name 3</i></li> </ul>

## Example Keyword Set Category: Problem Resolution

Keyword Set Name	Keywords
(Agent) Resolution Indicators	<ul style="list-style-type: none"><li>• Is there anything else I can help you with</li><li>• I'm glad I could help</li></ul>
(Customer) Resolution Indicators	<ul style="list-style-type: none"><li>• I'm happy</li><li>• I'm pleased</li><li>• Great</li><li>• Amazing</li><li>• Amazed</li><li>• Excellent</li><li>• Fantastic</li><li>• Perfect</li><li>• Working now</li><li>• It works</li><li>• Wonderful</li><li>• Relieved</li><li>• Terrific</li><li>• Fabulous</li><li>• Satisfied</li><li>• Outstanding</li><li>• That was easy</li><li>• Very helpful</li><li>• I appreciate</li><li>• Thank you</li><li>• Thanks</li><li>• Thankful</li><li>• That's better</li><li>• That's much better</li><li>• You deserve a</li><li>• You really know</li><li>• Great job</li><li>• Good work</li><li>• Job well done</li></ul>

## Example Keyword Set Category: Sales

Keyword Set Name	Keywords
(Customer) Loss of Business	<ul style="list-style-type: none"> <li>• Cancel my account</li> <li>• Canceling my account</li> <li>• Close my account</li> <li>• Cancel my service</li> <li>• Stop service</li> <li>• Money back</li> <li>• Refund</li> <li>• I'll never purchase</li> <li>• I'll never buy</li> <li>• Never get another</li> <li>• Hears about this</li> <li>• Better Business Bureau</li> </ul>
(Customer) Referral	<ul style="list-style-type: none"> <li>• I'll tell everyone</li> <li>• I'll tell my</li> <li>• Will love this</li> <li>• For my friends</li> </ul>
(Customer) Repeat Business	<ul style="list-style-type: none"> <li>• Where can I get</li> <li>• When can I get</li> <li>• When does</li> <li>• I'm going to order</li> <li>• I'll order</li> <li>• Get another</li> <li>• Next version</li> <li>• Next release</li> <li>• Next update</li> </ul>
(Customer) Sale Success	<ul style="list-style-type: none"> <li>• When will I receive</li> <li>• What can I expect</li> <li>• My credit card number is</li> <li>• I'll go with</li> <li>• Purchase</li> <li>• I'll buy</li> </ul>

## Example Keyword Set Category: Service Improvement

Keyword Set Name	Keywords
(Customer) Suggestions	<ul style="list-style-type: none"> <li>• It would be great if</li> <li>• What you should do is</li> <li>• Would be better if</li> <li>• Would be so much better if</li> <li>• Want to see</li> <li>• Want to hear about</li> <li>• Like to see</li> <li>• You should consider</li> <li>• You should make</li> </ul>

## Example Keyword Set Category: Threats

Keyword Set Name	Keywords
Legal Action	<ul style="list-style-type: none"><li>• Attorney</li><li>• Lawyer</li><li>• Legal action</li><li>• I'll sue you</li><li>• I'll sue your</li><li>• Take you to court</li><li>• Lawsuit</li></ul>
Physical harm	<ul style="list-style-type: none"><li>• Come down there</li><li>• I'll find you</li><li>• Kill you</li><li>• Don't make me</li><li>• I'll get you</li><li>• Get even</li><li>• Blow up</li><li>• Revenge</li><li>• Pay back</li><li>• Hurt you</li><li>• Where it hurts</li><li>• Blow you away</li><li>• Gun down</li><li>• Shoot you</li><li>• Stab you</li></ul>



## Example Keyword Set Category: Upset Customer

Keyword Set Name	Keywords
(Customer) Emotional Words	<ul style="list-style-type: none"><li>• Unacceptable</li><li>• Frustrated</li><li>• Unfair</li><li>• Isn't fair</li><li>• You people</li><li>• Angry</li><li>• Makes me mad</li><li>• Makes me so mad</li><li>• Outraged</li><li>• I don't understand</li><li>• Ridiculous</li><li>• Upset</li><li>• Ticked off</li><li>• Is that the best</li><li>• Unhappy</li></ul>
(Customer) Time Issues	<ul style="list-style-type: none"><li>• I can't wait</li><li>• I don't have time</li><li>• Take all day</li><li>• Hours and hours</li><li>• Put me on hold</li><li>• Can you hurry</li><li>• Waste my time</li><li>• Wasting my time</li><li>• Taking so long</li><li>• Do you know what time it is</li></ul>

# Appendix B: OpenSSL Copyright

## NOTICE

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This product includes cryptographic software written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)). This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

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# Glossary

Term	Definition
Agent channel	A communications channel that only contains the words and phrases spoken by an agent during an interaction
Anti-keyword	A word that is similar in pronunciation to a keyword where Interaction Analyzer can differentiate it from the keyword thereby reducing the possibility of a false positive
Category	A logical class of keyword sets
Confidence threshold	A percentage setting that controls the amount of discern that Interaction Analyzer applies to a keyword definition
Customer channel	A communications channel that only contains the words and phrases spoken by a customer or caller during an interaction
False positive	An accuracy problem where Interaction Analyzer mistakes another word for a defined keyword.
Keyword	A predefined word for which Interaction Analyzer scans interactions
Keyword spotting	The ability of Interaction Analyzer to process an interaction and identify specific, predefined words in that interaction
Keyword set	A named collection of keywords that you can assign to one or both channels for a workgroup queue.
Phoneme	A distinctive sound used in the pronunciation of words within a specific language
Speech analytics	An automated method of analyzing spoken words and phrases to determine content, emotion, and other aspects
Spotability	The ability to identify keywords and phrases in interactions
Tag	The process of demarcating the instance of a word in a recording of an interaction

# Change Log

The following table lists the changes to the *Interaction Analyzer Technical Reference* since its initial release.

Date	Changes
04-November-2011	Initial release
31-January-2012	Added trademark symbol to first instance of product name
06-March-2012	IC-94748 - Admins needs a way to restrict keyword spotting to particular SIP regional locations.
06-September-2012	<ul style="list-style-type: none"> <li>• Added content for supported language models released with Service Update 2</li> <li>• Added content for keyword count limits for workgroups</li> <li>• Added content for configuring Interaction Analyzer for identifying keywords in multiple languages</li> </ul>
22-February-2013	<ul style="list-style-type: none"> <li>• Added content for Turkish language model</li> <li>• Updated content for initialization of recordings and selection of keyword sets through Interaction Recorder Policy Editor</li> <li>• Updated content for assignment of keyword sets through Interaction Recorder Policy Editor</li> <li>• Added content for keyword spotting on intercom calls</li> <li>• Updated content to support new capabilities when searching for recordings</li> <li>• Updated content to support new icons in Interaction Recorder playback interface</li> <li>• Added content for new feature that support keyword spotting by Location</li> <li>• Added Troubleshooting section</li> <li>• Added content specifying how to set the language attribute for a call so that the proper keyword set for a language is used to spot keywords</li> </ul>
18-July-2013	<ul style="list-style-type: none"> <li>• DP-638 - Analyzer License Enforcement</li> <li>• IC-98238 - Add content for licensing stations and users</li> <li>• DP-818 - Supervisor and Recorder need to show which channels have keyword spotting</li> <li>• IC-103664 (IC-98212) Set a call attribute to indicate which channels have keyword spotting active</li> <li>• DP-938 - Analyzer Language Model - Polish</li> <li>• IC-109643 (IC-94605) Add UI in Interaction Administrator to Enable/Disable Keyword Spotting per Location</li> <li>• IC-107339 (IC-103783) Supervisor should differentiate between unanalyzed interactions and analyzed interactions with zero score, for Analyzer keyword score aggregate stats</li> <li>• IC-109015 (IC-108629) Usability Issue: <i>Interaction Was Analyzed</i> Search Attribute Contains Unclear Query Options</li> <li>• IC-106476 (IC-103692) Create an "Interaction was Analyzed" yes/no search attribute</li> <li>• Add content for personnel, training, scenarios, and business actions as they pertain to speech analytics.</li> <li>• Enhance index entries</li> </ul>
21-March-2014	<ul style="list-style-type: none"> <li>• Update multiple sections to clarify that accumulated scores are transferred and continue accumulating when a call is transferred to another agent</li> <li>• IC-106441 - Document new feature to search analyzed recordings by spotted keyword</li> <li>• IC-104397 - In multiple sections, clarify that keyword spotting continues after a call transfer</li> <li>• IC-104394 - Clarify that keyword spotting in Interactive Voice Response session is stopped if the call is first routed to an agent that is not licensed for Interaction Analyzer</li> </ul>
12-May-2014	DP-1081 Analyzer Language Model - Japanese
03-September-2014	<ul style="list-style-type: none"> <li>• Updated documentation to reflect changes required in the transition from version 4.0 SU# to CIC 2015 R1, such as updates to product version numbers, system requirements, installation procedures, references to Interactive Intelligence Product Information site URLs, and copyright and trademark information.</li> <li>• DP-1291 - Analyzer Language Model - Spanish (European)</li> </ul>

20-January-2015	<ul style="list-style-type: none"> <li>Updated the "Keyword acronyms" section with the new method of defining acronyms in keywords (IONMEDIA-1299).</li> <li>Added new "Interaction Analyzer reports" section and included information on Analyzer Scoring Detail Report (DP-967)</li> </ul>
10-April-2015	<ul style="list-style-type: none"> <li>DP-927 Analyzer Language Model - French (France)</li> <li>IONMEDIA-1940 - Update documentation for change to entering multi-word pronunciations or anti-pronunciations</li> <li>Corrected acronym representations in Interaction Analyzer keyword examples</li> <li>Update Copyright and Trademark Information page</li> <li>Minor reorganization of topic structure</li> </ul>
21-July-2015	<ul style="list-style-type: none"> <li>IC-128091 - A category must be set when defining a keyword</li> <li>IC-128808 - Category names are limited to 128 characters</li> </ul>
22-October-2015	<ul style="list-style-type: none"> <li>Updated content to reflect corporate rebranding</li> <li>IC-129997 - New search attribute for Total Overall Keyword Score</li> </ul>
16-December-2015	<ul style="list-style-type: none"> <li>IONMEDIA-2314 - DocLink: Rejection of possible False Positives too aggressive - detections do not go up even when confidence threshold is reduced.</li> <li>Added an admonition in "Incorrect keyword identification" for this change in 2016 R2 that could require setting higher confidence thresholds for existing keywords.</li> <li>Incorporated minor edits for clarity of content.</li> </ul>
03-February-2016	<ul style="list-style-type: none"> <li>Updated "Copyright and trademark information" page</li> <li>DP-1298 - Analyzer Language Model - Catalan (Spain)</li> </ul>
01-August-2016	DP-1659 Analyzer Language Model - Italian - Added license information and phoneme table for Italian (Italy) language model
24-May-2017	Added language support for Mandarin Chinese.
20-September-2017	Rebranded to Genesys.
04-March-2019	Removed language support for Catalan, Spain (ca-ES).
02-May-2019	Reorganized the content only, which included combining some topics and deleting others that just had an introductory sentence such as, "In this section..."
06-June-2019	<p>Added the following to <a href="#">Interaction Analyzer Statistics Reference</a>:</p> <ul style="list-style-type: none"> <li><b>Agent Keyword Spotted</b> to "Interaction Analyzer Agent Details Statistics."</li> <li><b>Customer Keyword Spotted</b> to "Interaction Analyzer Agent Details Statistics."</li> <li><b>Highest active agent negative score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Highest active customer negative score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Highest active agent positive score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Highest active customer positive score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Lowest active agent positive score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Lowest active customer positive score</b> to "Interaction Analyzer Workgroup Statistics."</li> <li><b>Total agent negative score</b> to "Interaction Analyzer Workgroup Details Statistics" and "Interaction Analyzer Agent Details Statistics."</li> <li><b>Total agent positive score</b> to "Interaction Analyzer Workgroup Details Statistics" and "Interaction Analyzer Agent Details Statistics."</li> <li><b>Total customer negative score</b> to "Interaction Analyzer Workgroup Details Statistics" and "Interaction Analyzer Agent Details Statistics."</li> <li><b>Total customer positive score</b> to "Interaction Analyzer Workgroup Details Statistics" and "Interaction Analyzer Agent Details Statistics."</li> </ul>

30-April-2020	Update or remove links to "my.inin.com" as appropriate.
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