



MOMENTUM

CALL RECORDING

with **Speech Analytics**
Quick Reference Guide

MOMENTUM

Powered By:  **MiaRec**

23Q1UC

Speech Analytics Overview

The typical contact center or organization may collect and store a vast amount of data in the form of customer interactions. It is widely recognized that these customer interactions contain information about the root causes of key business issues. Call Recording Speech Analytics, powered by MiaRec, is designed to deliver valuable intelligence that business users readily understand *and* can use to help reveal the cause/effect relationships that underly performance and business outcomes across the enterprise, without much of the complexity usually associated with advanced analytical technologies.

By revealing both what is happening and why, Speech Analytics helps equip organizations to make better-informed decisions, maximize strengths, address deficiencies, and make the most of market perceptions and opportunities. For instance, mining information from contact center calls using Speech Analytics can be an early warning system before an issue escalates to negative experiences – or social media.

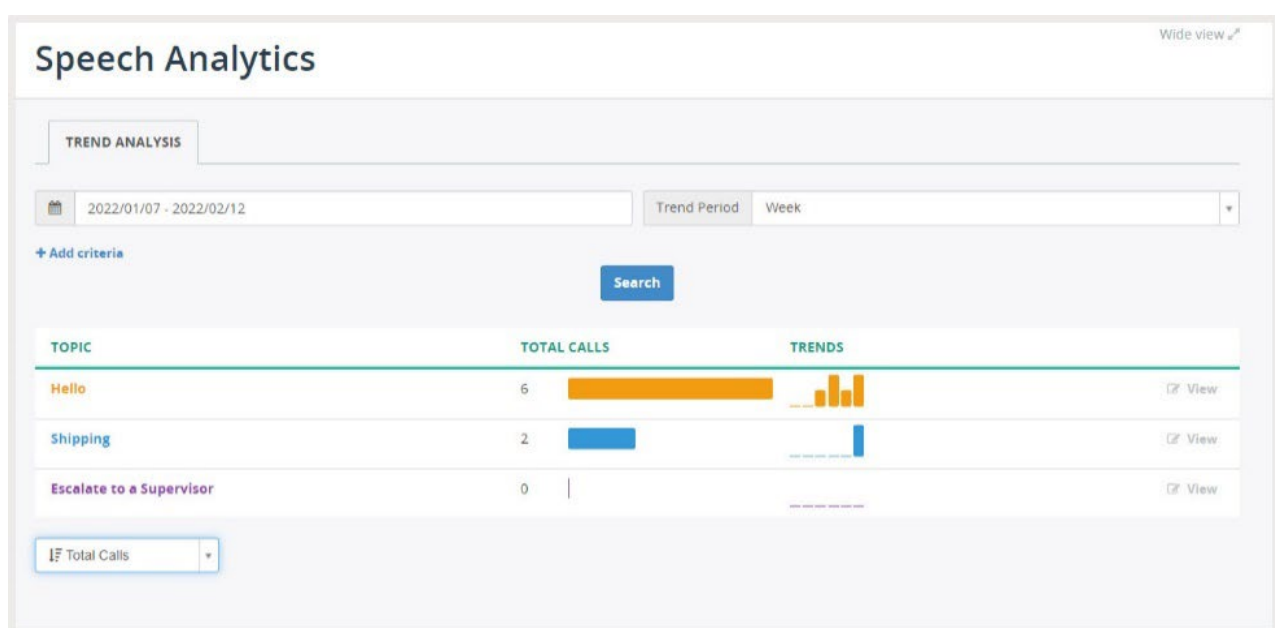
The goal is to analyze the information in ways that help a company improve customer service, get reactions to new products or policies, and so on. That is, Speech Analytics can help companies turn thousands of calls into actionable data.

The Call Recording application uses speech-to-text technologies to create transcriptions of recorded customer interactions and to transform them into a **searchable database**. That database of information can be the key to helping organizations enhance customer retention and satisfaction, increase first call resolution, and improve sales and self-service effectiveness.

The Speech Analytics application can be setup to automatically prioritize transcribed interactions based on specified business issues relevant to your contact center. The Speech Analytics application then enables Call Recording Admins to access the transcribed calls for playback, which in turn enables management to also *hear* the context in which the words were said and thus identify issues critical to your business needs.

With Speech Analytics organizations can:

- Gain insight from recorded calls to help optimize products and processes, gain a competitive advantage, and improve the overall customer experience.
- Use advanced search capabilities to research any hypothesis and quickly receive a prioritized list of results out of all calls in history.
- Quickly and efficiently surface call trends that might otherwise go undetected without someone sitting and listening to thousands of calls day after day.



Speech Transcription

With a Speech Analytics license in use, Call Recording will automatically render the audio of calls into a transcript that displays below the media player audio tracks. Once completed, Supervisors or Administrators have access to quickly review the text of the call alongside the audio and easily find any keywords, phrases or topics created by the organization that have been spotted within the text.

The application can be set to create transcripts for 100% of calls, or only selected calls based on criteria that is most useful to the organization, including group, call duration, call direction, etc., which organizations can define based on need and resources.

Organizations have complete control to utilize the transcribed data from recorded calls by creating topics and keywords they want to spot in calls, which can provide useful analytics for spotting trends and identifying training opportunities.

Call 667499271343 -> 402068775

[Mark as confidential](#)
[Send by email](#)
[Delete Call](#)
[INTERACTION](#)
[CALL \[1\]](#)
[CALL \[2\]](#)
[CALL \[3\]](#)
[Edit Tags](#)

MEDIA PLAYER

[Switch to basic player](#) | [Wide view](#)

[▶ Play](#)
[x1](#)
[x1.2](#)
[x1.5](#)
[x1.7](#)
[x2](#)
[Save audio file](#)

TRANSCRIPT

Agent [0:00]: It could you explain on expand on that a little bit so I could get the correct information for you?

Customer [0:05]: I wanted to know the information for child safety for the paint as well as what the what kind of wood is made out of.

Agent [0:12]: Oh, okay. Hold on 1 second.

ALL CALLS IN THIS INTERACTION

TIME	DURATION	FROM -> TO	TIMELINE	
5:24 PM	2:08	667499271343 -> 402068775 (Jessica Warren)		View
5:28 PM	0:32	667499271343 -> 402068775 (Jessica Warren)		View

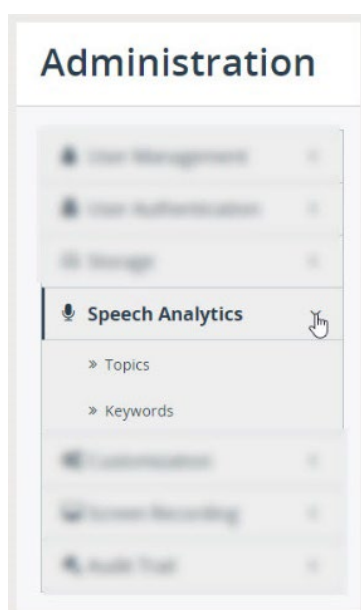
Topics and Keywords

Call Recording with the Speech Analytics add-on allows organizations to record and analyze up to 100% of calls automatically - or only analyze specified calls. When Topics or keywords are defined, Speech Analytics can do the following:

- Identify each defined keyword/phrase that the conversation participants use
- Categorize calls by Topics (groups of keywords)
- Calculate the aggregated call score (sum total based on the scores defined for each keyword)
- Display call volume trends by topic (or any other analytic) over a period of time
- Search calls by topic, keyword, or score to perform trend analysis

The system automatically displays the information with the audio and for reporting, negating the need to expend resources on tedious manual analysis of random recordings, and provides complete coverage of voice interactions that occur in the contact center or in any calls being recorded with Speech Analytics in use.

Administrators can access the tools for setup and management of Topics and Keywords by going to: **Administration > Speech Analytics**.



Topic Extraction

A Topic is a set of keywords that the Admin identifies as similar or in the same category. Speech Analytics offers tools to identify and group what is said in a call in this way. The phrases the admin wishes to track can be anything useful to the organization. For example, a Topic named "Repeated calls" may be created, and within it could be phrases like "called before", "called twice", "called last week", "never heard back", and "third time". Topics that have been used by some organizations include Upset Customer, Happy Customer, Positive Statements, Resolution Statements, Upsell Statements, etc.

Once the Speech Analytics is rendered, Call Recording then displays the extracted topic data within the Call Details view and highlights each found keyword with the call audio tracks and the transcript to offer a very complete picture of the conversation and experience.

TOPICS

- Positive Statements - Adverbs (1)
- Upset customer - Emotional words (1)
- Ending Statements (1)
- Resolution Indicators (customer) (2)
- Positive Statements - General (2)
- Subsequent (repeated) Call (1)
- Opening Statements (1)
- Problem (1)

KEYWORDS

- definitely NOTNEAR:1 not
- "definitely not"
- "have a great day"
- "thank you" OR thanks OR thankful (2)
- "thank you" (2)
- call* ONEAR:1 back
- "thank you for calling"
- problem NOTNEAR:3 (no|not)

TRANSCRIPT

Agent [0:00]: Kim **thank you** so much for holding. I do apologize about the wait. It does look like right now it is still in release status. So I'm going to have to go ahead and email our team to see if they can get that pushed and what's going on with that. And then once I hear back from them, I can go ahead and give you a call back. Will that work?

Customer [0:21]: **okay** so it's that shift so I'm **definitely not** going to be getting it today.

Agent [0:27]: Unfortunately, no, it has not shipped yet.

Customer [0:31]: **oh** course I need it for tomorrow all right you don't have to **call back** if unless there's **a problem** just send it whenever it's going to be show up.

Agent [0:44]: Okay. All right. I'll **definitely** go ahead and email them and see what we're what's going on with the order and then

Topic Score

A **Topic Score** is another measure that can be utilized. It is an aggregated metric of a conversation in which each keyword can be assigned a numeric value - positive (1), Negative (-1), or Neutral (0/zero) which is called a *Score*. The total Topic Score value is the sum of all spotted keywords' scores noted by Speech Analytics within a recorded call. Speech Analytics also calculates and displays the keyword scores when spoken by agents and customers in Call Recording to offer more granular analysis of the dialog on either side of the conversation. For example, the keyword "excellent" can be assigned a higher value by the organization if it is spoken by a customer - and given a lower or even a neutral (zero) score value if it is spoken by an agent whose training probably includes politeness and the use of such verbiage. The Total Score, Agent Score and Customer Score details are then made more enlightening within the context of the entire call, highlighting the *reasons* for the Topic Score.

MEDIA PLAYER
Switch to basic player | Wide view

0 5 10 15 20 25 30 35 40 45 50 55

► Play
x1
x1.2
x1.5
x1.7
x2
Save audio file

TOPIC SCORE

-15

Total Score

5

Agent Score

-20

Customer Score

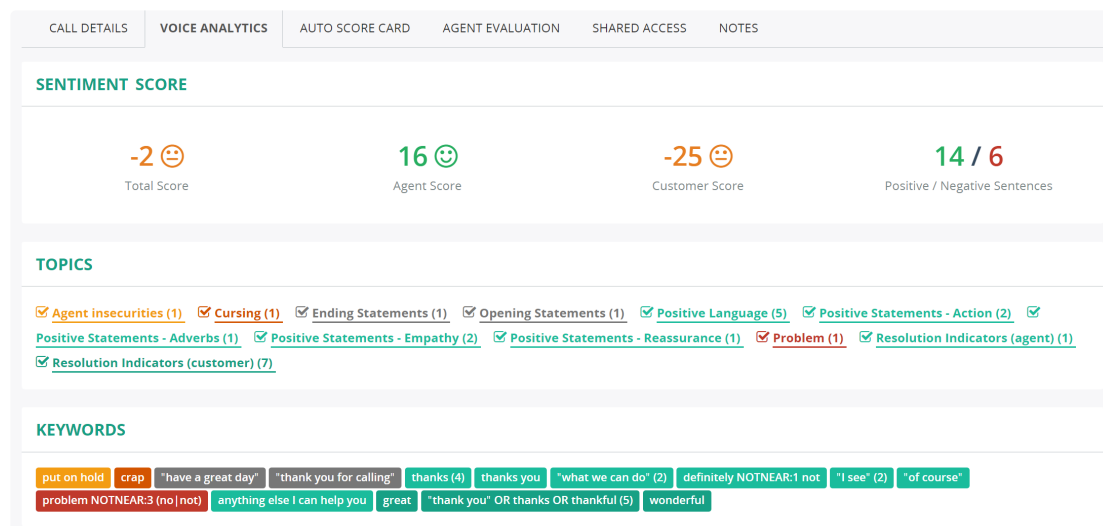
Sentiment Score

Sentiment analysis is a machine learning tool that analyzes text for polarity. Polarity refers to the overall sentiment conveyed by a particular text, phrase or word. This polarity can be expressed as a numerical rating known as a "sentiment score". For example, this score can be a number between -100 and 100 with 0 representing a neutral sentiment. By training machine learning tools, machines automatically learn how to detect sentiment without human input and score configuration.

Voice Analytics expresses customer sentiment in two different ways: through a numerical score with its associated emoji and through visualization of colors within the keyword list and the transcript.

Numerical Score

The speech engine analyzes identified keywords for positive or negative customer sentiment. Each keyword can be assigned a numeric value, either positive, negative, or zero (-100 to +100). A total sentiment score value is a summary of all spotted keywords' scores. Depending on the number of times a positive or negative keyword is mentioned either by the customer or the agent, a customer score, an agent score, and the total sentiment score (the average of the two) is automatically tabulated and symbolized by the appropriate emoji.



Visualization of Keywords and Transcript

Positive keywords, such as "thank you" or "this is helpful", are color-coded in green in the transcript as well as in the keyword list (or any other positive color you like), while negative keywords, like "upset", "angry", or "I expected more", are shown in red. This allows you to see at a glance how a call is trending. If a customer is angry at first, does the agent resolve the problem quickly or does it escalate? Using visual Customer Sentiment, Supervisors and Admins can immediately see it without reading the entire transcript, saving everyone valuable time.

Hover the cursor over the colored text in the transcript to preview the sentiment score of a specific keyword.

The screenshot shows the 'TRANSCRIPT' section of the interface. A tooltip is visible over the word 'support' in the first line of the transcript, displaying 'Sentiment: positive (73)'. The transcript content is as follows:

- Agent [0:01]: Hello this is support.
- Customer [0:02]: Oh alright, weird. I guess I got transferred.
- Agent [0:06]: Yep.
- Customer [0:09]: So my Internet speed has been really up and down.
- Agent [0:13]: What's the number associated with the account?
- Customer [0:15]: two one two three four five six seven eight nine
- Agent [0:19]: Hang on.

Keyword Spotting

Keyword spotting, a helpful subset of the Speech Analytics tools, offers companies the ability to tell the system to recognize predefined words and phrases within call interactions. Keyword spotting allows Admins to tell Call Recording that you are interested in knowing when customers use words like "terrible" or a phrase like "bad experience" during an interaction with one of your agents. An Admin may define such useful keywords in the Call Recording application and then put Call Recording to work to spot those terms. These Keywords are not 'Scored' - they are simply displayed and color coded according to the value set by the Admin.

Some examples of keywords and phrases could be:

- "frustrated"
- "angry"
- "Excellent"
- "you're not listening"
- "cancel my account"
- "Wonderful"

Call Recording with Speech Analytics can also identify who spoke the spotted keywords - the agent or the customer. This is important because some keywords may have a different value or even meaning depending on who says the word or phrase. For example, phrases like "thank you so much", "excellent", and "fabulous" are likely going to have a higher value if they are spoken by a customer rather than by an agent who is trained to be polite and cheerful during a call.

KEYWORDS

absolutely (2) Angry Frustrated Upset "I appreciate" "Blow up" talked on talked multiple times stupid is ONEAR nightmare

TRANSCRIPT

Agent [0:02]: Hello, this is [redacted].

Customer [0:03]: Hi [redacted], this is yet again[redacted] [redacted] [redacted] we have been talking for about a month now actually more than a month. It was October 20th was odd first call and then we **talked on the 22nd** and then we've **talked three or four times** since then and we're going through my notes here. What do you need from me? First came to this is about a one product. I bought online for my brother and I got free charges and two of them got taken care of but the one remaining charge is wrong and it **is just**

Agent [0:40]: It

Customer [0:41]: **been a nightmare** and it's still is not right.

Agent [0:44]: It's still not right? Oh my goodness. I'm so sorry. Okay.

Call Recording will display the spotted keywords the organization defined to be important to the business in a section above the transcript text. The service also highlights these specially defined keywords as it spots them within the transcribed text of the call while the audio is played.

Manage Topics

Navigate to **Administration > Speech Analytics > Topics**.

Administration > Speech Analytics

Topics

Select a Tenant: [Dropdown] Search by Name: [Text] [Search]

[Add] [Delete] [Export] [Import] 0-20 of 42

TENANT	TOPIC	STATUS	SENSITIVE	COLOR	DESCRIPTION	SPEAKER	KEYWORDS
Acme	Account Identification	Enabled				Customer	4 keywords [View] [Edit]
Acme	Agent insecurities	Enabled		#f9c12		Agent	8 keywords [View] [Edit]
Acme	Broken Trust	Enabled		#e67e22		Customer	12 keywords [View] [Edit]
Acme	Compliance message	Enabled				Agent	2 keywords [View] [Edit]
Acme	Credit card	Enabled		#8e44ad		Both	3 keywords [View] [Edit]

To Add a New Topic

- While in **Administration > Speech Analytics > Topics**, click the **Add** button to begin.
- Define the following in the **Add Topic** dialog, as needed or required*:
 - Status**: Default = Enable. An Admin may return here to remove the check and disable.
 - Name***: Type a unique name for display and searches.
 - Color**: Use the color selection tool to define a color to display for quick review in Call Details.
 - Description**: Type a short description of the purpose of this Topic grouping, if desired.
 - Speaker***: Select from Agent, Customer, or Both to tell Speech Analytics how to display and track scoring of keyword usage and Topic sums during calls.
 - Keywords**: In this section the Admin may click the **Add Keywords** link to define one or more specific terms, phrases, or expressions, include an at-a-glance Title, and set a Score for each. The Keyword Expression attribute can be as simple as an exact phrase like "Cancel Account" or a more complex expression like "(cancel OR canceling OR canceled) NEAR account". Ref: Keyword Expression Syntax. The Score attribute is also optional but allows Admins to rank the importance of the spotted keyword. Numbers entered here can be whole numbers, decimals, or negatives like -2 or -0.5. The sum of the scores of all spotted keywords noted in the Topic will be used to create an overall **Topic Score**.

- Click **Save** when finished.

The new **Topic** is added to the Topics list and (if *Enabled*) Speech Analytics can begin collecting data based on the information defined in the new Topic for trend analysis and call scoring going forward.

Administration > Speech Analytics > Topics

Add Topic

Status: ☒ Enable

Name*: Customer Satisfied

Color: #20cc4d (Format is #000000)

Description: Customer offers confirmation of satisfaction during call

Speaker*: ☐ Agent ☒ Customer ☐ Both

KEYWORDS

Expression	Title (optional)	Score
Thank You	Thank You	1
Perfect	Perfect	1
Made my day	Made My Day	1
Awesome	Awesome	1
Good	Good	1
Appreciate	Appreciate	1

+ Add Keywords

Save

To Edit a Topic

1. Go to **Administration > Speech Analytics > Topics**
Click the **Edit** button adjacent to an existing Topic in the list (far right).
2. Make changes to the following in the Edit Topic dialog, as needed:
 - **Name***: Modify the name of the Topic
 - **Color**: Optional – select a color using the tool to help to visually distinguish different topics
 - **Description**: Optional – type useful information about the purpose of the Topic
 - **Speaker***: Define how the keywords will be spotted, analyzed, scored, or searched.
Options here can include: Agent, Customer, or Both.
 - **Keywords**: Edit, add, or remove items within the list of keywords, phrases, or expressions and their corresponding scores.

Edit Topic «Loss of Business»

Enable ☒ Enable for keyword extraction jobs

Name *

Color Format is #000000

Description

Speaker * ☐ Agent ☒ Customer ☐ Both

KEYWORDS

Keyword expression	Title (optional)	Keyword score	
"better business bureau"		-5	×
(cancel* clos*) ONEAR:2 account	cancel account	-5	×
(cancel* stop) ONEAR:2 service	cancel service	-5	×
"hears about this"		-5	×
"I'll never" ONEAR:1 (purchase buy)		-20	×

3. Click **Save** when finished to update the Topic information and allow Call Recording with Speech Analytics to begin using the new information for analysis of calls and trends in future calls.

Trend Analysis

Trend Analysis for All Topics

With Speech Analytics tools in use, Admins and Supervisors can easily review call values per Topic over specified periods of time to uncover trends in calls. By default, topics on **Trend Analysis** page are ordered by **Total Calls**, with topics found in the highest number of calls shown at the top of the list. Admins can choose to reorder the list using the **Order By** selection tool at the bottom of table. Call Recording with Speech Analytics can also be set up to display changes in call volumes where a specific Topic was extracted using the criteria specification tools at the top of the view.

Navigate to **Voice Analytics > Trend Analysis** to see trends for the Topics defined in your system or even for a certain group or call center. Select a different period to be analyzed by changing the date range in the Search section, click Add Criteria to further filter the search as needed, and then click on the **Run Search** button.

The **Trend Analysis** page displays:














- Total number of calls for each topic for a Trend Period (column = **Total Calls**)
- A trend diagram, displaying a change in call volume over the last 7 trend periods (column = **Trends**).

An authorized Admin or Supervisor can also choose a different **Trend Period** in the search panel (Day, Week, Month, Quarter, Year), as needed.

If a specific Topic in the list is interesting, click on the **View** link adjacent to it (far right). This opens the view to show the list of calls related to this topic for further review, and of course the Admin or Supervisor may review the details of any of those calls to listen to the audio and read the transcribed text with scoring in the call details view.

Speech Analytics

Wide view 
License expires in 30 day

TREND ANALYSIS			
Tenant	Acme	2021/06/08 - 2021/07/13	Trend Period Week
Add criteria Run Search			
TOPIC	TOTAL CALLS	TRENDS	
Positive Statements - General	159		View
Resolution Indicators (customer)	155		View
Agent insecurities	49		View
Opening Statements	49		View
Ending Statements	37		View
Positive Statements - Adverbs	28		View
Resolution Indicators (agent)	23		View
Payment language	18		View
Shipping	15		View
Positive Statements - Empathy	14		View
Positive Statements - Reassurance	11		View
Subsequent (repeated) Call	11		View
Broken Trust	8		View

Searches can also be filtered to focus on particular calls, as shown in the following example:

TREND ANALYSIS

Tenant: Acme 2021/06/15 - 2021/07/20 Trend Period: Week

Call - Duration: Between 2:00 - 15:00

Call - Topic: One of * Broken Trust * Subsequent (repeated) Call

Call - Direction: Is Inbound

[Add criteria](#) [Run Search](#)

TOPIC	TOTAL CALLS	TRENDS	
Broken Trust	7		View
Subsequent (repeated) Call	7		View

Order by: ↓ Total Calls

By default, topics on **Trend Analysis** page is ordered by Total Calls, with topics with highest number of calls shown at the top. Admins can change the order by clicking **Order By** select box in the bottom of table:

TOPIC	TOTAL CALLS	TRENDS	
Broken Trust	7		View
Subsequent (repeated) Call	7		View

Order by: ↓ Total Calls ↑ Topic ↑ Topic ↓ Total Calls ↑ Total Calls

Trend Analysis for Individual Topics

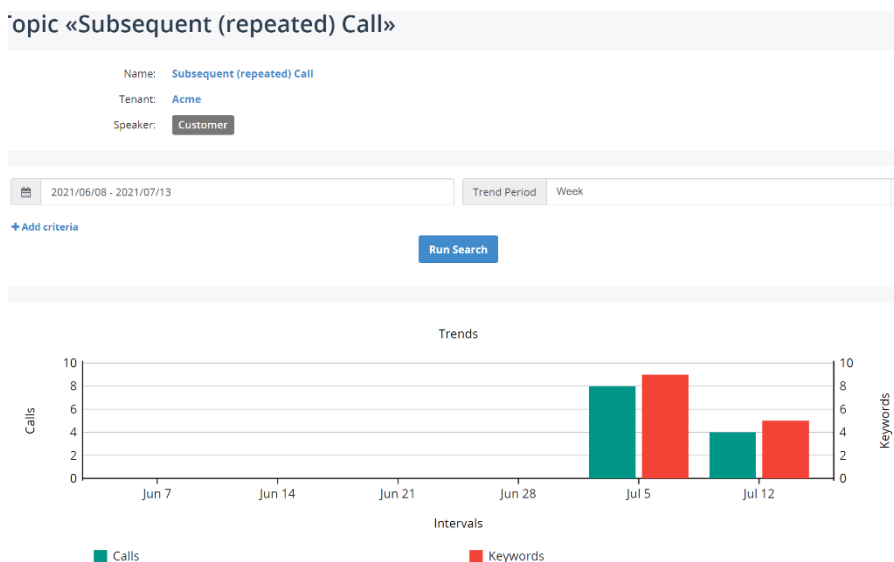
Click on the **View** link adjacent to a Topic in the list to see metrics for this topic only.

The following example demonstrates metrics for the Topic named **Subsequent (repeated) Call** in July.

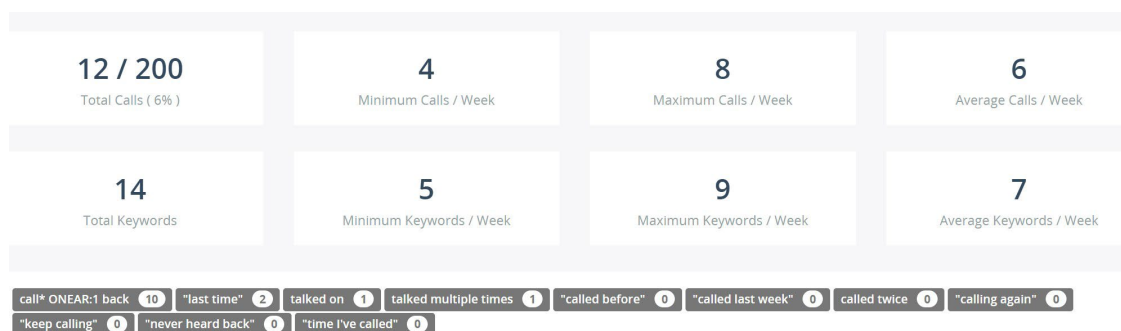
The display updates to show trend analysis information about the selected Topic, including:

A chart, displaying the trend in calls over the selected period of time.
*Change a period of time in the search panel and click the **Run Search** button to re-calculate trends.*

Various metrics, like minimum, maximum and average calls per period, total/min/max/avg keywords etc.



Any keywords in the Topic display with the number of times each was spotted in calls for this period of time.



CALLS									
<div>Tags</div> <div>Download Export Delete More</div> <div>0-12 of 12</div>									
	USER	DATE	TIME	DURATION	FROM	TO	TOPICS	TOPIC TOTAL SCORE	
<input type="checkbox"/>		Jul 12, 2021	5:26 PM	0:43	929465868502	837284959 (Valerie Woods)	Resolution Indic... 4 Subsequent (repe... 1 Positive Stateme... 1 Positive Stateme... 1	13	
going on. Okay, we'll just have him give me a call back if you don't mind. [redacted] [redacted] [redacted] [redacted]. Okay. Thank you									
<input type="checkbox"/>		Jul 12, 2021	5:20 PM	7:40	853172865418	575429417 (Desiree Jenkins)	Positive Stateme... 2 Subsequent (repe... 1 Positive Stateme... 2	-4	
know what that is. It's right underneath the back. It's called back snap navgtr which almost sounds like the artist and for									
<input type="checkbox"/>		Jul 12, 2021	5:19 PM	2:50	428972788924	494425002 (Scott Martin)	Ending Statements 2 Positive Stateme... 1 Subsequent (repe... 1 Positive Stateme... 2 Resolution Indic... 1 Opening Statemen... 1	0	
I see. Okay. That makes sense. Okay, I guess I'll call back if I have any more questions. I thank you. Bye									
<input type="checkbox"/>		Jul 12, 2021	5:14 PM	2:49	348827038019	584723879 (Dennis Young)	Upset customer ... 3 Subsequent (repe... 2 Cursing 1 Positive Stateme... 2 Resolution Indic... 1 Negative Stateme... 1 Treat 1	-156	
was October 20th was odd first call and then we talked on the 22nd and then we've talked three or four times since then and we're going through my notes here. What									
<input type="checkbox"/>		Jul 7, 2021	7:47 PM	4:05	184319825788	557437735 (Christopher Hicks)	Positive Stateme... 4 Subsequent (repe... 1 Positive Stateme... 2 Agent Insecuriti... 2 Positive Stateme... 1	-13	

Once again, the Admin or Supervisor can narrow-down search results by selecting or specifying useful criteria in the search panel and then click the **Run Search** button to filter. Choose from Group, Call duration, Call direction, and many other attributes to filter the data as needed.

Topic «Subsequent (repeated) Call»

Name: **Subsequent (repeated) Call**

Tenant: **Acme**

Speaker: **Customer**

📅

2021/06/15 - 2021/07/20

Trend Period

Week

▼

Call - Duration

▼

Between

▼

2:00

🕒

-

15:00

×

Call - Direction

▼

Is

▼

Inbound

×

▼

Group

▼

Is

▼

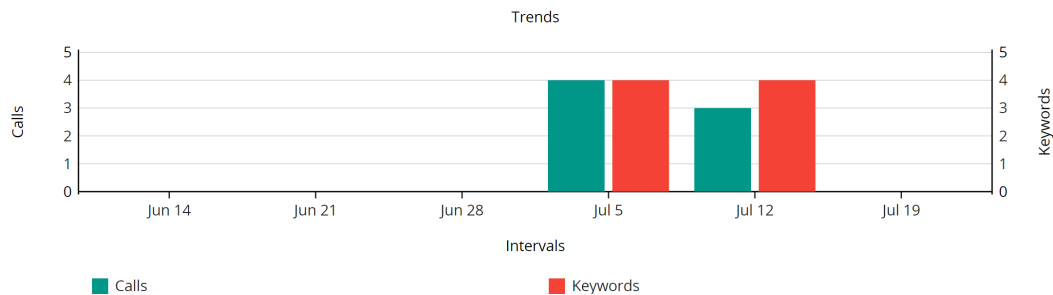
Group Savage-Hale

×

▼

[+ Add criteria](#)

Run Search



Configuring Data Display Settings

Display Topic Column in Recordings List

To display topic information in call recordings lists, an Administrator can navigate to **Administration > Customization > Field Visibility**, to define new columns or remove columns from layouts. Click **Edit** next to the Layout to be changed to see all possible options.

Administration > Customization

Field visibility

Tenant System

LAYOUT	VISIBLE COLUMNS	
Recordings - All Calls	Date Time Duration From To Topic Total Score Topic Agent Score Topic Customer Score	Edit
Recordings - My Calls	Date Time Duration From To Tags	Edit
Recordings - Active Calls	User Date Time Duration From To Timeline	Edit
Recordings - By User	Date Time Duration From To Tags	Edit
Recordings - By Client	Client Date Time Duration From To	Edit
Recordings - By Tag	User Date Time Duration From To Tags	Edit
Recordings - Not assigned to user	Date Time Duration From To	Edit
Recordings - Advanced Search	Date Time Duration From To	Edit
Recordings - Interaction	Time Duration From -> To	Edit

In the **Hidden Columns** list, locate the **Topic** option and click the **Show** link or drag-n-drop it to the **Visible Columns** list. Then click **Save** and the Layout is updated to show a Topic Column.

Administration > Customization > Field Visibility

Edit Layout «Recordings - All Calls» for System

VISIBLE COLUMNS

≡	DATE	hide
≡	TIME	hide
≡	DURATION	hide
≡	FROM	hide
≡	TO	hide

HIDDEN COLUMNS

≡	KEYWORDS	show
≡	CALL ID	show
≡	TENANT	show
≡	PARENT CALL ID	show
≡	SECONDARY PARENT CALL ID	show
≡	TRANSCRIPT STATUS	show
≡	TOPICS	show
≡	KEYWORDS	show
≡	TOPIC TOTAL SCORE	show
≡	TOPIC AGENT SCORE	show
≡	TOPIC CUSTOMER SCORE	show

Save

After the layout configuration is **Saved**, the **Topics** column displays in the Recordings list.

DATE	TIME	DURATION	FROM	TO	TOPICS
11/7/21	7:35 PM	7:40	1521147438	915686591 (Yolanda Fletcher)	<div>Positive Stateme... 4</div> <div>Positive Stateme... 3</div> <div>Shipping 3</div> <div>Positive Stateme... 1</div> <div>Resolution Indic... 1</div> <div>Agent insecuriti... 1</div> <div>Cursing 1</div>
11/7/21	7:34 PM	0:13	567988805468	240941414 (John Mitchell)	<div>Positive Stateme... 1</div>
11/7/21	7:34 PM	0:34	827750989277	561731230 (Monica Johnson)	<div>Positive Stateme... 2</div> <div>Ending Statements 1</div> <div>Resolution Indic... 1</div> <div>Resolution Indic... 1</div> <div>Payment language 1</div>
11/7/21	7:34 PM	1:16	990671504996	575429417 (Desiree Jenkins)	<div>Negative Stateme... 4</div> <div>Ending Statements 1</div> <div>Resolution Indic... 1</div> <div>Positive Stateme... 1</div>
11/7/21	7:34 PM	0:15	743226204746	792383680 (Dale Brooks)	<div>Positive Stateme... 2</div> <div>Agent insecuriti... 2</div>

Display Topic Score Column in Recordings List

To display topic score information in call recordings list, an Administrator can navigate to:

Administration > Customization > Field Visibility

Click **Edit** adjacent to the corresponding Recordings layout (these layouts correspond to tabs on Recordings page).

In the *Edit Layout* page, click **show** link for Topic score columns or drag-n-drop them to the **Visible Columns** list.

After this layout configuration is Saved, you will be able to see **Topic Score** columns in recordings list.

Administration > Customization > Field Visibility

Edit Layout «Recordings - All Calls» for System

VISIBLE COLUMNS

≡	DATE	hide
≡	TIME	hide
≡	DURATION	hide
≡	FROM	hide
≡	TO	hide

HIDDEN COLUMNS

≡	KEYWORDS	show
≡	CALL ID	show
≡	TENANT	show
≡	PARENT CALL ID	show
≡	SECONDARY PARENT CALL ID	show
≡	TRANSCRIPT STATUS	show
≡	TOPICS	show
≡	KEYWORDS	show
≡	TOPIC TOTAL SCORE	show
≡	TOPIC AGENT SCORE	show
≡	TOPIC CUSTOMER SCORE	show

Save

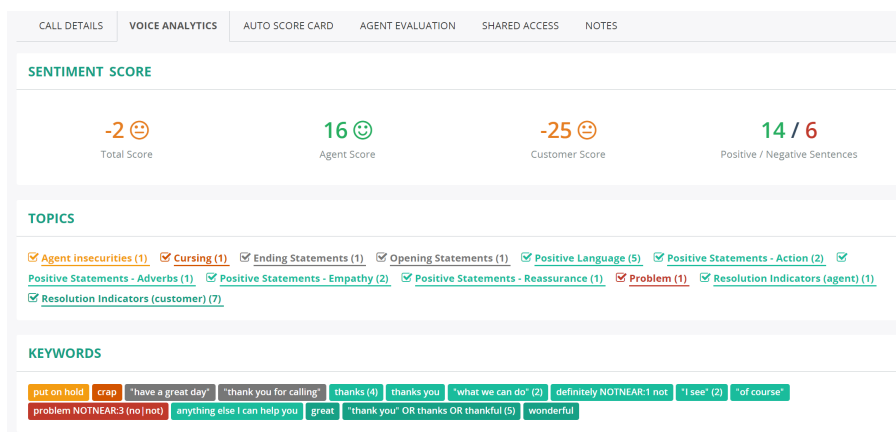
Sentiment Scoring

Sentiment analysis is a machine learning tool that analyzes texts for polarity. Polarity refers to the overall sentiment conveyed by a particular text, phrase or word. This polarity can be expressed as a numerical rating known as a "sentiment score". For example, this score can be a number between -100 and 100 with 0 representing neutral sentiment. Sentiment is subjective, and must be defined by rules the AI follows. This is 'training'. By training the AI machine learning tools, machines automatically learn how to detect sentiment without human input over time, and to score those configurations.

Call Recording analytics expresses customer identified sentiment information in two different ways: through a numerical score with its associated emoji and through visualization of colors assigned to topics and keywords in the Topic list and within the transcript.

Numerical Score

The speech engine analyzes identified keywords for positive or negative customer sentiment. Each keyword can be assigned a numeric value, either positive, negative, or zero (-100 to +100). A total sentiment score value is a summary of all spotted keywords' scores. Depending on the number of times a positive or negative keyword is mentioned either by the customer or the agent, a customer score, an agent score, and the total sentiment score (the average of the two) is automatically tabulated and symbolized by the appropriate emoji.



Keyword Visualization

Positive keywords, such as "thank you" or "this is helpful", are color-coded in green in the transcript as well as in the keyword list (or any other positive color you like), while negative keywords, like "upset", "angry", or "I expected more", are shown in red.

This allows you to see at a glance how a call is trending. If a customer is angry at first, does the agent resolve the problem quickly or does it escalate? With visual Customer Sentiment, you can immediately see it without reading the entire transcript, saving you valuable time.

Customer [1:18]: I don't remember using my phone for.
Wait, so would the GPS app use the Internet?

Agent [1:25]: I'm afraid so. That's probably where the additional charges occurred.

Customer [1:30]: **Crap, it's my fault.** Uh, look, is there anything we can do about this charge?

Agent [1:35]: Umm mister Hobson can I **put you on a brief hold while** I see **what we can do?**

Customer [1:41]: Of course, of course.

Agent [1:45]: **Thanks for holding.** I think we have a solution for you.

Customer [1:49]: **That'd be great.**

Agent [1:50]: We have a provisional travel plan for fifty dollars that covers Canada and Mexico for a month now. **What we can do** since this was a one time occurrence is backdate the coverage for the month of March and that would save you seventy seven dollars from the bill.

Customer [2:06]: **That would be wonderful. Thank you.**

Agent [2:08]: **Of course,** mister Hobson. You'll get a new invoice by email in the next twenty four hours. Looks like all your payments are directly withdrawn, so you should see the seventy seven dollars reimbursed to your bank account in the next three business days. Usually it doesn't even take that long.

Customer [2:22]: **I really appreciate it, thanks.**

Agent [2:24]: Just so you're aware, we can upgrade you to a one bill plus account which includes Mexico and Canada. Would you be interested in that?

Customer [2:32]: No, I really almost never travel, but **thanks.**

Agent [2:35]: Not a problem in the future if you are traveling to Canada or Mexico, you can always call us and add the fifty dollar coverage so you don't experience the charges in the future.

Customer [2:45]: I'll **definitely** remember that. **Thanks so much.**

Hover over the colored keyword text in the transcript to preview the sentiment score of a specific keyword.



Redaction

Redaction can be used to identify and secure content the organization determines is sensitive within the transcripts and audio recordings. Rules can be set up to highlight or redact sensitive personal information such as credit card numbers, phone numbers, or dates of birth from call recordings automatically. The Call Recording data redaction engine relies upon the use of customer defined rules to locate specific text in transcripts (and audio) that may need to be highlighted for review or to be redacted. Identified data can be found in both the speech transcripts and the associated audio files.

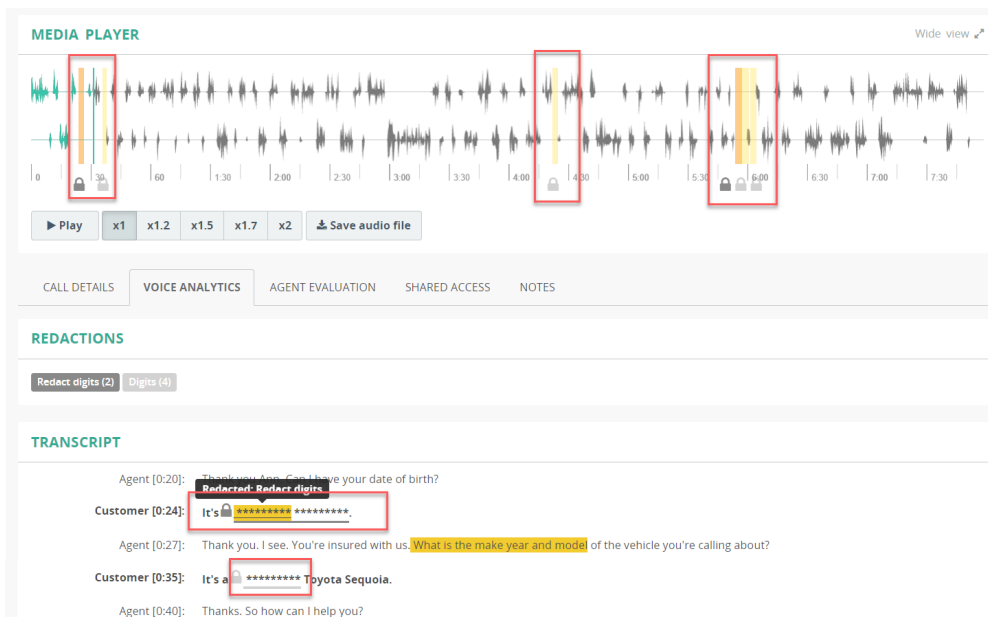
Important

The redaction feature is designed to identify and remove specified data. However, due to the predictive nature of machine learning (i.e., transcription) and the variability of human language, Data Redaction may **not** identify and remove all instances of sensitive data in your transcripts and recordings and the accuracy is dependent on the specificity of the rules you create. Since both false positive and false negative errors can occur, it is important to understand how both types of errors might affect your overall system.

False negatives could lead to personal information leakage or missed redactions - this can be a security risk.

False positives could lead to non-sensitive data being recognized as sensitive and thus redacted - AKA: over-redaction. This is not a risk.

We strongly recommend creating ways to test before running jobs to redact and routinely review any redacted output to ensure it meets all needs and adjust accordingly.



Best Practices

- ♦ Create sets of redaction rules and test their expressions' effectiveness on some call recordings.
- ♦ Use advanced search criteria (on the Recordings > Advanced Search page) to locate recordings in your platform that represent good candidates for redaction and **tag** them with something like "test-redaction" for future use in redaction testing. If you target calls with credit card number information, then search by words "credit card" or even just words "card" or "number".
- ♦ Create and run jobs in a test mode (or highlight only) on the recordings that were selected for testing.
- ♦ Review the highlighted results and fine-tune the redaction rules as necessary before redaction in full.
- ♦ Once the results are satisfactory, an Admin can configure a job to be run periodically in production.
- ♦ Routinely spot check to see whether the redaction rules are still applicable to any new vocabulary that agents or callers may use in conversations or to make adjustments, include more rules with additional definitions, and to test the efficacy of your rules.

Add/Edit a Redaction Rule

1. Admins Only - Go to: **Administration > Speech Analytics > Data Redaction**
2. Click the **Add** button to create a new rule or the **Edit** button to modify an existing rule.
3. Within the *Add/Edit Data Redaction Rule* dialog, configure, select, or specify the following:

Status: Click to add a check to *Enable* the rule and allow its use if selected in Redaction Jobs.

Name*: Required. Enter a unique name for the rule to make it easy to find in lists or searches.

Color: Use the color selection to to define a highlight color to help visually distinguish different rules in the results.

Descriptions: Optional. Add a simple description of the rule's purpose.

Redact Audio: Click within an adjacent radio button to select Both Sides (recommended) or Matched Side.

Redact Transcript: Click within an adjacent radio button to select Both Sides (recommended) or Matched Side.

Note: *The Redact Audio and Redact Transcript settings can also work in tandem with the Job definitions that determine the side(s) of the interaction that will be highlighted or redacted. See Note 1*

Expressions: Here you will define one (1) or more regular expressions the system will use to identify and highlight or redact matches to the information you define as 'sensitive data'.

a) Expression - Enter the regular expression or simple verbiage to locate within the field.

b) Replacement - define what will be used to mask the data when the job is run - the default is asterisks (***** as shown), but you may change that to anything, including [Redacted].

c) Left and right pad (ms) is the microseconds of data to be included before and after - the default of 500 is the minimum recommended amount.

Use the **+ Add Expression** button to create additional expressions for the rule on new lines.

4. Click **Save and Test** to check the effectiveness of your expressions against some call records -

Or, click **Save** to save the changes and exit the dialog without testing.

Add Data Redaction Rule

Status ☒ Enable
Enable rule processing by data redaction job

Name *

Color
Format is #000000

Description

Redact audio ☒ Both sides ☐ Matched side

Redact transcript ☒ Both sides ☐ Matched side

EXPRESSIONS

Expression	Replacement	Left pad (ms)	Right pad (ms)
1 R"(one two three four five six seven nine \\.)(2,)"	*****	500	500
2 R"[0-9]+" AFTER "credit card"	*****	500	500
3	*****	500	500

[+ Add Expression](#)

**Note 1. Redact both sides vs the matched side only**

In most cases, we recommend redacting data in both audio channels due to a potential echo effect in the audio signal.

By default, the application records audio in two-channel format (stereo), where each side of a conversation is stored in a separate audio channel (left and right). Echo is a common flaw in telephony when the spoken words on one side of a conversation are replayed back on another side with a slight delay and distortion. Another common instance is when an agent repeats each spoken word after the caller says them as some form of confirmation.

Let's look at a common case of redacting credit card numbers in recordings. A target for redaction would be a caller speaking consecutive digits after an agent spoke some trigger phrases like "What is your credit card number?" or "What is a three-digit security code?". Due to the echo effect, the spoken digits can be heard in both audio channels, possibly with slight distortion, for example, a clear "five" on one side and a distorted "fine" on another side. If a redaction is applied to one side only, sensitive data could be potentially recovered from the echoed signal.

A redaction of both sides provides extra safety in removing sensitive data.

For each expression, you can configure the **Replacement** text that will substitute the original text in a transcript, for example:

```
***** or [redacted], and left and right padding (see Note 2).
```

**Note 2. Left and right padding**

The padding setting specifies how much data will be redacted to the left and right side from the targeted data.

We recommend redacting at least 500ms to the left and right from the detected sensitive data to compensate for the negative effects of echo and potential inaccuracy in transcription timestamps.

Transcription timestamps can fluctuate for 200-300ms on average from the ground truth. Such small fluctuation is hardly noticeable by a human, but can expose a word or two in audio if not redacted properly.

Expression Examples

Here are a few common examples of using regular expression syntax to define rules that will redact sensitive data in call recordings to demonstrate the capabilities of the engine. We will gradually increase the complexity of redaction rules in the following examples.

The Goal: To redact all credit card numbers from recorded call audio and transcripts.

To perform a redaction, we will use the regular expression syntax to search for sensitive data in a transcript. Assuming a credit card number consists of 16 digits, we could specify a simple rule, like:

```
R"[0-9]{16}"
```

"[0-9]{16}" = "all digits 0 through 9 in a group of exactly 16 in the text/audio"

Such a rule will search very simply for the 16 digits 0 to 9 that appear in the transcript as a group. For example: When found in the phrase **"My credit card number is 1234567890123456"**. In reality, a credit card number could be pronounced by a speaker in many different ways:

- ♦ each digit spoken individually, like in **"My credit card number is 1 2 3 4 5 6 7 ..."**
- ♦ digits are spoken in groups, like in **"My credit card number is 1234 5678 ..."**
- ♦ digits are separated by the use of words like dash or some other punctuation symbol, like in: **"My credit card number is 1234 dash 5678 dash..."**
- ♦ a speaker uses filler words like in **"My credit card number is 1234 um 5678 ..."**
- ♦ the digits are not a credit card number at all, like in **"A tracking number is 123456789"**

To cover all those variations in our example, a more sophisticated rule is needed. Here's another expression for a rule that can help distinguish digit usage in a conversation a little better:

```
R"[0-9][0-9\-\,\. ]{2,}[0-9]"
```

This rule will search for a single digit 0 to 9 at the beginning of the text (defined by the first `[0-9]` expression), then, it expects to find two or more digits or punctuation symbols (defined by the middle `[0-9\-\,\.]{2,}` expression), and, finally, it expects to find a single digit in the end (defined by the last `[0-9]` expression).

Such an expression *would* allow the rule to match all of the above-mentioned variations of the credit card number in the transcript, but it is *also* broad enough to match tracking number phrases or SKUs or MAC addresses, which we may not want to redact.

To **exclude** things like tracking number variations from being matched by a redaction rule, the expression can include a **trigger phrase** that is added to the search expression. Here's an example you could use:

```
R"[0-9][0-9\-\,\. ]{2,}[0-9]" AFTER:10 ("credit card" OR "card number")
```

In this new expression, we use the operator `AFTER:10`, which instructs the redaction engine to search only for the digits that are spoken within 10 words **after** the triggering phrases "credit card" or "card number".

The **10** in `AFTER:10` defines a maximum allowed distance between a trigger phrase and the searched digits. *Distance* is defined in words, so digits mentioned within 10 words of the trigger phrase(s) would be matched.

Using such an expression, the rule would match the digits that are spoken after the terms credit card or card number are said, but will ignore moments in conversations when digits are spoken in other contexts like after asking for a tracking number. So if this rule is used in a Job that is set to Highlight, the matched digits would be highlighted. If the rule is used in a Job that is set to Redact, the digits that match the rule criteria would be redacted using the replacement method defined in the rule.

We recommend testing all expression rules you create on your real call recordings before enabling the rule(s) in production or creating jobs to run the rule(s) for redaction in production.

For more information about supported regular expression syntax, see the [Appendix](#).

Test Expressions

The **Test Expressions** tool allows you to test the expression rule(s) you created in a Redaction Rule on real call recordings without altering the original transcript and audio file. This is a great way to figure out whether your redaction rule(s) will work for redacting call recordings and adjust to account for the various ways people may provide information before saving redaction rules for use in production.

1. Admins Only - On the **Data Redaction** page, navigate to the existing data redaction rule and click **Test Expressions**.

Administration > Speech Analytics > Data Redaction

Data redaction rule «Redact digits»

[Edit](#) [Test expressions](#) [Delete](#)

Name: **Redact digits**

Color: **#3498d8**

Tenant: **Star Assistance**

Redact the transcript of the opposite side: **Yes**

Description:

EXPRESSION	REPLACEMENT	LEFT PAD	RIGHT PAD
REGEX "[0-9][0-9\-\.\,]{1,}[0-9]"	*****	500	500

2. On the **Step 1** tab, select a call on which you want to test your expression. You can apply filtering criteria to quickly find the target call recording.

Test redaction rule

Wide view

Redact digits

[Manage rule](#)

Step 1. Select a call

Call - Transcript Search query card

[+ Add criteria](#) [Search](#)

0-20 of 35

	DATE	TIME	DURATION	CALLER PARTY	CALLED PARTY
Select	Oct 8, 2022	5:23 PM	1:47	623441916396	542243175 (Tracy Butler)
store real quick. I guess I don't understand why that would take money off my gift card . OK. Let me see. Can I return something wouldn't give me return shipping? I mean					
Select	Oct 8, 2022	5:22 PM	0:15	557165206658	432548072 (Mallory Molina)
Just Yes. came out that your card is showing twenty five dollars are available. OK, thank you so much. You bet have a great day and thank					

3. On the **Step 2** tab, apply the desired changes to the expression rules as needed and click **Test rule** to run a simulated data redaction process.

Digits

[Manage rule](#)

Step 1. Select a call

Step 2. Test expressions

EXPRESSIONS

Expression	Replacement	Left pad (ms)	Right pad (ms)
1 REGEX "[0-9]{4}"	*****	500	500

[+ Add Expression](#)

Redact audio ☒ Both sides ☐ Matched side ☐ Highlight

Redact transcript ☒ Both sides ☐ Matched side ☐ Highlight

[Test rule](#) [Save](#) [Save and close](#)

- Review the results of the redaction for any mistakes and adjust the rule as necessary. Hover over the redacted text to see what rule was applied.

MEDIA PLAYER

Wide view

0 30 60 1:30 2:30 3:30 4:30 5:30 6:30 7:30

Play x1 x1.2 x1.5 x1.7 x2 Save audio file

REDACTIONS

Redact digits (2) Digits (4)

TRANSCRIPT

Agent [0:20]: Thank you. Can I have your date of birth?

Customer [0:24]: It's a [REDACTED].

Agent [0:27]: Thank you. I see. You're insured with us. What is the make year and model of the vehicle you're calling about?

Customer [0:35]: It's a [REDACTED] Toyota Sequoia.

Agent [0:40]: Thanks. So how can I help you?

- When you are satisfied with the results, you can save the redaction rule by clicking the **Save** button (if you wish to continue working in the rule) or the **Save and close** button to save and exit the redaction rule edit dialog.

To confirm that a rule covers a variability of spoken language and redacts, testing your redaction rules on multiple call recordings that include different ways the information was offered is highly recommended.

Create Redaction Jobs

Prerequisite: Data redaction works on transcribed recordings only, so the Speech Analytics license must be applied to the line for redaction to occur.

- Admins Only - Go to Administration > Speech Analytics > Redaction
- Click on the JOBS tab.
- Click **+ Create** to create a new job.

Administration > Speech Analytics > Data Redaction

Data Redaction

RULES **JOBS**

+ Create **x Delete**

0-1 of 1 < >

<input type="checkbox"/>	JOB NAME	STATUS	SCHEDULE	LATEST RUN	
<input type="checkbox"/>	Clear Sensitive Keywords in Calls	Finished	Not scheduled	Today, 8:50 AM	View Start Edit

20 per page

0-1 of 1 < >

4. Fill out the required configuration parameters listed in the dialog:

Name - Choose a distinctive name so that it is easy to locate in lists or searches.

Duration - Required. Choose a duration in seconds.

Mode - Required. Choose a mode: **Full** or **Incremental**. **Incremental** is recommended for large datasets.

Redaction Settings

Action - Choose an action: **Redact data based on rules**, **Highlight moments based on rules**, or **Redact the previously highlighted moments**.

Rules - Choose a rule: **Active rules** or **Selected rules**.

Limits - Set the maximum redacted words per moment and the maximum redacted moments per call.

Filtering Criteria - Add filters to specify the call recordings that will be processed.

Note: this allows the creation of multiple job types

Action After Successful Processing (Optional) - Choose an action: **Clear a tag** or **Assign a tag**.

Limits

Maximum redacted words per moment - Set the maximum number of words that can be redacted in a single moment.

Maximum redacted moments per call - Set the maximum number of moments that can be redacted in a single call.

Note: modify these limit settings if you note that 50 redacted words per moment or 50 moments per call are not enough.

Filtering Criteria

Optional. Define any filtering criteria to specify the call recordings that will be processed. For example, you can set two filters that will process only sales calls for a defined period in this job.

Action After Successful Processing

Optional. This allows Admins to create a chain of events or tasks that occur after the run is successful. Example: assign a tag that is used to send emails in other jobs, and then clear the tag once that task has processed.

Job Advanced Settings

Log File - Optional. Enable to create full logs every time.

Keep job history - Default = 60 days.

Timezone - Select from the drop-down list, or leave empty.

Execution time limit - set number of minutes allowed before abort.

Keep alive timeout - set number of minutes before timeout.

Email notification on completion - Select the preferred option.

Email notification on failure - Select the preferred option.

Email notification address - Enter comma-delimited (separated) email address(es)

Schedule

Run this job - Required; Select the run options from the following

Manually - Only runs when the Admin starts the job.

Every hour - Runs automatically every hour.

Every day - Runs automatically each day - set the time of day (default is 1:00a)

Every Week - Runs automatically each week - set the time and day(s)

Every Month - Runs automatically each month - set the time and day of month

Custom (crontab) - Set very specific time and day definitions, as needed.

Time = 24hr clock

Month = 1-12, so 6 = June

Day = 1-31, so 15 = the 15th of the month

Weekday = 0-6; Sunday = 0 in most US systems.

5. Click **Save** to instruct the system to save your newly set up or edited job.

Start a Redaction Job

1. Go to: Administration > Speech Analytics > Data Redaction.
2. Click on the **JOBS** tab.
3. Locate a Job you wish to run and click the **Start** button next to the targeted job.

Administration > Speech Analytics > Data Redaction

Data Redaction

RULES **JOBS**

[+ Create](#) [x Delete](#) 0-2 of 2 < >

<input type="checkbox"/>	JOB NAME	STATUS	SCHEDULE	LATEST RUN	
<input type="checkbox"/>	Clear Sensitive Keywords in Calls	Not started	Not scheduled	Today, 8:39 AM	View Start Edit

20 per page 0-2 of 2 < >

The table offers information about any jobs that have been set to run.

The **Status** column displays the current state – not started, completed, aborted, in progress.

- ♦ Click **Start** adjacent to a job to manually start the job run.
- ♦ Click **View** adjacent to a job to see the results of the job run when it is completed.
- ♦ Click **Edit** adjacent to a job to make changes to the run criteria using the steps previously outlined.

Administration > Speech Analytics > Data Redaction

Job is started successfully. x

Data Redaction

RULES **JOBS**

[+ Create](#) [x Delete](#) 0-1 of 1 < >

<input type="checkbox"/>	JOB NAME	STATUS	SCHEDULE	LATEST RUN	
<input type="checkbox"/>	Clear Sensitive Keywords in Calls	Finished	Not scheduled	Today, 8:51 AM	View Start Edit

20 per page 0-1 of 1 < >

The job results in the View dialog display the number of processed records and the number of replaced keywords, if any.

Administration > Speech Analytics > Data Redaction

Run #6 of Job «Clear Sensitive Keywords in Calls» [Delete](#)

Job Name: **Clear Sensitive Keywords in Calls**

Status: **Finished**

Start Time: **Oct 13, 2022, 8:50 AM**

Total Execution Time: **3 seconds**

Stage: **Finished [Finished]**

Total replacements for sensitive keywords: **4**

Skipped (files not transcribed): **1**

Total records to process: **202**

Processed: **201**

Skipped: **1**

Remaining: **1**

Review Redaction Job Results

The results of data redaction, where sensitive data has been removed from both the audio file and the transcription are displayed in the Audio track *and* in the Transcript. If only one of those is selected in the rule, the selected option (audio or transcription) is where the redaction will be masked/noted.

The screenshot shows the 'MEDIA PLAYER' interface with an audio waveform. Three segments of the audio are highlighted with red boxes, indicating redacted content. Below the audio player, the 'TRANSCRIPT' section shows a conversation between an agent and a customer. Redactions are visible in the transcript, such as 'Redacted: Redacted digits' and 'It's a [REDACTED] Toyota Sequoia'.

View Redactions found per rules in use within the Audio track - click on the section to check that audio

View Redactions found per rules in use within the Transcript section (Speech Analytics Add-On)

When browsing through the recordings, you can quickly identify which calls contain redacted data by spotting the **lock** icon next to the call recording file – and in the text when viewing a transcription within a recording.

<input type="checkbox"/>	TENANT	DATE	TIME	DURATION	CALLER PARTY	CALLED PARTY	TAGS
<input type="checkbox"/>	PeriSolutions Ltd.	Jun 14, 2022	11:05 PM	2:25	252815881	583232816	
<input type="checkbox"/>	PeriSolutions Ltd.	Jun 14, 2022	7:10 AM	7:59	168780123	928732197	
<input type="checkbox"/>	PeriSolutions Ltd.	Dec 11, 2021	10:07 PM	0:24	467255031	307449420	encrypted
<input type="checkbox"/>	PeriSolutions Ltd.	Nov 22, 2021	9:11 PM	1:48	256814801076	271327389 (Kent Clark)	imported
<input type="checkbox"/>	PeriSolutions Ltd.	Nov 20, 2021	9:11 PM	1:48	256814801076	271327389 (Kent Clark)	imported
<input type="checkbox"/>	PeriSolutions Ltd.	Nov 19, 2021	9:11 PM	1:48	256814801076	271327389 (Kent Clark)	imported
<input type="checkbox"/>	PeriSolutions Ltd.	Nov 20, 2019	12:48 AM	1:42	+17029034115 (BTP)	+14084148202	imported2
<input type="checkbox"/>	PeriSolutions Ltd.	Nov 20, 2019	12:47 AM	1:01	+17029034115 (BTP)	+14084148202	imported2

Also, you can use the **Advanced Search** tool and apply **Call - Redacted** and/or **Call - Redacted By Rule** filtering criteria to search through call recordings that have redacted data.

Call - Redacted

Recordings

The screenshot shows the 'ADVANCED SEARCH' interface. The search criteria are set to 'Call - Redacted' and 'Is true (enabled)'. The 'Search' button is highlighted.

Call - Redacted By Rule

Recordings

The screenshot shows the 'ADVANCED SEARCH' interface. The search criteria are set to 'Call - Redacted By Rule' and 'Is Digits'. The 'Search' button is highlighted.

Searching Speech Analytics

Search by Topic and/or Score

In the Advanced Search, Admins can search calls by Call - Topic and by Call - Topic Total Score values.

In the example below, the search was looking for calls that spotted Topics called Broken Trust, Agent Insecurities, and a Topic Total Score lower than -10. This enabled the search to find calls that might be scored as "Critical" for those topics for review.

5 MY CALLS BY USER BY CLIENT NOT ASSIGNED TO USER BY TAG **ADVANCED SEARCH**

Call - Topic One of * Broken Trust * Agent insecurities

Call - Topic Total Score Lower than -10

Add criteria

Run Search Save Search

No auto-refresh Tags Download Export Delete More 0-4 of 4

	DATE	TIME	DURATION	FROM	TO	TOPICS	TOPIC TOTAL SCORE
1/2	Jul 7, 2021	7:47 PM	4:05	184319825788	557437735 (Christopher Hicks)	Positive Stateme... 4 Agent insecuriti... 2 Positive Stateme... 1	-13
2/2	Jul 7, 2021	7:43 PM	1:57	681574134230	430674321 (Billy Valenzuela)	Positive Stateme... 2 Loss of Business 2 Agent insecuriti... 2 Resolution Indic... 1	-13
	Jul 7, 2021	7:14 PM	4:33	619495167947	142701964 (Pamela Smith)	Positive Stateme... 5 Agent insecuriti... 1 Problem 2 Positive Stateme... 1	-18
1/1	Jul 7, 2021	7:08 PM	4:29	756686112892	157948353 (Christopher Kline)	Agent insecuriti... 4 Payment language 2 Credit card 4 Resolution Indic... 1 Positive Stateme... 1	-14

Search by Transcript Text

Searches can be made of calls using any verbiage found within the Speech Analytics transcriptions.

In the following example, the search was filtered using the Call - Transcript option and the word **Refund** was entered as the value to be found within call transcripts.

5 MY CALLS BY USER BY CLIENT NOT ASSIGNED TO USER BY TAG **ADVANCED SEARCH**

Call - Transcript Search query refund

Add criteria

Run Search Save Search

No auto-refresh Tags Download Export Delete More 0-13 of 13

	DATE	TIME	DURATION	FROM	TO
	Jul 12, 2021	5:29 PM	1:06	610217061211	116128992 (April Roberts)
back to [redacted] [redacted] [redacted] [redacted] . Yep . Only thing with that Okay . is it would be refunded to your card ? Right . I got you know , it's fine . Okay . I just looking at some options					
	Jul 12, 2021	5:27 PM	4:13	3360900690	638899152 (Matthew Scott)
small or anything like that . So we will go ahead and do a return for a full refund on that without any kind of return restocking fees and all that kind of stuff . Oh , that					
	Jul 12, 2021	5:24 PM	1:03	978669836601	280527267 (Ariel Fritz)
Okay [redacted] [redacted] . So per the notes are order refund team denied that refund and told us we had to reach out to him a manager for the accommodation . So my manager is just wanting					

Call Recording then easily found instances within the Speech Analytics call transcripts where that verbiage was spoken during recorded calls for further review of the individual calls by a Supervisor or Admin. The results also clearly show when the calls occurred.

ATE	TIME	DURATION	FROM	TO	TOPIC TOTAL SCORE	TOPIC AGENT SCORE	TOPIC CUSTOMER SCORE
il 7, 321	7:35 PM	7:40	1521147438	915686591 (Yolanda Fletcher)	3	8	-5
il 7, 321	7:34 PM	0:13	567988805468	240941414 (John Mitchell)	1	1	0
il 7, 321	7:34 PM	0:34	827750989277	561731230 (Monica Johnson)	9	4	5
il 7, 321	7:34 PM	1:16	990671504996	575429417 (Desiree Jenkins)	-14	-4	-10
il 7, 321	7:34 PM	0:15	743226204746	792383680 (Dale Brooks)	-8	-8	0
il 7, 321	7:34 PM	4:38	307570246519	578934222 (Amy Peters)	24	9	15
il 7, 321	7:34 PM	0:30	732427355 (Sandra Brown)	51427588080	5	0	5

Appendix

A. Keyword Expression Syntax

Call Recording with Speech Analytics supports very powerful expression syntax for defining keywords and phrases in text in very specific ways.

AND - If the Admin is adept at the use of regular expressions, these tools for defining keywords can truly help make analysis and detection precise and enlightening. The following Operators are supported:

- AND OR AFTER
- & |
- NOT NOTIN
- NEAR NOTNEAR
- ONEAR MATCHES

Additionally, Speech Analytics supports the use of:

- parentheses "() AND ()" for grouping multiple terms or expressions.
- Wildcards

B. Boolean Operators

AND, OR, NOT, plus the symbols & and |

Expression	Description
quick OR brown	matches " quick fox " and " brown fox "
quick AND fox	matches " quick fox "
NOT brown AND fox	matches " quick fox " but not " brown fox "

The ampersand symbol & is synonymous with the operator **AND**

The | symbol is synonymous with the operator **OR**

When using the symbols, a space between words or symbols is **optional**.

For example: both ways to write "(quick | brown | grey) & fox" and "(quick|brown|grey)&fox" are valid

Expression	Equivalent Format
quick brown	quick OR brown
quick & fox	quick AND fox
(quick brown grey) & fox	(quick OR brown OR grey) AND fox

C. Case Usage in Operator Names

The case in operator names is important. **Operators always use all capitalized letters.**

Examples: **AND**, **NOW**, **OR**, **AFTER**...

AND is treated as an operator, while the word **and** in lower case or the word **And** in camel case will be treated as just the word 'and' within the text.

D. Order of Term Match

An order of matched words is not taken into account normally.

If the order of the matched words is important, use a proximity operator like **ONEAR** in the expression.

Expression	Description
quick AND fox	matches both " quick fox " and " fox quick "

E. Distance Between Matched Words

By default the distance between words is not taken into account and must be specified. In Call Recording the default distance (if not specified with a Proximity Operator) is 5 words.

Use all caps Operators with a Quoted Term, or use Proximity Operators like **AFTER**, **NEAR**, **ONEAR**, or **NOTNEAR** if the distance between words, numbers, or phrases is important for a match.

Expression	Description
quick AND fox	matches both " quick fox " and " quick dog was chasing a fox "
"quick fox"	matches " dog was chasing a quick fox " but not " quick dog was chasing a fox "
quick NEAR:3 fox	matches " quick fox " and " quick and cute fox " <i>But, won't match "a quick dog was chasing a red fox", because the distance between the word quick and the word fox is more than 3 words.</i>

F. Quoted Terms

A Quoted Term uses quotation marks ("quotes") around words or terms to search for that exact phrase.

Expression	Description
"quick fox"	matches " dog was chasing a quick fox " but not " quick dog was chasing a fox "
quick fox	matches both " quick fox " and " quick dog was chasing a fox ". Another equivalent would be " quick NEAR:5 fox " which would find <i>quick</i> and <i>fox</i> within a distance of 5 words of each other.

G. Wildcards

A wildcard character is used to substitute one or more characters in a string. Supported wildcard characters include:

Symbol	Description	Example
*	Represents zero or more characters	bl* finds bl , black , blue , and blob
?	Represents a single character	h?t finds hot , hat , and hit
[]	Represents any character(s) within the brackets	h[oa]t finds hot and hat , but not hit
!	Represents any character not included within the brackets	h[!oa]t finds hit or hut , but not hot and not hat
-	Represents a range of characters	c[a-b]t finds cat and cbt

Tip: Use the expression **yes!!** to find instances where the term **yes!** is found in the text.

H. Grouping Terms

Parentheses. Multiple terms or clauses can be grouped together using parentheses to form sub-queries.

Examples:

- (quick OR brown) AND fox
- (quick | brown | grey) fox
- NOT brown AND (fox OR dog)

I. Proximity Operators

NEAR[:x], ONEAR[:x], NOTNEAR[:x], NOTIN

Proximity operators used with distance parameters allow Admins define ways to locate one searched term found within a specified distance of another within the text.

NEAR[:x]

This term creates a distance parameter. It finds the phrase where the terms joined by this operator are within the specified number of words from each other, where **x** = the maximum distance allowed between the specified terms.

Note 1: A distance parameter is optional. If omitted from the expression, a default distance of **5** is always used. That means using the **NEAR** proximity operator without the **:x** is equivalent to **NEAR:5**

Note 2: The order of the found terms is not taken into account.

An expression of **brown NEAR fox** will find matches for both '**dog is chasing brown fox**' and '**fox chased a brown dog**' because the terms specified are within the distance of 5 words.

Note 3: When chaining multiple operators together, parentheses must be used when distances are not the same. This means the expressions (brown NEAR quick NEAR fox) and (brown NEAR:2 quick NEAR:2 fox) are both valid, but if brown NEAR:2 quick NEAR:5 fox is used, it is not valid without the parentheses because the distances are not equal (2 in one case, 5 in the other) - Parentheses must be added to make such expressions valid. For example: (brown ONEAR:2 quick) ONEAR:5 fox

Expression	Description
cancel* NEAR order	Matches " cancel my order ", " order is canceled " but not " cancel my account and then place an order ", because the distance between cancel and order is more than the 5 word default.
cancel* NEAR:1 order	Matches " cancel order ", but not " cancel my order " because the distance between words noted in the expression is more than the requested (1).
brown NEAR quick NEAR fox	Matches " brown and quick fox ", but not " brownfox "

ONEAR[:x]

Similar to the **NEAR proximity** operator, but the specified order of the matched terms as written/in the transcript **is** taken into account.

For example: if written as brown NEAR fox it will spot a match for "**brown fox**" but not "**fox brown**".

Expression	Description
cancel* ONEAR order	Matches " cancel my order " but not " order is cancelled ", because of the order of terms is important.

Note 1: In a distance parameter the [:x] is optional. If omitted, a default distance of **5** is used. So, writing **ONEAR** without including the **:5** is still equivalent to **ONEAR:5**

Note 2: When chaining multiple Operators, parentheses must be used. This is especially important when the distances are not the same. For example, the expressions **brown ONEAR quick ONEAR fox** and **brown ONEAR:2 quick ONEAR:2 fox** are both valid as written, but **brown ONEAR:2 quick ONEAR:5 fox** is not valid without the parentheses because a distance is 2 in one case and 5 in another.

NOTNEAR[:x]

Syntax: <term-1> NOTNEAR[:x] <term-2>

The Proximity Operator **NOTNEAR** finds the term on the **left** side of the operator (<term-1>) that is not in close proximity to the term on the right side of operator (<term-2>).

Expression	Description
cancel* NOTNEAR account <i>(don't match cancel with account if within 5 words.)</i>	Matches "cancel order", "order is canceled", but <u>won't</u> match "cancel my account", "this account is canceled", or "cancel the check"
cancel* NOTNEAR:1 account <i>(don't match cancel with account if there is less than 1 word between them)</i>	Matches "cancel my bank account" but not "cancel account", because the required distance between terms is a maximum of 1 (there must be at least one other word between the two terms).

Note 1: A distance parameter (:x) used with the Proximity Operator is optional. If omitted, a default distance of **5** is used. So, **NOTNEAR** is equivalent to **NOTNEAR:5**

Note 2: An order of the found terms is not taken into account. So, **cancel* NOTNEAR account** will exclude "cancel account" and "account canceled".

Note 3: A chaining of the operator NOTNEAR without using parentheses is not supported. Always use parentheses to specifically group multiple expressions together. For example:

Cancel* NOTNEAR bank* NOTNEAR account is invalid.

Cancel* NOTNEAR (bank* NOTNEAR account) is valid.

NOTIN

Operator **NOTIN** allows the user to match terms that are not part of a longer term in the expression.

For example, to locate the word "problem", but not when it is part of the phrase "not a problem" the following example expressions could be used:

- problem NOTIN "not a problem"
- problem NOTIN "no problem"
- problem NOTIN ((no|not) ONEAR problem)
- problem NOTIN no* ONEAR:2 problem

J. Count Occurrences

The operator **MATCHES** finds the term that occurs the requested number of times in a text. For example, it can be used to find a phrase where at least 5 or 8 digits are included together.

Syntax: **<term> MATCHES: N[-M]** Where:

- **<term>** is a search expression, which can be a word, a phrase, or a more complex expression like **(brown | quick)**
- **N** is the minimum number of occurrences of the term in the text.
- **M** is the maximum number of occurrences of the term in the text. If omitted, then the maximum M is equal to the value for N. For example: **brown MATCHES: 2** is the equivalent of **brown MATCHES: 2-2** and both ways to write this are valid.

Expression	Description
(one two three four five six seven eight nine ten) MATCHES: 5-10	Locates matches for " one two two three four five seven " but not " one two three " because the minimum (N) is 5 and the maximum (M) is 10

K. Precedence Rules

When no parentheses are present, then the proximity operators are evaluated in the following order of precedence:

NOTNEAR
ONEAR
NEAR
NOTIN
MATCHES
NOT
AND
OR

Expression	Equivalent Format
quick OR brown AND fox	quick OR (brown AND fox)
quick NEAR brown AND fox	(quick NEAR brown) AND fox

L. Default Operator

If no operator is included between terms, then a default operator of **NEAR** is used.

Expression	Equivalent Format
brown fox	brown NEAR fox
(quick OR brown) fox	(quick OR brown) NEAR fox
quick OR brown fox	quick OR (brown NEAR fox)

Note 1: The **NEAR** operator has a higher priority or precedence than **OR** and **AND** (Ref: Precedence Rules).

M. Combining Operators

Multiple operators can be combined together to form a complex expression.

Expression	Description
cancel* NEAR (order account)	matches " cancel order ", " order is canceled ", " I am cancelling my account ", " I want to cancel this order " as all terms fall within the default 5 words (NEAR is the same as NEAR:5)
definitely NOTIN "definitely not"	matches the word "definitely" but not when found within the term " definitely not "