MiaRec

Speech Analytics-User-Guide

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1. Overview

The typical contact center collects and stores 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. Designed to deliver valuable intelligence that business users readily understand and use, MiaRec Speech Analytics can help reveal the cause/effect relationships that underlie performance and business outcomes across the enterprise, without 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 social media.

The goal is to analyze information that can 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 MiaRec application uses speech-to-text technologies to transcribe recorded customer interactions and to transform them into a searchable database. It helps organizations enhance customer retention and satisfaction, increase first call resolution and improve sales and self service effectiveness.

The Speech Analytics application automatically prioritizes transcribed interactions based on specific business issues relevant to your contact center. The Speech Analytics application then enables you to access the transcribed contacts for playback, enabling you to hear the context in which the words were said and thus identify issues critical to your business needs.
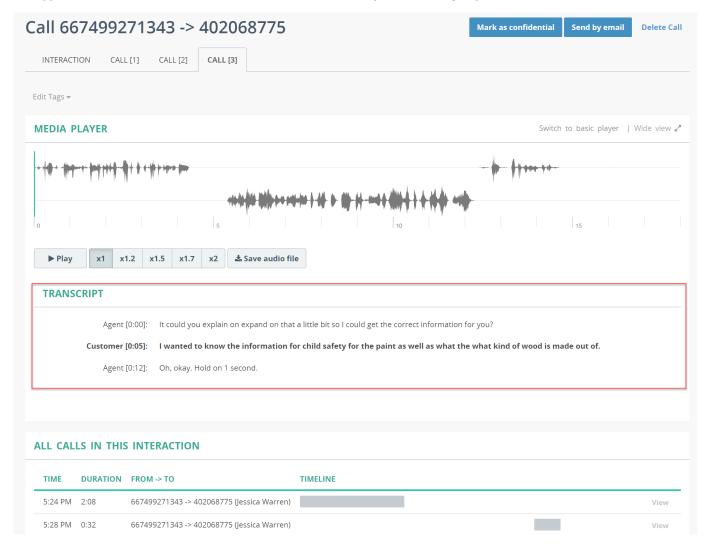
With Speech Analytics you can:

- Gain insight from recorded calls to help you improve products, processes, competitive advantage, and the overall customer experience.
- Use advanced search capabilities to research any hypothesis and quickly receive a prioritized list of results out of millions of calls.
- Surface trends that might otherwise go undetected without listening to thousands of calls.

2. Transcription

MiaRec automatically transcribes calls into text, allowing users to quickly review the transcription and search for keywords or phrases.

The application can transcribe 100% or selective calls based on many criteria, like group, call duration, call direction and others.

Call 667499271343 -> 402068775

<table>
<tr><td>Mark as confidential</td><td>Send by email</td><td>Delete Call</td></tr>
</table>

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

3. Topics and keywords

MiaRec allows you to record and analyze 100% of calls automatically. It does the following actions:

- Identifies each defined keyword/phrase that the participants use in a conversation
- Categorizes calls by topics
- Calculates the aggregated call score
- Displays call volume trends by topic over a period of time
- Searches calls by topic, keyword or score

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.

3.1 Keyword spotting

Keyword spotting, a subset of speech analytics, is the ability of a monitoring system to recognize predefined words and phrases in interactions.
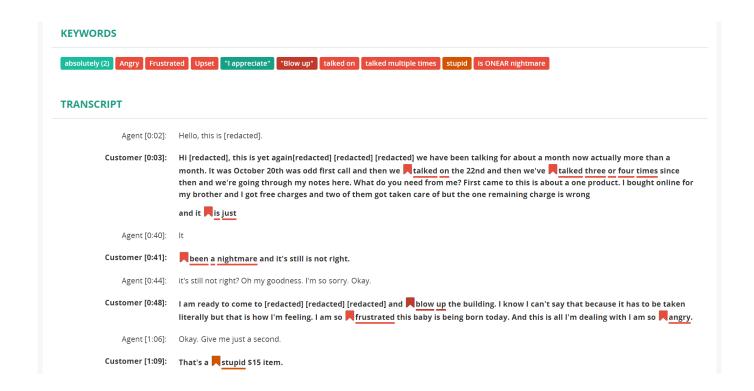
For example, you are interested in knowing when customers use the word "*frustrated*" or other words during an interaction with one of your agents. You define the keywords in the MiaRec application and then put it into operation.

Examples of keywords / phrases:

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

MiaRec identifies who spoken the spotted keywords, agent or customer. Some keywords may have different value or even meaning depending of who, agent or customer, speaks them. For example, phrases like "thank you so much", "excellent", "fabulous" are more valued if they are spoken by customer rather than by agent, who is trained to be polite during a call.

MiaRec shows the spotted keywords above the transcription as well as highlights them within a transcription.

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.
Customer [0:48]:	I am ready to come to [redacted] [redacted] [redacted] and 🚩blow up the building. I know I can't say that because it has to be taken literally but that is how I'm feeling. I am so 🚩frustrated this baby is being born today. And this is all I'm dealing with I am so 🚩angry.
Agent [1:06]:	Okay. Give me just a second.
Customer [1:09]:	That's a 🚩stupid $15 item.

3.2 Topic extraction

A topic is a set of similar or related keywords that fall into the same category. For example, a topic "Repeated calls" may consist of phrases like "called before", "called twice", "called last week", "never heard back" etc.

Examples of topics:

- Upset customer
- Account cancellation
- Repeated calls

MiaRec shows the extracted topics in call details.

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

---

ⓘ **Info**

Topic extraction is highly effective when used together with the Sentiment score feature.

4. Sentiment score

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. Thi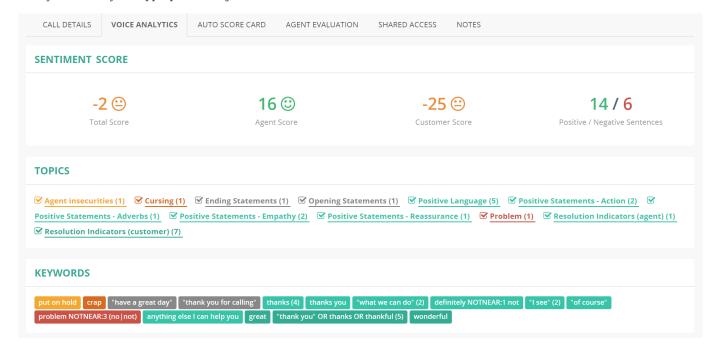s polarity can be expressed as a numerical rating known as a "sentiment score". For example, this score can be a number between -100 and 100 with 0 representing neutral sentiment. By training machine learning tools, machines automatically learn how to detect sentiment without human input and score configuration.

MiaRec 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 transcript.
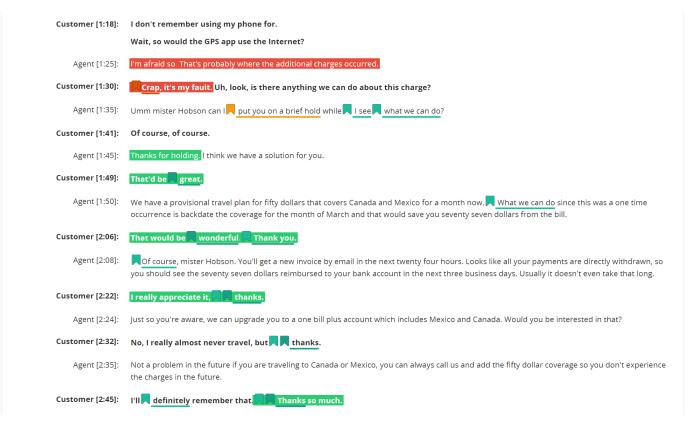
4.1 Numerical score

The MiaRec 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.

| CALL DETAILS | **VOICE ANALYTICS** | AUTO SCORE CARD | AGENT EVALUATION | SHARED ACCESS | NOTES |

SENTIMENT SCORE

-2 ☹	16 ☺	-25 ☹	14 / 6
Total Score	Agent Score	Customer Score	Positive / Negative Sentences

TOPICS

☑ Agent insecurities (1) ☑ Cursing (1) ☑ Ending Statements (1) ☑ Opening Statements (1) ☑ Positive Language (5) ☑ Positive Statements - Action (2) ☑ Positive Statements - Adverbs (1) ☑ Positive Statements - Empathy (2) ☑ Positive Statements - Reassurance (1) ☑ Problem (1) ☑ Resolution Indicators (agent) (1) ☑ Resolution Indicators (customer) (7)

KEYWORDS

put on hold | crap | "have a great day" | "thank you for calling" | thanks (4) | thanks you | "what we can do" (2) | definitely NOTNEAR:1 not | "I see" (2) | "of course"
problem NOTNEAR:3 (no|not) | anything else I can help you | great | "thank you" OR thanks OR thankful (5) | wonderful

4.2 Visualization of the 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 in 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 MiaRec's visual Customer Sentiment, you can immediately see it without reading the entire transcript, saving you valuable time.

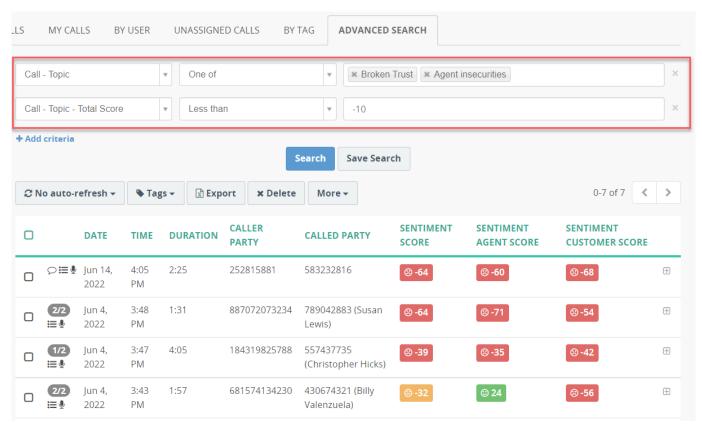|		
Customer [1:18]:	I don't remember using my phone for.	
	Wait, so would the GPS app use the Internet?	
Agent [1:25]:	I'm afraid so That's probably where the additional charges occurred.	
Customer [1:30]:	Crap, it's my fault. Uh, look, is there anything we can do about this charge?	
Agent [1:35]:	Umm 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.	

By hovering over the coloured text, you can preview the sentiment score of a specific keyword.

5. Searching
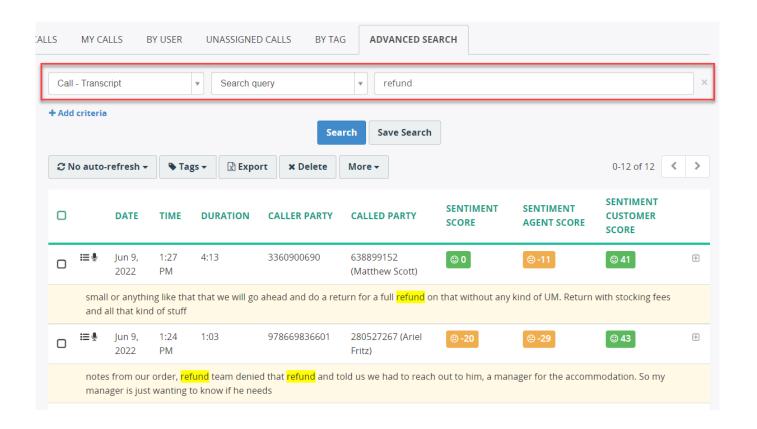
5.1 Searching by topic and/or score

You can search calls by any of topic or score value. For example, you can use this search capability to pullup "critical" call recordings for review.

				CALLER PARTY	CALLED PARTY	SENTIMENT SCORE	SENTIMENT AGENT SCORE	SENTIMENT CUSTOMER SCORE	
		Jun 14, 2022	4:05 PM	2:25	252815881	583232816	-64	-60	-68
	2/2	Jun 4, 2022	3:48 PM	1:31	887072073234	789042883 (Susan Lewis)	-64	-71	-54
	1/2	Jun 4, 2022	3:47 PM	4:05	184319825788	557437735 (Christopher Hicks)	-39	-35	-42
	2/2	Jun 4, 2022	3:43 PM	1:57	681574134230	430674321 (Billy Valenzuela)	-32	24	-56

5.2 Searching in transcription

You can search the transcribed calls using any text expression.

ALLS   MY CALLS   BY USER   UNASSIGNED CALLS   BY TAG   **ADVANCED SEARCH**

| Call - Transcript | ▾ | Search query | ▾ | refund | ✕ |

+ Add criteria

Search   Save Search

⟳ No auto-refresh ▾   🏷 Tags ▾   📄 Export   ✕ Delete   More ▾   0-12 of 12   ‹ ›

☐		DATE	TIME	DURATION	CALLER PARTY	CALLED PARTY	SENTIMENT SCORE	SENTIMENT AGENT SCORE	SENTIMENT CUSTOMER SCORE	
☐	☰🎤	Jun 9, 2022	1:27 PM	4:13	3360900690	638899152 (Matthew Scott)	☺ 0	☺ -11	☺ 41	⊞

small or anything like that that we will go ahead and do a return for a full **refund** on that without any kind of UM. Return with stocking fees and all that kind of stuff

| ☐ | ☰🎤 | Jun 9, 2022 | 1:24 PM | 1:03 | 978669836601 | 280527267 (Ariel Fritz) | ☺ -20 | ☺ -29 | ☺ 43 | ⊞ |

notes from our 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 to know if he needs

6. Trend analysis

6.1 Trend analysis for all topics

Users can easily review trends of call value per topic over certain period of time. For instance, MiaRec can show end users if there was any change in call volumes for any topic.
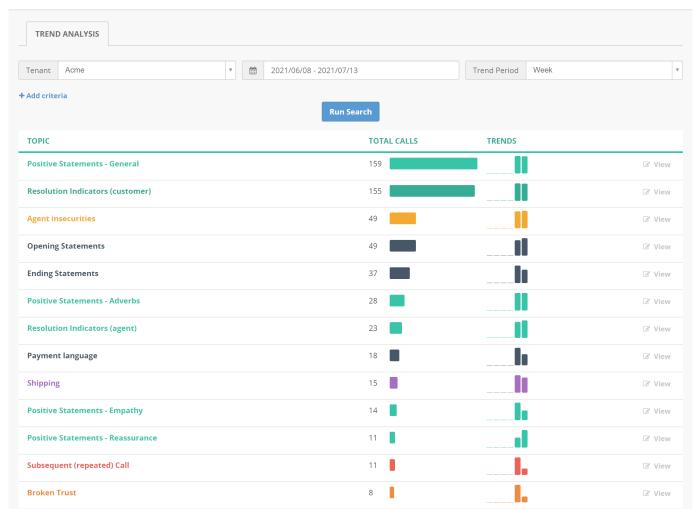
Navigate to **Speech Analytics > Trend Analysis** to see trends for topics in your contact center for a specified period of time.

You choose a different period for analysis by changing a date range in search panel and clicking **Search** button.
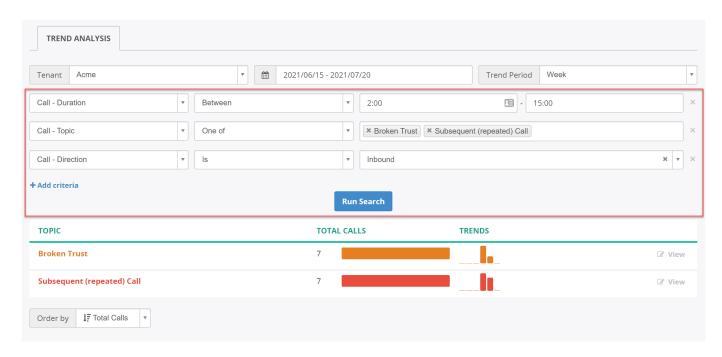
In **Trend Analysis** page, you can see:

- Total number of calls for each topic for a whole period (column **Total Calls**)
- A trend diagram, displaying a change in call volume over the last 7 trend periods (column **Trends**). You can choose a different **Trend Period** in search panel (Day, Week, Month, Quarter, Year).

You can can narrow-down search to focus on particular calls, like shown in the following screenshot:

By default, topics on **Trend Analysis** page is ordered by Total Calls, with topics with highest number of calls shown at the top. You can change the order by clicking **Order By** select box in the bottom of table:
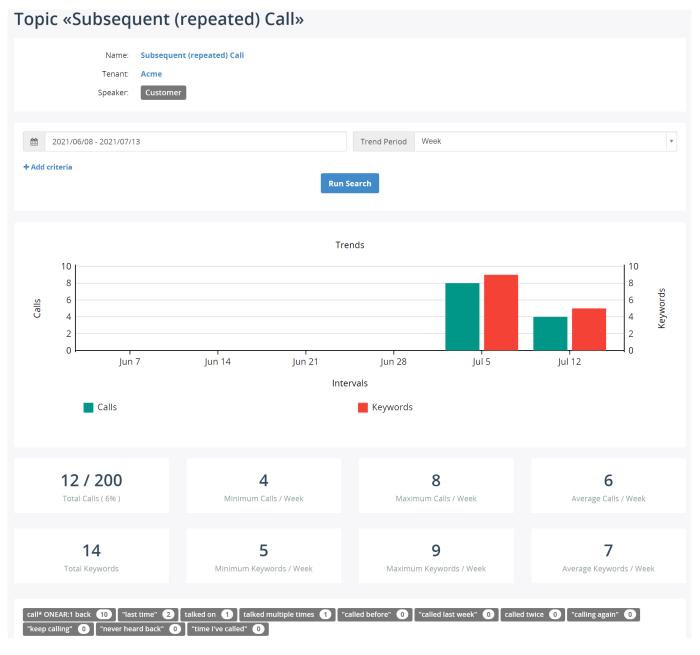
6.2 Trend analysis for individual topic
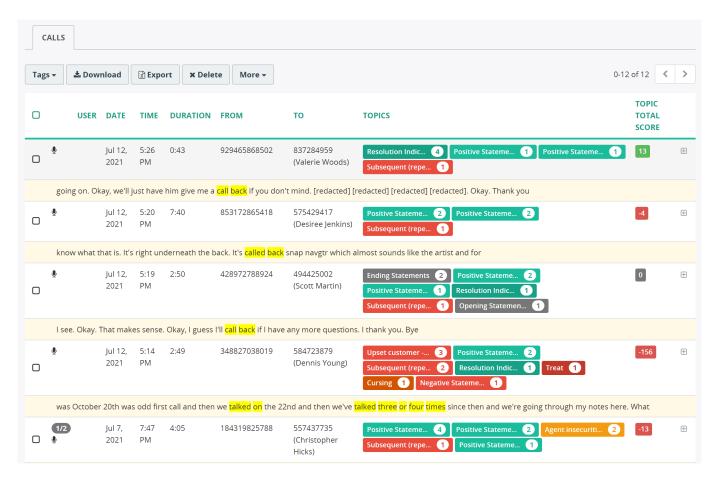
Click View link for a topic to see metrics for this topic only. The following screenshot demonstrates metrics for topic **Subsequent (repeated) calls**.

On this page, you can see:
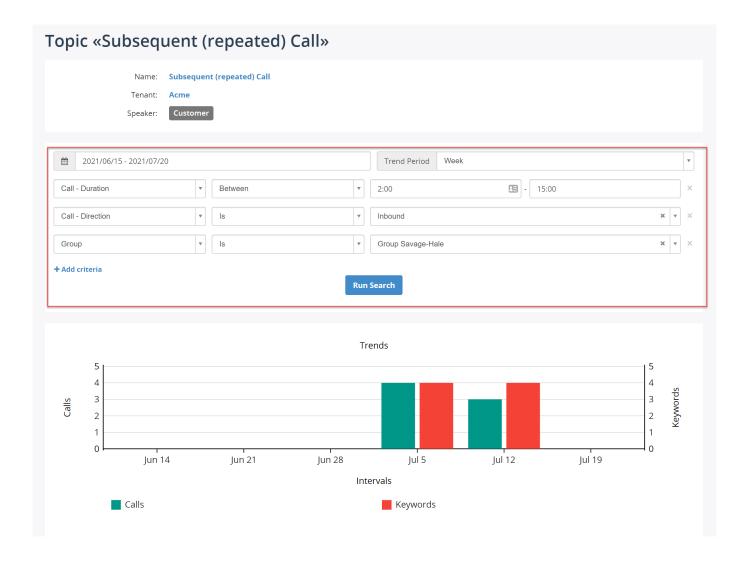
- A chart, displaying trends of topics over the selected period of time. You can change a period of time in the search panel and click **Search** button to re-calculate trends.

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

- A list of keywords in the topic. Each keywords shows a numeric value, representing how many times it was spotted in calls for this period of time.

Topic «Subsequent (repeated) Call»

Name:	**Subsequent (repeated) Call**
Tenant:	**Acme**
Speaker:	Customer

2021/06/08 - 2021/07/13   Trend Period   Week

+ Add criteria

Run Search

Trends

12 / 200 Total Calls (6%)	**4** Minimum Calls / Week	**8** Maximum Calls / Week	**6** Average Calls / Week
14 Total Keywords	**5** Minimum Keywords / Week	**9** Maximum Keywords / Week	**7** Average Keywords / Week

call* ONEAR:1 back **10**   "last time" **2**   talked on **1**   talked multiple times **1**   "called before" **0**   "called last week" **0**   called twice **0**   "calling again" **0**   "keep calling" **0**   "never heard back" **0**   "time I've called" **0**

At the bottom of this page, you can see call recordings matching the search criteria:

	CALLS								

Tags ▾ | ⬇ Download | 🗎 Export | ✕ Delete | More ▾   0-12 of 12   ‹   ›

☐		USER	DATE	TIME	DURATION	FROM	TO	TOPICS	TOPIC TOTAL SCORE
☐	🎤		Jul 12, 2021	5:26 PM	0:43	929465868502	837284959 (Valerie Woods)	Resolution Indic… 4 Positive Stateme… 1 Positive Stateme… 1 Subsequent (repe… 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

| ☐ | 🎤 | | Jul 12, 2021 | 5:20 PM | 7:40 | 853172865418 | 575429417 (Desiree Jenkins) | Positive Stateme… 2   Positive Stateme… 2   Subsequent (repe… 1 | -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

| ☐ | 🎤 | | Jul 12, 2021 | 5:19 PM | 2:50 | 428972788924 | 494425002 (Scott Martin) | Ending Statements 2   Positive Stateme… 2   Positive Stateme… 1   Resolution Indic… 1   Subsequent (repe… 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

| ☐ | 🎤 | | Jul 12, 2021 | 5:14 PM | 2:49 | 348827038019 | 584723879 (Dennis Young) | Upset customer -… 3   Positive Stateme… 2   Subsequent (repe… 2   Resolution Indic… 1   Treat 1   Cursing 1   Negative Stateme… 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

| ☐ | 1/2 🎤 | | Jul 7, 2021 | 7:47 PM | 4:05 | 184319825788 | 557437735 (Christopher Hicks) | Positive Stateme… 4   Positive Stateme… 2   Agent insecuriti… 2   Subsequent (repe… 1   Positive Stateme… 1 | -13 | ⊞ |

You can narrow down search by selecting criteria in the search panel and clicking **Search** button. For example, you can choose Group, Call duration, Call direction and other attributes to filter data.
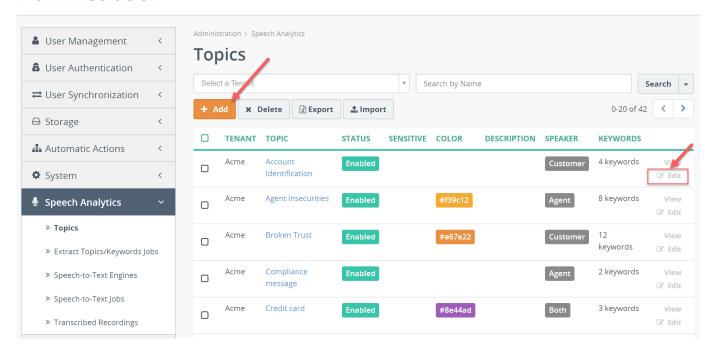

Topic «Subsequent (repeated) Call»

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

Trends

Calls   Keywords

7. Configuring topics

Navigate to **Administration > Speech Analytics > Topics** page, click **Add** button to create new topic or **Edit** button to modify the existing topic.
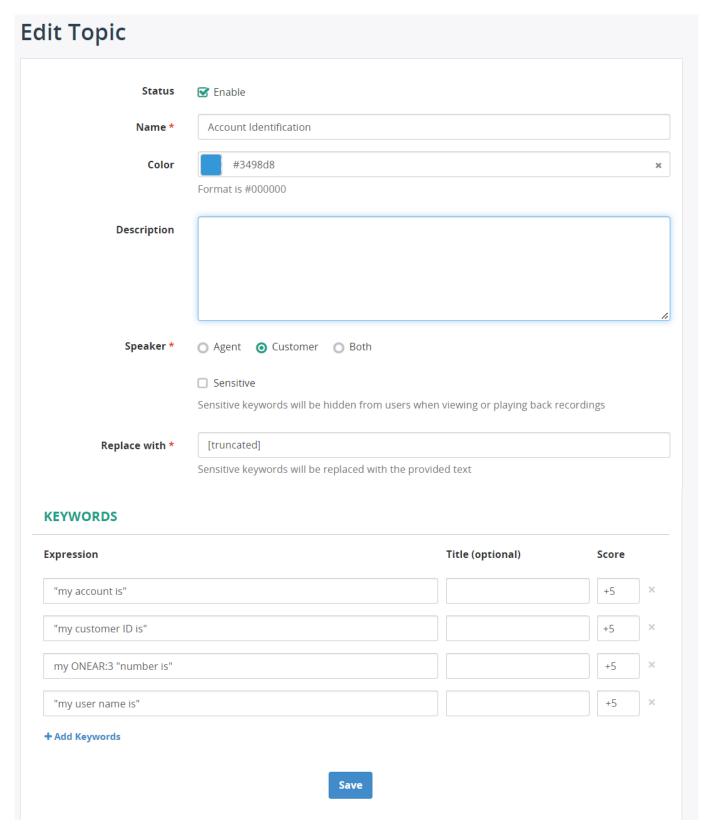

In the **Edit Topic** page, you can configure:

- Name for topic
- Color, which helps to visually distinguish different topics
- Optional description
- Speaker side, where the keywords will be searched for. Keywords can be searched in either agent side, customer side or both.
- A list of keywords and their corresponding score

Edit Topic

Status   ☑ Enable

Name *

> Account Identification

Color

>   #3498d8   ✕

Format is #000000

Description

> [empty text area]

Speaker *   ○ Agent   ◉ Customer   ○ Both

☐ Sensitive

Sensitive keywords will be hidden from users when viewing or playing back recordings

Replace with *

> [truncated]

Sensitive keywords will be replaced with the provided text

KEYWORDS

Expression	Title (optional)	Score	
"my account is"		+5	✕
"my customer ID is"		+5	✕
my ONEAR:3 "number is"		+5	✕
"my user name is"		+5	✕

+ Add Keywords

Save

Keyword expression can be as simple as an exact phrase "cancel account" or more complex expression like "(cancel OR canceling OR cancelled) NEAR account". Check **MQL expression** for details.
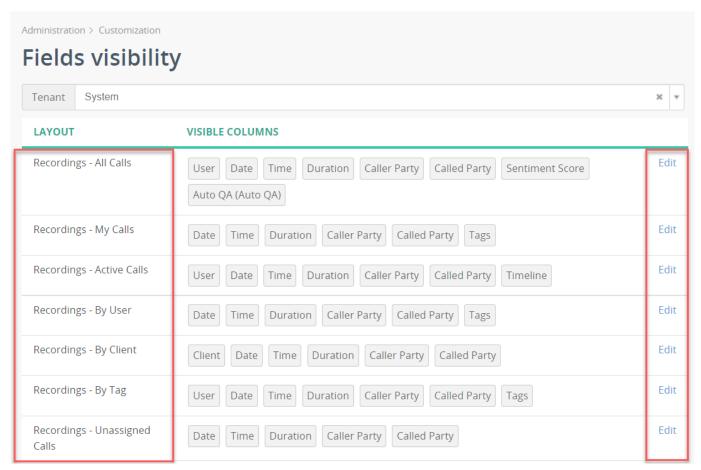
Title attribute is optional. It useful to specify a short and easy to read title for complex expression like "**(close*|closing) NEAR account**". A title will be shown in call details instead of the expression.

Use **Keyword score** score to rank the important of the spotted keywords. A summary of scores of all spotted keywords will be used as a sentiment score. For details, see **Sentiment score**.

8. Configuring data display settings

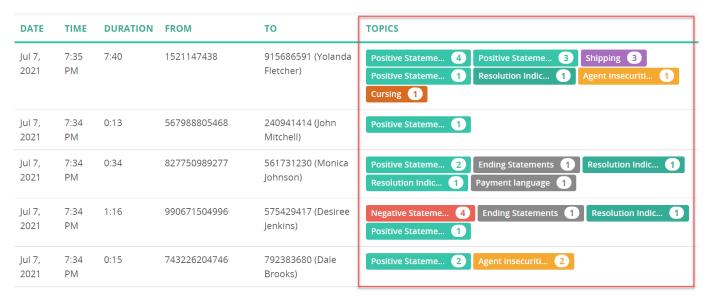## 8.1 Display Topic column in recordings list

To display topic information in call recordings list, navigate to **Administration > Customization > Fields Visibility**, click **Edit** for the corresponding Recordings layouts (these layouts correspond to the tabs on Recordings page):

Administration > Customization

Fields visibility

| Tenant | System | | ✕ ▾ |

LAYOUT	VISIBLE COLUMNS	
Recordings - All Calls	User · Date · Time · Duration · Caller Party · Called Party · Sentiment Score · Auto QA (Auto QA)	Edit
Recordings - My Calls	Date · Time · Duration · Caller Party · Called Party · Tags	Edit
Recordings - Active Calls	User · Date · Time · Duration · Caller Party · Called Party · Timeline	Edit
Recordings - By User	Date · Time · Duration · Caller Party · Called Party · Tags	Edit
Recordings - By Client	Client · Date · Time · Duration · Caller Party · Called Party	Edit
Recordings - By Tag	User · Date · Time · Duration · Caller Party · Called Party · Tags	Edit
Recordings - Unassigned Calls	Date · Time · Duration · Caller Party · Called Party	Edit

In the **Hidden Columns** list, locate **Topic** column and click **show** link or drag-n-drop it to **Visible Columns** list.

After you save the layout configuration, you will be able to see **Topics** column in recordings list.

8.2 Display sentiment score column in recordings list

To display topic score information in call recordings list, navigate to **Administration > Customization > Fields Visibility**, click **Edit** for the corresponding Recordings layouts (these layouts correspond to tabs on Recordings page).

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

Administration > Customization > Fields Visibility

Edit Layout «Recordings - My Calls» for System

VISIBLE COLUMNS

	DATE	hide
≡	TIME	hide
≡	DURATION	hide
≡	CALLER PARTY	hide
≡	CALLED PARTY	hide
≡	TAGS	hide

HIDDEN COLUMNS

	CALL ID	show
≡	TENANT	show
≡	PARENT CALL ID	show
≡	SECONDARY PARENT CALL ID	show
≡	PBX CALL ID	show
≡	PBX TRACKING ID	show
≡	SENTIMENT SCORE	show
≡	SENTIMENT AGENT SCORE	show
≡	SENTIMENT CUSTOMER SCORE	show

After you save the layout configuration, you will be able to see **Sentiment score** columns in recordings list.

		USER	DATE	TIME	DURATION	CALLER PARTY	CALLED PARTY	SENTIMENT SCORE	SENTIMENT AGENT SCORE	SENTIMENT CUSTOMER SCORE	
☐	💬≡🎤	John Jacobs	Jun 14, 2022	4:05 PM	2:25	252815881	583232816	😟 -64	😟 -60	😟 -68	⊞
☐	🎤	John Jacobs	Jun 14, 2022	12:20 AM	7:59	998993605	371652894	😟 -48	😟 -43	😟 -55	⊞
☐	🎤	John Jacobs	Jun 14, 2022	12:10 AM	7:59	168780123	928732197	😟 -47	😟 -43	😟 -53	⊞