Speech Analytics

This chapter mainly elaborates on the analysis operations for recording files within the Speech Analytics module, with core features covering call intent analysis and voicemail detection.

- Speech Analysis Tasks
- Keyword Rule
- Analytics Report

Speech Analysis Tasks

This document provides a detailed overview of the entire workflow for speech analysis tasks, including creation, configuration, execution monitoring, and result analysis. The system supports two data sources: CDR-based (Call Detail Records) and offline recordings. It offers precise task scheduling mechanisms, visual progress feedback, and in-depth transcription details to help administrators efficiently conduct speech analysis and business reviews.

Overview

Speech analysis tasks are the core vehicle for executing voice analysis. Administrators can flexibly specify the scope of recordings to be analyzed (by automatically pulling CDRs or manually uploading files) and configure execution strategies (immediate or scheduled). After execution, the system provides real-time feedback on success/failure progress and offers multi-level result viewing capabilities, ranging from list overviews to timeline analysis of individual calls, enabling deep mining of call content.

Access

1. Log in to the backend management system.
2. In the left navigation bar, select **Speech Analysis > Analysis Tasks** to enter the task management page.

Features

1. View Task List

In the speech analysis task list, you can quickly search for tasks using the top filter bar (Creation Time, Task Name, Status, Data Source). The definitions of core fields in the list are as follows:

- **Task Name**: A custom identifier for the task.
- **Data Source**: Distinguishes whether the data source is "CDR" or "Offline Recording".
- **Time Range**: The time coverage of the recordings for the task.
- **Execution Method**: Displays as "Run Immediately" or "Scheduled Execution".
- **Status**: Reflects the current lifecycle stage of the task.
  - **Pending**: The task has been created but has not started yet (requires manual click on "Start").

    - **Running**: The task is currently processing data.
    - **Completed**: All data processing is finished.
    - **Failed**: The task was interrupted due to an exception during execution.
- **Progress**: Displayed in the format of `Success Count/Failure Count/Total Count`. For example, `0/3/3` means a total of 3 recordings, 0 successful, and 3 failed; `0/1/1` means 1 recording failed to process.
- **Creation Time**: The specific time when the task was generated.

2. Create Speech Analysis Task

1. In the upper left corner of the task list page, click **+ Create Task**.
2. In the pop-up dialog box, fill in the basic information:
    - **Task Name**: Enter an easily recognizable name.
    - **Language**: Select the language corresponding to the recording (e.g., "Indonesian").
    - **Execution Method**:
        - **Run Immediately**: After creation, the task enters a "Pending" status. You need to manually click "Start" on the list page to begin analysis (to allow for modification and confirmation).
        - **Scheduled Execution**: Set a future trigger time, and the system will automatically start the task on schedule.
3. Select the **Data Source** according to business needs:
    - **Scenario 1: Select "CDR"**
        - **CDR Time Range**: Set the start and end times. The system will automatically pull all call records within this time range as analysis objects.
    - **Scenario 2: Select "Offline Recording"**
        - **Upload Recording**: Supports manual uploading of local recording files (formats supported: .wav, .mp3), suitable for model testing or specific case reviews.

3. View Execution Results

For tasks with a status of "Completed" or containing partial successful data, click the **Results** button in the action column to pop up the recording processing list for that task.

Result List Field Descriptions:

- **Callee/Extension Number**: Number information of both parties in the call.
- **File Name**: The name of the original recording file.
- **Recording Duration**: The duration of the call in seconds.
- **Source**: Distinguishes the data source (e.g., "Automatic" pull or "Manual" upload).
- **Recognition Type**: Displays the technical type of speech recognition (e.g., "Single Party Recognized", "Normal Two-way Dialogue").
- **Call Tag**: Business tags matched by the system based on keywords (e.g., "Normal Call", "Prospective Customer", "Callback Customer").

- **Content**: A text summary preview of the transcription.
- **Recording File**: Click **Play** to directly listen to the original recording.

4. Analysis Detail Record

Click **Details** in the result list to enter the in-depth analysis page for a single call. This page restores the entire call process and provides refined timeline analysis.

Core Information Area:

- **Basic Data**: Displays metadata such as callee number, recording duration, source, recognition time consumption, and creation time.
- **Call Tag**: Highlights the business classification tag matched by the call (e.g., "Prospective Customer").
- **Matched Keywords**: Lists the specific words that triggered the tag (e.g., "tertarik" in the screenshot).

Dialogue Timeline Analysis:

The bottom of the page displays the dialogue content sentence by sentence in a timeline format, supporting refined review:

- **Role Identification**: Clearly identifies the speaker as "Agent" or "Customer".
- **Silence Detection**: Marks the silence duration (e.g., `1.0s`) and voice duration (e.g., `2ms`) next to each sentence to help analyze pauses and reaction times in the dialogue.
- **Keyword Highlighting**: Matched keywords are highlighted in the transcribed text for quick location of key information.

Keyword Rule

This document provides a detailed introduction to the configuration and management mechanism of keyword matching rules within the Speech Analytics module. It focuses on elaborating the collaborative working logic between the system default dictionary and custom rules, ensuring that quality inspection analysis can accurately cover general scenarios and specific business needs.

Feature Overview

Keyword rules are the fundamental basis for intent recognition and content analysis in Speech Analytics. The system adopts a **"System Default + User Custom"** superposition matching strategy:

- **System Default Rules**: A general keyword library preset by the platform (e.g., voicemail recognition words), which takes effect without configuration to guarantee basic quality inspection capabilities.
- **Custom Rules**: Supports administrators in adding specific business terms or sensitive words according to actual business scenarios.

When a user configures custom rules, the system will simultaneously load the default dictionary and the custom list for comprehensive matching, achieving full coverage of recording content.

Access

1. Log in to the backend management system. In the left navigation bar, select **Speech Analytics > Keyword Rule** to enter the rule configuration page.

Feature Introduction

Rule Mode Description

The top of the page provides display and configuration entries for two rule sources:

- **System Default**: Displays the basic keyword library uniformly maintained by the platform. This section is read-only and aims to provide general business recognition capabilities (e.g., automatically identifying common terms like "voicemail" or "anti-spam" in languages such as Indonesian). Users can use it directly without self-configuration.

- **Custom**: Supports users in using their own keyword lists. Entries configured here will **take effect together** with the system default dictionary (i.e., Final Matching Logic = System Default Dictionary + Custom Dictionary) to cover specific business scenarios or personalized quality inspection needs.

View System Default Words (Read-Only)

In the "System Default Words" area, you can view all basic keyword information currently preset by the platform, mainly including the following fields:

- **Tag Category**: The business category to which the keyword belongs (e.g., "Voicemail"). The number on the right represents the count of entries under this category.
- **Language**: The language to which the keyword belongs (e.g., "Indonesian"), used to distinguish matching logic in multi-language environments.
- **Keyword**: The specific text content to be matched (e.g., "tekan", "anti spam", etc.).

Configure Custom Rules

1. In the "Custom" area, click **Add** to enter the editing state.
2. Enter the business keyword to be added, and select the corresponding language or category.
3. Click **Save**. The new rule will immediately join the matching queue and work in parallel with the system default dictionary.

> **Important:** Custom rules follow an **incremental superposition** mode, not an overwrite mode. Configuring custom rules **will not** cause the system's default basic recognition capabilities to become invalid. Please feel free to configure specific business vocabulary to enhance the quality inspection effect.

Analytics Report

This document provides a detailed introduction to the report statistics feature within the Speech Analytics module. This module helps administrators comprehensively grasp call quality inspection status, quickly identify high-intent customers and items requiring follow-up, and optimize business strategies through visual data overviews, trend analysis, and detailed queries.

Feature Overview

The Analytics Report is a window for aggregating and analyzing data from completed quality inspection tasks. Based on keyword matching rules, the system automatically categorizes recordings into classes such as "Voicemail", "High Intent", and "Callback Required". It also provides multi-dimensional filtering and export functions to support managers in quantitatively evaluating business results.

Access

1. Log in to the backend management system.
2. In the left navigation bar, select **Speech Analytics > Analytics Report** to enter the report viewing page.

Feature Introduction

1. Data Overview

The top of the page displays a summary of core metrics for the current statistical period, helping administrators quickly understand the overall business status:

- **Total**: The total number of recordings successfully transcribed and participating in quality inspection within the statistical period.
- **Voicemail**: The number of recordings that matched "Voicemail/Message" keywords.
- **High Intent**: The number of recordings that matched "High Intent" keywords (e.g., purchase, price, cooperation), usually representing potential business opportunities.
- **Callback Required**: The number of recordings that matched "Callback Required" keywords (e.g., call back later, in a meeting), indicating a need for manual follow-up.
- **Others**: The number of remaining recordings that do not belong to the above three categories (Calculation formula: Total - Voicemail - High Intent - Callback Required).

2. Filtering and Time Control

The top of the report provides flexible time filtering tools, supporting custom viewing of data performance for specific time periods:

- **Date Range**: Click the calendar icon to select the start and end dates.
- **Quick Options**: Provides **Last 7 Days** and **Last 30 Days** quick switch buttons.
- **Refresh**: Click the **Refresh** button to reload the latest statistical data.

3. Call Quality Inspection Trends

This area displays daily data trends in a table format, supporting daily monitoring of business fluctuations. Hover over the header icons to view specific metric definitions:

Metric Name	Definition
Date	The specific date of data statistics.
Total	The total number of successfully transcribed recording records within the statistical period.
Voicemail	The number of customer messages/voicemails among successfully transcribed recordings.
High Intent	The number of recordings matching high-intent keywords among successfully transcribed recordings.
Callback Required	The number of recordings requiring agent callback among successfully transcribed recordings.
Others	The number of recordings not belonging to Voicemail/High Intent/Callback Required among successfully transcribed recordings.

4. Quality Inspection Alert Details

The bottom of the page provides a detailed list for key business scenarios (High Intent / Callback Required), supporting precise positioning of recordings that need attention:

- **Search Criteria**:
  - **Agent**: Enter or select a specific agent account for filtering.
  - **Callee Number**: Enter a customer phone number for exact search.
  - **Matched Tag**: Dropdown to select specific quality inspection tag types.
- **Operation Functions**:
  - **Search/Reset**: Execute query or clear filter criteria.
  - **Export**: Export the current query results to a file for offline statistics or reporting.
- **List Fields**: Includes detailed information such as Extension Number, Callee Number, Call Duration, Matched Tag, and Matched Channel.

> ⚠ **Note:** The accuracy of report data depends on the execution status of "Analytics Tasks". Only data from tasks with a status of "Completed" will be included in the statistics; data from tasks that are running or failed will not be reflected in the report in real-time.