Brekeke Contact Analytics

Version 2.7

Administrator's Guide

Brekeke Software, Inc.

Version

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1. Introduction

Brekeke Contact Analytics (CA) is a Management Information System (MIS) application used to analyze Brekeke Customer Interaction Manager (CIM) operational logs, monitor call centers through visualization of status activity, and generate data analysis reports.

The following table describes the Brekeke CA functionality.

CDR Server	CDR Server analyzes Brekeke CIM logs in real time to maintain data on the current status and creates summaries of daily record statistics. The server also converts analyzed logs Call Detail Records (CDRs), which contain detailed metrics data, and stores these records into a database as Call Detail Records (CDRs).
Real Time Reports	These on-screen reports display call center status information in real time and summaries of daily statistics graphically using tables, charts, and maps. Additional features include the **My Reports** feature, which enables each user to freely choose and combine multiple reports, and powerful customization capability ✓ *Available features vary depending on the edition of CA.*
Historical Reports	This feature is used to export call center statistics in PDF and CSV formats.
Call Record Search	This feature is used to search through agent call records, display call details, and play recordings of calls. ✓ *CA must be linked with the Brekeke RFS to play recordings of calls.*

2. Installation

2.1. System & Software Requirements

The following table describes the system and software requirements to install Brekeke Contact Analytics.

CPU	2 GHz minimum (Multi-core processor rrecommended)
Memory	4 GB minimum
OS	Microsoft Windows 7 or later, Red Hat Linux
Java	Java SE7 or later (Java by Oracle recommended)
Apache Tomcat	Version 7.0.53 or later
Database	MySQL 5.5 or later
Brekeke CIM	Version 2.7.0.0 or later

2.2. Installation

2.2.1. Installing Brekeke CIM

Install Brekeke CIM as instructed in the Brekeke Customer Interaction Manager Administrator’s Guide. Brekeke CA and Brekeke CIM are normally installed on separate machines. They can be installed on the same machine if necessary.

✓ *CA directly accesses the CIM Log database. As such, if Brekeke CA and Brekeke CIM are installed* *on separate machines, both machines must be configured for mutual connectivity.*

2.2.2. Installing Java SE

1) Install JDK or JRE.

✓ *This step is not necessary if Brekeke CA and Brekeke CIM are installed on the same machine.*

2.2.3. Installing Tomcat

1) Access the Apache Tomcat website (http://tomcat.apache.org/index.html) and download the appropriate version of Tomcat for your environment.
2) Set the environment **JAVA_HOME** variable to the path where you installed JDK or JRE.
3) Install Apache Tomcat.

✓ *We recommend disabling autoDeploy and liveDeploy to avoid causing unnecessary errors. See the following example configuration to update the **Host** tag in the server.xml file (<Tomcat Install Destination directory>/conf/server.xml) to disable these settings.*

<Host name=”localhost” appBase=”webapps”
unpackWARs=”true” **autoDeploy=”false” liveDeploy=”false”**
xmlValidation=”false” xmlNamespaceAware=”false”>

✓ *CA saves images and other large files to the database. As such, you may need to change adjust the maximum Tomcat POST size by configuring the **maxPostSize** attribute for the **Connector** element in the **server.xml** file.*

✓ *This step is not necessary if Brekeke CA and Brekeke CIM are installed on the same machine.*

2.2.4. Installing the database

1) Install the database. Refer to the instruction manual provided by the manufacturer for instructions on installing the database.

✓ *CA saves images and other large files to the database. As such, you may need to change the packet length if the default value for the database is too small. Change the packet length in MySQL by configuring the **max_allowed_packet** variable.*

2.2.5. Installing Brekeke Contact Analytics

1) Place the ca.war file in the webapps directory found in the Tomcat directory.

2.2.6. Starting Tomcat

1) Start Tomcat.
2) Open a web browser and enter “http://localhost:8080” into the address bar. If you chose a

port number other than the default of 8080, specify the chosen port number in the URL.

3) Tomcat has started successfully once the **Apache Jakarta Project** page appears.

2.2.7. Confirming that Brekeke Contact Analytics is running

1) Open a web browser and enter "http://localhost:8080/ca/" into the address bar and verify accessibility to the **Admin** page. If you chose a port number other than the default of 8080, specify the chosen port number in the URL.
2) The **License Activation** page should appear.

2.3. Initial Configuration Procedure

2.3.1. License Activation

1) Paste the product ID into the text box.
2) Click the **Activate** button and then complete the activation in accordance with the on-screen instructions.
3) Once activation is finished, the **CA Initialization** page appears.

2.3.2. Initial database configuration

1) From the **Database** page, configure basic settings such as the database name.
2) Once you have finished configuring the database, proceed to the **CIM** page.

2.3.3. CIM Registration

1) Enter the Brekeke CIM URL into the **CIM URL** field on the **CIM** screen.
   Example: http://192.168.0.1:8080/cim/

2.3.4. Setting the Tenant Name (Single-Tenant version)

1) Configure Brekeke CA with the tenant name created in Brekeke CIM. Once the tenant name is configured, the user is logged off.

2.3.5. Configuring Access-Control-Allow-Origin in Brekeke CIM

1) Log into Brekeke CIM, select the **Settings** option in the main menu, and then open the **Security** page.
2) Add the Brekeke CA domain in the **Domain** list under the **Access-Control-Allow-Origin** setting.
   Describe the domain in the "http://<tomcat-address:tomcat-port>" format.
   [Example: http://192.168.0.2:8080]

✓ *This step is not necessary if Brekeke CA and Brekeke CIM are installed on the same machine.*

2.3.6. Configuring Brekeke Contact Analytics

1) Log into Brekeke CA with an administrator account.
2) Configure the CDR server.
   The core functionality of the application is handled by the CDR server. As such, the CDR server must be configured at a minimum to run CA. To configure the CDR server, select **Settings** option in the main menu and then open the **Engine** page. Refer to Section 5.5.2. “CDR Server" in the Main Menu chapter for more information.
3) Start the CDR server from the **Start/Stop** option in the main menu.
   CA is running properly if the **CDR server** status located at the lower-left corner of the page reads **Starting** or **Active**.
4) The CDR server analyzes unprocessed logs and recompiles real time data at startup. While these startup tasks are running, the **CDR server** status will read **Starting,** and some real time data may not appear correctly. Depending on the number of unprocessed logs, the CDR server startup process may take a few minutes to several hours.
5) Configure Real Time Report or Historical Report settings as necessary.
   To configure Real Time Report settings, select **Settings** under the **Real Time Report** main menu. To configure Historical Report settings, select the **Historical report** option in the main menu and then open the **Settings** page.

2.4. Linking a Brekeke Recording File Server

Linking a Brekeke Recording File Server (RFS) in CA allows users to play recordings of calls from the **Call record** page.

2.4.1. Installing a Brekeke Recording File Server

Install Brekeke Recording File Server.

Refer to the RFS documentation for the installation procedure.

2.4.2. Linking a Brekeke Recording File Server in Brekeke Contact Analytics

1) Log into Brekeke CA with an administrator account.
2) Select **Settings** in the main menu and open the **RFS** page to configure RFS connectivity settings.
   Refer to Section 5.5.6. “RFS” in the Main Menu chapter for more information.

3. Maintenance

3.1. Version Updates

Use the following procedure to update Brekeke CA to a newer version.

1) Log into Brekeke CA and select **Update Software** under the **Maintenance** main menu.
2) Select a WAR file and then click the **Update** button to update the application.
3) Restart the Application server to complete the update.

3.2. Uninstallation

Stop Tomcat and delete the .war file (normally ca.war) and the ca directory from the webapps directory. To uninstall other applications and databases, refer to the uninstallation procedures defined by the applicable vendor.

3.3. Rebuilding CDRs

Call Detail Records (CDRs) can be rebuilt using retained Brekeke CIM logs if CDRs are corrupted due to a database or other failure.

1) From the **Maintenance** page, stop the CDR server.
2) Delete any CA database records as necessary. Note that when CDRs are rebuilt, the CDRs that have already been analyzed and saved in the CA database will not be overwritten.
3) Use the console to execute the following SQL command on the CA database.
   UPDATE cdr SET ctime=0 WHERE tenant_name = '<tenant_name>';
   Note: Replace <tenant_name> with the applicable tenant name.
4) Start the CDR server.

The **CDR server** status will change to **Starting**, and the CDR server starts to analyze CIM logs. Depending on the number of logs, the CDR server rebuilding process may take a few minutes to several hours.

4. Administrator Menu (Multi-Tenant Edition)

This menu appears only when logged into Brekeke CA Multi-Tenant Edition as a system administrator.

4.1. Tenant

4.1.1. Tenant

This menu option displays a list of registered tenants. When creating a new tenant in Brekeke CA, specify the tenant ID that has been created in Brekeke CIM.

4.2. Real Time Report

4.2.1. Real Time Report

This menu option is used to define and configure common real time report tables and charts. These settings apply to all tenants. Refer to Section 5.1 “Real Time Report” in the Main Menu chapter for more information.

4.3. Logs

4.3.1. Error Logs

While the main menu contains a similar page, this menu option displays overall system errors. Refer to Section 5.4 “Logs” in the Main Menu chapter for more information.

4.4. Settings

4.4.1. System

Name	Description
General	
Log Expires (days)	Used to specify log storage period.
User	Used to specify the CA Administrator username. This CA specific account is used to configure initial settings or to troubleshoot issues. Normally, users should log into CA with their CIM account.
Password	Used to specify the CA Administrator password.

4.4.2. CDR Server

While the **Tenant** main menu contains a similar page, this page is used to configure the default CDR server settings. The CDR server settings configured here also apply to newly added tenants. Refer to Section 5.5.2. “CDR Server” in the Main Menu chapter for more information.

4.4.3. RFS

While the **Tenant** main menu contains a similar page, this page is used to configure the default Brekeke RFS link settings. These settings apply to all tenants unless configured separately for an individual tenant from the **Tenant** main menu. Refer to Section 5.5.6. “RFS” in the Main Menu chapter for more information.

4.4.4. Security

While the **Tenant** main menu contains a similar page, this page is used to configure system-wide security settings that apply to all tenants. Refer to Section 5.5.7. “Security” in the Main Menu chapter for more information.

4.5. Other

The remaining settings pages are the same as those in the Brekeke CA Single-Tenant Edition. Refer to the Main Menu chapter for more information.

5. Main Menu (Single-Tenant Edition)

5.1. Real Time Report

This menu option is used to display call center status information in real time and daily statistics as well as configure report definitions and settings. Refer to Chapter 8 “Real Time Reports” for more information.

5.2. Historical Report

This menu option is used to generate statistical reports on calls, agents, and other metrics as well as configure common settings and perform maintenance. Refer to Chapter 9 “Historical Reports” for more information.

5.3. Call Record

This menu option is used to search agent call records so as to display detailed information on calls and play recordings of calls. Refer to Chapter 10 “Call Records” for more information.

5.4. Logs

5.4.1. Error Logs

This menu option is used to display error logs. Logs can be filtered by date.

Column	Description
Event time	Date and time of the error.
Error code	Type of error
Memo	Click the error to view more detailed error information.

✓ *To access logs in the Multi-Tenant Edition of Brekeke CA, select **Logs** under **Administrator Menu**.*

5.5. Settings

5.5.1. System

This page is used to configure system options.

Setting	Description
General	
Tenant Name	Displays the CA tenant name.
Description	Used to enter a description of the tenant.
Log expires (days)	Used to specify log storage period.
User	Used to specify the CA Administrator username. This CA specific account is used to configure initial settings or to troubleshoot issues. Normally, users should log into CA with their CIM account
Password	Used to specify the CA Administrator password.

✓ *The **Log expires (days)**, **User**, and **Password** settings are found in the Multi-Tenant edition of*

*Brekeke CA from the **Settings** menu option under **Administrator Menu**.*

5.5.2. Engine

This page is used to configure CDR server settings. Changes take effect after the CDR server is restarted.

Setting	Description
Number Pattern	
External Number	Used to specify external numbers using regular expressions. Examples: “^[0-9]{6,25}$” and “^[0-9]{7,25}$|^999.+$”
VM	Used to specify PBX voicemail numbers using regular expressions. Example: ”^vm.+$”
MSG	Used to specify PBX voicemail playback numbers using regular expressions. Example: “^msg.+$”
IVR	Used to specify PBX IVR numbers using regular expressions. Example: “^ivr.+$”
Queue	Used to specify PBX queue numbers using regular expressions. Example: “^q_.+$”
Ignore	Used to specify numbers excluded from CA using regular expressions. Sessions that satisfy these criteria are excluded from the CDR server analysis process. Examples: “^vm.+$” and “^0000$|^9[0-9]{3}$”
Analysis Settings	
Call Log expires (Hour)	Used to specify the storage period for CDR processing data. Set a value of at least 1 using integers. Data for which analysis could not complete due to some reason, such as the loss of CIM logs, will be discarded after a timeout occurs when the configured retention period expires. For this reason, enter a value longer than the estimated time of calls.
Log process interval (msec)	Used to specify the CIM log processing interval in milliseconds. Set a value of at least 1 using integers. Higher values reduce the load on the system, which also reduces log processing capacity. As such, a number of logs that exceeds processing capacity may create a delay in real time information updates. For this reason, set a value as appropriate regarding the number of calls and server processing capacity of your environment.
Summary Settings	
Interval (min)	Used to specify the period of time that defines the time tables that store daily statistics. Specify a value of either 30 or 60 using integers. During startup, the CDR server references this setting to determine the timing at which time tables are to be created. Each table stores the daily statistics generated during the corresponding period.

	A smaller value divides daily statistics into more periods for finer resolution of data. However, this also consumes more system resources.
Start time End time	Used to specify the period (business hours) during which to aggregate daily statistics. Data generated outside of business hours is isolated as non-business hours data and excluded from real time reports.
Short calls (msec)	Used to configure the reference value in milliseconds used to determine short calls. To enable this short call determination, set the reference to a value greater than 0 using integers. A short call determination is made when the call is disconnected within the time configured by this setting after the DNIS connection is established. Short calls are excluded from reports. Configuring this setting with a value of 0 disables short call determination.
Service level reference value (msec)	Used to configure the reference value in milliseconds used to determine SLA compliance. Set this reference to a value of at least 1 using integers. An SLA compliance determination is made when the call is transferred to an agent or other intended destination within the time configured by this setting after the DNIS connection is established.
CDR Settings	
Days to keep the logs (days)	Used to specify the log storage period in days. Set a value of at least 1 using integers. CDRs are automatically deleted from the database once this storage period elapses.
Advanced Options	
	Advanced options are used to adjust CDR server performance.
engine.read.max.records *Default: ［1000］*	Used to specify the maximum number records read by the CDR server at one time. Use this setting in combination with **Log processing interval** to adjust the number of records that can be processed during a configured unit of time. For example, if **engine.read.max.records** is set to 1000 and **Log processing interval** is set to 250 ms, the system will read approximately 4,000 logs each second. However, note that the actual number of records that can be processed is smaller than this simple calculation due to the analysis processing performed on the records once read.
engine.read.interval.millisecond *Default: [0]*	Used to configure a record processing delay, in milliseconds, that is applied to the CDR server log analysis process. This delay does not normally need to be configured, but it is available to reduce system load during times of high utilization that can occur during server operation. Higher values reduce log analysis processing performance.
engine.write.queue.max.records *Default: ［100,000］*	Used to specify the maximum number of records that can be buffered when the CDR server writes analyzed data values to the database. If the number of buffered records exceeds this threshold, the CDR server pauses the CIM log reading process for 100 milliseconds.

engine.write.overwrite.enabled *Default: ［false］*	Used to enable or disable overwriting of analyzed data that already exists when the CDR server is writing newly analyzed data to the database.

5.5.3. Database

This page is used to configure database connection settings used by the CDR Server. CDRs are stored in the database specified on this page. These settings are configured automatically when a database is initialized on the **Database Initialization** page.

Setting	Description
Database Settings	
Driver class	Used to select the name of the JDBC driver class. Example: “com.mysql.jdbc.Driver”
URL	Used to specify the URL of the database to which JDBC connects. Example: “jdbc:mysql://127.0.0.1:3306/ca?useUnicode=true&characterEncoding=UTF-8”
User	Used to configure the username used for the JDBC connection.
Password	Used to configure the password used for the JDBC connection.

5.5.4. Database Initialization

Setting	Description
Database Server	
IP Address	Used to configure the IP address of the database server.
Port	Used to configure the port number used to connect to the database server (default is 3306)
Database	
Database Name	Used to configure the name of the database to be created and initialized.
User Name	Used to configure the ID of a user created to access the database.
User Password	Used to configure the password for the user.
Database Administrator	
Administrator Name	Used to configure the ID of database administrator.
Administrator Password	Used to configure the password for the database administrator.

5.5.5. CIM

Setting	Description
Registration to CIM	
CIM URL	Used to configure the URL of the CIM with which you want to link CA. Format: “http:// <address>:<port>/cim”

5.5.6. RFS

This page is used to configure Brekeke Recording File Server link settings. Settings changes take effect immediately. As these settings are not required, CA will operate normally if these settings are not configured or incorrectly configured. However, CA will be unable to link to an RFS in this scenario.

Setting	Description
General	
Connect Recording File Server	Used to enable or disable the link.
Call Log Settings	
File server URL	Used to select the desired Brekeke RFS from the list of Brekeke RFSs registered in Brekeke CIM. Selecting an option auto-populates the corresponding JDBC settings underneath this setting.
JDBC Driver	Used to select the name of the JDBC driver class. Example: “com.mysql.jdbc.Driver”
JDBC URL	Used to specify the URL of the database to which JDBC connects. Example: “jdbc:mysql://127.0.0.1:3306/ca?useUnicode=true&characterEncoding=UTF-8”
JDBC User	Used to configure the username used for the JDBC connection.
JDBC Password	Used to configure the password used for the JDBC connection.

5.5.7. Security

This page is used to configure Brekeke CA access control.

Setting	Description
IP address patterns (User)	
Default	Used to enable or disable default setting of user access to Brekeke CA. If the **Allowed** radio button is selected, all users except those accessing from forbidden IP addresses are allowed access to CA. If the **Forbidden** radio button is selected, all users except those accessing from allowed IP addresses are denied access to CA.
Forbidden IP/Allowed IP	Used to configure either the blocked or allowed IP addresses in accordance with the setting of **Default**.

5.5.8. Advanced Options

Advanced options are used to adjust the behavior of CA by configuring property values. These settings can only be configured here.

Property	Description
Supervisor Rights Properties	
adminui.sv.accessible.recfile.othergroup Default: [false]	If set to **true**, supervisor users can access recordings of calls made by the agents in other teams.
adminui.sv.accessible.recfile.extension Default: [false]	If set to **true**, supervisor users can access recordings of internal calls made by non-agent users.
adminui.sv.accessible.historical.quickreport Default: [false]	If set to **true**, supervisor users can access the **Quick Report** page from **Historical Report** in

	the main menu.
Other Properties	
web.lang	Used to set the display language. Options include **ja** (Japanese), **en** (English), and **zh** (Chinese).
export.text.charset Default: [UTF-8]	Used to configure the character encoding used to export historical reports and call records.

5.6. Maintenance

This page is used to start and stop the CDR server. If you want to reaggregate statistics after changing real time report settings, for example, you can rebuild the real time information by restarting the CDR Server.

Setting	Description
Start Server	Used to start the CDR server when stopped. The **CDR server** status changes from **Starting up** to **Active**.
Stop Server	Used to stop the CDR server when running. The **CDR server** status will change to **Stopped**.

6. Login Page

6.1. Overview

This page is used to log into Brekeke Contact Analytics through the entry of a user ID and password. The phone ID can be omitted when logging in with an account assigned with a phone ID. In this case, agent features are enabled and supervisor call operations such as monitoring and tutoring can be performed via CA real time reports. Agent features must be enabled in the CIM user settings to enable logins with assigned device IDs. With Brekeke CA is linked with Brekeke CIM, users will normally log in with a Brekeke CIM Administrator or Supervisor (SV) account.

Administrator accounts have access to all pages and functions. Supervisor accounts are limited to the **Real Report** and **Call record** pages. The information accessible by Supervisor accounts depends on rights and the administrator group. Use a CA Administrator account when CA in not linked with CIM such as when first configuring CA.

6.2. Administrator and Supervisor Access Control

Menu/Menu Option/Page		Administrator	Supervisor (SV)
Real Time Report	My Reports	○	△ 1
	Table	○	△ 1
	Chart	○	△ 1
	Map	○	△ 1
	Settings	○	x
Historical report	Quick Report	○	△ 2
	Scheduled Reports	○	x
	Settings	○	x
Call record	Search	○	△ 3
Logs	*	○	x
Maintenance	*	○	x
Settings	*	○	x

△1 --- Only when access is granted in Real Time Report settings and only for accessible information

△2 --- Only when access is granted with Advanced Options settings

△3 --- Only for accessible information

7. CDR Server

7.1. Overview

The core functionality of the application is handled by the CDR server and so is required for CA operation. The CDR server analyzes Brekeke CIM logs in real time and converts this data into call detail records (CDRs), which are then stored in a database. Stored CDRs are used to create historical reports and display data on the **Call record** page.

In addition to this CDR conversion process, the CDR server stores real time call status information, agent states, and daily statistics application memory. This information is used real time reports.

The **CDR server** status appears in the status area located at the lower-left corner of the screen. The following table describes each server state.

State	Description
Stopped	This is the CDR server stopped state. The CDR server stops when the database connection settings are invalid, a critical failure occurs during operation, or the server is manually stopped. Some pages will not display correct information if the CDR server is stopped.
Starting up	This is CDR Server startup state. During startup, the CDR Server analyzes unprocessed logs and recompiles real time status information. **Starting** appears as the CDR server status, and some pages will not display correct information during the startup process. Depending on the number of unprocessed logs, CDR Server startup process may take a few minutes to several hours.
Active	This is the CDR server state during normal operation. The status changes to **Active** after the startup process completes. In this state, the server monitors and reads CIM logs, converts this data into CDRs, and stores real time status information. The CDR server must be in the Active state for all CA features to function properly.

8. Real Time Reports

8.1. Overview

Real time reports display real time status information and daily call center statistics graphically using on-screen tables, charts, and maps. The **My Reports** feature is also available so that users can freely choose, combine, and customize multiple reports. Real time reports contain real time status information and daily statistics. The following table describes these two types of information.

Information	Description
Real time status	Current values or states of call center objects This information is not affected by the statistics collection period. The current status of objects updates in real time.
Daily statistics	Daily statistics of call center objects include total and average values for the applicable period Operational data during operations hours for the current day is collected and displayed as totals, averages, and other statistics. Data generated outside of business hours is isolated as non-business hours data and excluded from real time reports. Daily statistics information is reset at midnight every day. The collection period can be configured on the **Engine** page.

8.1.1. Report Types

The following report types are available to configure real time reports.

Types	Description
Real time table	Reports contain current status information and daily statistics in table format.
Real time chart	Reports contain current status information and daily statistics in chart format.
Real time map	Reports contain current status information on agents in map format.

8.1.2. Report Data Sources

The following data sources are available for real time reports.

Data source	Description
dnis	Current status information and daily statistics per DNIS (inbound)
ani	Current status information and daily statistics per ANI (outbound)
acd	Current status information and daily statistics per ACD
agent	Current status information and daily statistics per agent
call	Current status information on active calls

8.2. Common Real Time Report Features

8.2.1. Views

Views are the areas in which real time reports appear. Reports appear as separate windows in the view area.

Common Menu Bar Options

Menu		Description
Show	View in Full Screen mode	Used to switch the real time report display between full screen mode and window mode.
Window		Used to select the window that appears on top. Also used to bring the window into the view area when a window is no longer visible on-screen due to a change to the view size or other reason.

8.2.2. Report Windows

Report windows are instances of real time reports accessible from the **View** tab. Windows can be moved by dragging the title bar or adjusting the window size by dragging the bottom right corner of the window. The window can be closed or maximized using the icons located on the title bar. These operations sometimes cannot be performed depending on settings or conditions.

Common Menu Bar Options

Menu/Menu Option		Description
Report	Open Sub Reports	Used to open sub reports that belong to the parent report. The sub menus list the reports available for selection as sub reports. Sub reports can be opened from reports dragged and dropped from **My Reports** and from the default reports opened in views on the report administration screen. Sub reports with the same definitions cannot be opened multiple times for the same parent report.
	Close	Used to close the report window. Windows sometimes cannot be closed depending on conditions such as the windows that appear on top of the view for the report administration screen.
Tool		Provides Supervisor (Agent Management) functionality. This menu is only available when information on agents under supervision of the supervisor is displayed or selected in real time maps or in reports with agent data sources.
Tool	Silent Monitor	Used to join agent calls in listening mode. This option is only available for users logged in with agent features enabled when agents on calls.
	Tutor	Used to join agent calls in tutor mode. This option is only available for users logged in with agent features enabled while agents are on calls.
	Join Call	Used to join agent calls in conference mode. This option is only available for users logged in with agent features enabled while agents are on calls.
	Dismiss Help	Used to dismiss help request notifications from agent icons. This option is only available when agents are requesting help.
	Change Status	Used to manually change agent status. Agent status sometimes cannot be changed due to the state of the agent’s operation screen. Note that changes made by a third

		party may route calls to agents not ready or available to take a call.

8.2.3. Sub Reports

Definition information creates internal correspondence between each real time report. Each report can be opened as a sub report in other real time reports. Keys automatically change and display content updates in accordance with filter criteria or selected data in the parent report. This is effective in creating views of multiple reports that contain information on similar types of call center objects.

Sub reports can be opened from reports dragged and dropped from **My Reports** and from the default reports opened in views on the report administration screen. Only tables and charts can be opened as sub reports. The same sub reports cannot be opened multiple times for the same parent report. Sub reports with the same definitions cannot be opened multiple times for the same parent report. All sub reports are closed in unison when the parent report is closed.

8.2.4. Report Customization

Report customization is available in some editions of the software. This feature enables users to create new reports or copy existing reports from the **Real Time Table** and **Real Time Chart** administration screens and then further customize these reports. Only users with administrator rights can customize reports.

8.3. My Reports

8.3.1. Overview

My Reports is a dashboard feature that enables users to freely choose and combine the different types of real time reports including tables, charts, and maps. Users can freely arrange and change settings of reports in the multiple views assigned to each user. Views can be saved and recalled instantly during future logins.

8.3.2. My Reports Menu

This menu displays the list of real time reports available to the current login user. Reports are displayed by dragging and dropping a report icon in the tree list onto a **View** tab. The number of displayable windows is restricted. This limit can be changed in the **Settings** option under the **Real Time Report** menu.

8.3.3. Views

Real time reports are displayed in **View** tabs as separate windows. **View** tabs are created as separate instances to enable each user to freely configure and use their individual **View** tabs. The number of available **View** tabs in **My Reports** varies depending on the user type. The number of these tabs can be changed in the **Settings** option under the **Real Time Report** menu.

Menu Bar Options

Menu		Description
Settings	Update View Name	Used to changes the name of the current view. Changes to view names are retained only for the current user session unless the user saves the view state.
	Save View State	Used to save the state of the current view. Changes to view names are retained only for the current user session unless the user saves the view state. This menu option saves the layout and settings information of the report displayed in the view as user settings in CIM. For this reason, these user settings are lost if the user account is deleted from CIM.

8.4. Real Time Tables

8.4.1. Overview

These reports contain real time status information in table format configured with rows and columns. This screen provides administrative capabilities including creating, customizing, configuring, and viewing real time tables.

8.4.2. Real Time Table Menu

This menu displays a list of viewable reports available for the current login user. Clicking the icon corresponding to the desired report in the tree displays the administration screen for that report to the right of the menu. Reports can also be created and deleted from this menu if report customization is enabled.

Menu Bar Options

Menu		Description
New	Create New Table	Used to create new real time tables. Selecting this menu option displays the chart creation dialog. Enter a name for the report and create a new report from this dialog. This option is only available when table customization is enabled.
Edit	Copy Table	Used to copy the report selected in the tree. This option is only available when table customization is enabled.
	Delete Table	Used to delete the report selected in the tree. This option is only available for reports that are editable.
Show	Show with Group	Used to change the grouping of reports that appear in the tree. Available options include **Categories**, **Resource Type**, and **Owner**.
	Expand All	Used to expand all objects in the tree.
	Collapse All	This object is used to collapse all objects in the tree.

8.4.3. Views

Reports are displayed in the **View** tab. The window of the selected report always appears in a view. Window layouts can be changed and sub reports can be opened in the **View** tab. Note that this **View** tab is different from **My Reports** in that the view state is not saved, and so the current view state is lost when a user moves away from the administration screen of the selected report.

If the configuration of the report currently displayed in the **View** tab is changed, this configuration is saved as the default user setting for the report. This default setting is applicable whenever this report is opened, including in **My Reports** or as a sub report.

8.4.4. Report Window

Report windows are instances of real time tables accessible from the **View** tabs. Charts are configured with three display areas. These areas include a filter area used to filter information in accordance with specified conditions, an information area that displays a summary of the report, and the actual chart. Note that the filter and information areas may not appear depending on the configuration of the report settings.

Menu Bar Options

Menu		Description
Show	Filter	Used to toggle the display of the filter on and off. This option may be unavailable depending on the configuration of the report settings.
	Info	Used to toggle the display of the information area on and off. This option may be unavailable depending on the configuration of the report settings.
Settings	General	Used to change the report settings of the current report window. Select the menu option to display the settings dialog. Settings changes take effect immediately after applied. To reset the report settings to the defaults, click the **Reset** button. Excluding some special scenarios, each report window instance is configured individually with these settings. Refer to the Report Settings section for more information.
	Selected items	Used to change the table display parameters of the current report window. Select the menu option to display the settings dialog. Display parameter selections take effect immediately after applied. To reset the report settings to the defaults, click the **Reset** button. Excluding some special scenarios, each report window instance is configured individually with these settings.

8.5. Real Time Table Settings

8.5.1. Table

This section describes the basic settings of real time tables. The configuration of these settings is used as the default settings. Settings are inherited hierarchically from System to Tenant and then to User.

General

Setting	Description
State	Used to enable and disable the report. Disabled reports are hidden from all users except administrators.
Refresh interval (msec)	Used to specific the interval in milliseconds at which the report content is refreshed. Using a shorter update interval improves the real time performance of the report, but this also increases the load on the CDR server and browser. Configure this setting to an appropriate value so as to obtain a suitable balance between system performance and real time performance.

Info

Setting	Description
Show	Used to show or hide the information area in report windows.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Filter

Setting	Description
Show	Used to show or hide the filter in report windows.
Filter Values	Used to set the default values of the filter. The filter criteria available here vary depending on the data source of the report.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Inactive Records

Setting	Description
Show	Used to show or hide inactive records in tables. Normally, only active call center object records that contain operational information for the current day appear in table rows of reports. However, enabling this setting will also display inactive records that do not contain values.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Total / Total within Business hours

Setting	Description
Show	Used to hide or show the total row in reports with detail rows.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

non-Hours Detail

Setting	Description
Show	Used to hide or show non-business hours detail rows in timeline reports.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Total in non-business hours

Setting	Description
View	Used to hide or show the non-business hours total row in tables of timeline reports.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

8.5.2. Window Settings

This section describes the settings related to report window sizing.

Size

Setting	Description
Width (W)	Used to specify the width of the window in pixels.
Height (H)	Used to specify the height of the window in pixels. The height of the window includes the title bar.

Resize

Setting	Description
Resize	Used to enable and disable resizing of windows in report views.
Max Width (W)	Used to specify the maximum width to which a window may be resized.
Max Height (H)	Used to specify the maximum height to which a window may be resized.
Min Width (W)	Used to specify the minimum width to which a window may be resized.
Min Height (H)	Used to specify the minimum height to which a window may be resized.

8.5.3. Action Settings

These settings are used to configure action triggers. When action triggers (conditions) are defined for reports, each row in corresponding tables is evaluated against the condition each time the content of the report is updated. The trigger is triggered when the condition is satisfied. Utilizing triggers helps to improve awareness of users when screen content changes in accordance with specific scenarios occur.

Trigger Settings

Setting	Description
Trigger parameters	Used to specify the parameters used to evaluate action trigger conditions. Some triggers do not require any parameters.
Action	Used to specify the action performed when the trigger is triggered. Selectable actions include changing the background color of the row, color of text, and similar.
Action Parameters	Used to specify the parameters of the action. Used to specify the background or text color using HTML codes such as red or #ff0000 when a color change action is selected.

✓ *The actual settings and their names available vary depending on the action trigger definitions.*

8.5.4. Security

This section describes settings related to report access.

Access Permission

Setting	Description
View Access to SV	Used to enable and disable supervisor viewing access.

8.6. Real Time Table Definitions

8.6.1. Tables

This section describes the definitions configured for real time tables.

✓ *Refer to “Brekeke Contact Analytics v2.7 Real-Time Report Customization Guide” for more information on real-time chart definitions.*

Basic Settings

Setting	Description
Table Name	Used to specify the name of the real time table. This is a required setting.
Categories	Used to specify a text string used to categorize the real time table. This setting is optional. If specified, however, reports appear in the **Report List** and other trees organized by category.
Data source	Defines the data source of the real time table. Available options include dnis, ani, acd, agent, and call. System variables are defined to retrieve call center object information for each data source. This information can be referenced in the information area and table expressions.
Data Mode	Used to specify the type of raw data retrieved from a data source. Available options include **record**, **record-timeline**, **total**, and **total-timeline**. With the **record** option, information for multiple call center objects is retrieved from a data source and displayed in table rows. With the **total** option, the total value of multiple objects is retrieved and displayed in one row. With the **record-timeline** and **total-timeline** options, the information retrieved with either the record or total option is retrieved once every hour and displayed on separate detail rows.

Information Settings

HTML is the language used to describe and format the information area that appears in report windows. If invalid text strings such as blank spaces or blank characters are used to specify the source, information columns become invalid and is always not displayed.

To reference system variables from information column source, describe the JSON objects enclosed in percentage symbols using the following format.

<% { "expression": string, "type": string, "format": string } %>

The following table describes the JSON object properties.

Property	Description
Expression	Used to specify the expression in string format. Expression details are described later in the section on the **Expression** setting.
Type	Used to specify the variable type in string format. Available options include **number**, **time**, **datetime**, **const**, and **string**. Type details are described later in the section on the **Type** setting.

Format	Used to specify the variable format text in string format. Format details are described later in the section on the **Format** setting.

Field Settings

Field settings are used to defines the parameters to be displayed in report window tables. The following table describes the field settings.

Setting	Description
Column Name	Column names appear in table column headers. Specify long column names by including a vertical bar somewhere in the text string. The vertical bar functions as a line break.
Formula	Javascript is used to describe parameter expressions. Cells are displayed in accordance with the values derived from expressions when a report is generated. Expressions can include default system variables, functions, operators, and other data types. The available system variables and functions vary depending on the report definitions.
Type	Used to specify the display type of the parameter in the table. Available options include **value**, **time**, **date and time**, **constant**, and **text string**. The result of the expression is converted into the specified format and displayed in the cell when reports are generated. If the resulting value cannot be converted into the specified display type, the cell is not populated with a value but a text string representing an error instead.
Format	Used to specify the display format of each type. Use the number format pattern text for numbers and date format pattern text for dates and times.
Display Column Width	Used to specify the default value of table column width in pixels.
Selected Items	Used to enable and disable the parameter as a default display parameter in reports. Deselecting a check box excludes the corresponding parameter as a default display parameter. The parameter does not appear in reports unless explicitly selected by a user.

8.6.2. Triggers

This section describes action trigger definitions. The following table describes the definition settings.

Field	Description
Trigger Name	Used to specify the action trigger name. This name appears as the name of the section of trigger settings in the report action settings.
formula	Use Javascript to describe the logical expression that functions as the triggering condition. Triggers are triggered when the evaluation result is true during the report generation process.

	The same system variables as those available for report parameter expressions can be used in the expression. A special $p variable can also be used in expressions. Using this variable causes the **Action Parameters** setting to appear in the **Action** page in report settings. This column is used to prompt users to configure dynamic parameters such as the coefficient to be used in conditional expressions. This enables evaluation of conditional expressions during report generation by replacing the $p variable with the action parameter value defined by the user.
Parameter name	Used to specify the action parameter name when the $p variable is used in the expression. This name appears as the parameter name for the trigger in the report action settings. If omitted, the default “Action Parameters” text appears.

8.7. Real Time Table Standard Reports

8.7.1. Inbound

These reports contain real time information and daily statistics for each DNIS.

Columns

Type	Column name	Description
Real Time Information	Calls	Number of current calls received by the DNIS.
	Calls Completed	Number of calls with call results of complete
	Calls Incompleted	Number of calls with call results of incomplete
	ACD Calls	Number of calls processed by an ACD
	Calls in Queue	Number of calls in queue
Number of Calls	Incoming Calls	Number of calls received by the DNIS.
	Completed Calls	Number of inbound calls with call results of complete
	Dropped Calls	Number of inbound calls with call results of dropped
	IVR Dropped Calls	Number of dropped calls with a final call status of IVR
	VM Dropped Calls	Number of dropped calls with a final call status of VM
	MSG Dropped Calls	Number of dropped calls with a final call status of MSG
	Queue Dropped Calls	Number of dropped calls with a final call status of Queue
	Short Calls	Number of inbound calls disconnected within a predetermined amount of time after the call was connected Short calls are invalid and so excluded from statistics.
	Calls within SLA	Number of calls with completion times within a predetermined amount of time
	ACD Calls	Number of inbound calls processed by ACD
	Queued Calls	Number of inbound calls that were queued
Counts	Total ACD Processing Count	Total ACD processing count for inbound calls
	Max ACD Processing Count	Maximum ACD processing count per inbound call.
	Total Queue Count	Total number of inbound call queue placements
	Max Queue Count	Maximum number of queue placements per inbound call
Average Time	Average Call Duration	Average duration of inbound calls
	Average Duration of Complete Calls	Average duration of complete calls
	Average Duration of Dropped Calls	Average duration of dropped calls
	Average Completion Time	Average completion time of complete calls
	Average ACD Processing Time	Average processing time per ACD call
	Average Queue Time	Average wait time per queued call
Maximum Time	Maximum Call Duration	Maximum duration of inbound calls
	Maximum Duration of	Maximum duration of complete calls

	Complete Calls	
	Maximum Duration of Dropped Calls	Maximum duration of dropped calls
	Max Completion Time	Maximum completion time of complete calls
	Max ACD Processing Time	Maximum processing time per ACD call
	Max Queue Time	Maximum wait time per queued call
Other	Completion Rate	Completion rate of inbound calls
	Drop Rate	Drop rate of inbound calls
	SLA Rate	Rate of SLA compliance for complete calls
	Call Volume	DNIS call volume calculated by the total duration of all inbound calls divided by the elapsed time since start of business for the day.

8.7.2. Outbound

These reports contain real time information and daily statistics for each ANI.

Columns

Type	Column name	Description
Real Time Information	Calls	Number of current calls received by the DNIS.
	Calls Completed	Number of calls with call results of complete
	Calls Unconnected	Number of calls with call results of unconnected
	Calls Incompleted	Number of calls with call results of incomplete
	ACD Calls	Number of calls processed by an ACD
	Calls in Queue	Number of calls in queue
Number of calls	Outgoing Calls	Outgoing calls originating from the ANI
	Completed Calls	Number of outbound calls with call results of complete
	Unconnected Calls	Number of outbound calls with call results of unconnected
	Dropped Calls	Number of outbound calls with call results of dropped
	IVR Dropped Calls	Number of dropped calls with a final call status of IVR
	VM Dropped Calls	Number of dropped calls with a final call status of VM
	MSG Dropped Calls	Number of dropped calls with a final call status of MSG
	Queue Dropped Calls	Number of dropped calls with a final call status of Queue
	Short Calls	Number of outbound calls disconnected within a predetermined amount of time after the call was connected Short calls are invalid and so excluded from statistics.
	Calls within SLA	Number of calls with completion times within a predetermined amount of time
	ACD Calls	Number of outbound calls processed by ACD
	Queued Calls	Number of outbound calls that were queued
Counts	Total ACD Processing Count	Total ACD processing count for outbound calls

	Max ACD Processing Count	Maximum ACD processing count per outbound call.
	Total Queue Count	Total outbound call queue placements
	Max Total Queue Count	Maximum number of queue placements per outbound call
Average Time	Average Call Duration	Average duration of outbound calls
	Average Duration of Complete Calls	Average duration of complete calls
	Average Duration of Unconnected Calls	Average duration of unconnected calls
	Average Duration of Dropped Calls	Average duration of dropped calls
	Average Ring Time	Average ring time of outbound calls
	Average Ring Time of Completed Calls	Average ring time of completed outbound calls
	Average Ring Time of Unconnected Calls	Average ring time of unconnected outbound calls
	Average Ring Time of Dropped Calls	Average ring time of dropped outbound calls
	Average Completion Time	Average completion time of complete calls.
	Average ACD Processing Time	Average processing time per ACD call
	Average Queue Time	Average wait time per queued call
Maximum Time	Maximum Call Duration	Maximum duration of outbound calls
	Maximum Duration of Complete Calls	Maximum duration of complete calls
	Maximum Duration of Unconnected Calls	Maximum duration of unconnected calls
	Maximum Duration of Dropped Calls	Maximum duration of dropped calls
	Maximum Ring Time	Maximum ring time of outbound calls
	Maximum Ring Time of Completed Calls	Maximum ring time of completed outbound calls
	Maximum Ring Time of Unconnected Calls	Maximum ring time of unconnected outbound calls
	Maximum Ring Time of Dropped Calls	Maximum ring time of dropped outbound calls
	Max Completion Time	Maximum completion time of complete calls
	Max ACD Processing Time	Maximum processing time per ACD call
	Max Queue Time	Maximum wait time per queued call
Other	Completion Rate	Completion rate of outbound calls
	Unconnected Rate	Unconnected rate of outbound calls
	Drop Rate	Drop rate for outbound calls
	SLA Rate	Rate of SLA compliance for complete calls
	Call Volume	ANI call volume calculated by the total duration of all outbound calls divided by the elapsed time since start of business for the day.

8.7.3. ACD

These reports contain real time information and daily statistics for each ACD.

Columns

Type	Column name	Description
Basic Information	Description	Description of the ACD system
Real Time Information	ACD Calls	Number of calls processed by ACD
	Queued Calls	Number of calls in queue
	Number of sessions in distribution	Number of sessions in distribution by ACD to intended recipients
	Number of distributed sessions	Number of sessions distributed by ACD to intended recipients
Number of Calls	ACD Calls	Number of calls processed by ACD
	Completed Calls	Number of ACD calls with call results of complete
	Unconnected Calls	Number of ACD calls with call results of unconnected
	Dropped Calls	Number of ACD calls with call results of dropped
	Short Calls	Number of short calls processed by ACD Short calls are invalid and so excluded from statistics.
	ACD Completed Calls	Number of calls processed and completed by an ACD
	Queued Calls	Number of ACD calls that were placed in queue
Number of Sessions	Distributed Sessions	Number of sessions distributed by ACD the intended recipients
	Connected Sessions	Number of distributed sessions with a connection result of connected
	Unconnected Sessions	Number of distributed sessions with a connection result of unconnected
Counts	ACD Calls	Number of calls that were processed by ACD
	Queued Calls	Number of ACD calls that were queued
	Total Hold Count	Total number of connected session placed on hold
	Max Hold Count	Maximum number of hold per connected session
Average Time	Average Call Duration	Average call duration of distributed sessions
	Average Ring Time	Average ring time of distributed sessions
	Average Connection Time	Average time of connected sessions
	Average Talk Time	Average talk time per connected session
	Average Hold Time	Average hold time per connected session
	Average ACD Processing Time	Average ACD processing time per ACD session
	Average Queue Time	Average wait time per queued session
Maximum Time	Maximum Call Duration	Maximum duration of distributed sessions
	Maximum Ring Time	Maximum ring time of distributed sessions
	Maximum Connection Time	Maximum time of connected sessions
	Maximum Talk Time	Maximum talk time per connected session
	Maximum Hold Time	Maximum hold time per connected session
	Maximum ACD Processing Time	Maximum ACD processing time per ACD session
	Maximum Queue Time	Maximum wait time per queued session
Others	Completion Rate	Completion rate of ACD calls
	Unconnected Rate	Disconnection rate of ACD calls
	Drop Rate	Drop rate of ACD calls

	ACD Completion Rate	Rate of ACD calls completed by the ACD
	Queue Rate	Rate for ACD calls placed in queue
	Session Connection Rate	Connection rate of distributed sessions
	Session Disconnection Rate	Disconnection rate of distributed sessions
	Call Volume	ACD call volume calculated by the total call duration of all distributed sessions divided by the elapsed time since start of business for the day.

Actions

Action	Description
Low Call Waiting Alert High Call Waiting Alert	Triggers an alert when the number of calls in the ACD queue exceeds the call waiting alert threshold. The call waiting alert threshold corresponds to the value configured on the ACD Settings screen in CIM.

8.7.4. Agent

These reports contain real time information and daily statistics for each agent.

Columns

Type	Column name	Description
Basic Information	Agent Name	Name of agent
	Agent Type	Type of agent user
	Device ID	Device ID of agent
Real Time Information	Agent Status	Agent status
	Agent Status Reason	Reason for agent status
	Status Duration	Duration of current status
	Call Status	Agent call status
Number of Calls	Inbound/Outbound Calls	Number of inbound and outbound calls received to/originating from the agent device
	Unknown Calls	Number of inbound/outbound calls that are unknown
	Inbound Calls	Number of inbound/outbound calls that are inbound
	Outbound Calls	Number of inbound/outbound calls that are outbound
	Internal Calls	Number of inbound/outbound calls that are internal
Number of Sessions	Sessions	Number of agent device inbound/outbound sessions
	Connected Sessions	Number of sessions that were successfully connected
	Unconnected Sessions	Number of sessions that were not connected
Counts	On-hold Count	Total number of connected sessions placed on hold
Total Call Time	Total Call Time	Total call time of all sessions
	Total Ring Time	Total ring time of all sessions
	Total Connection Time	Total connection time of connected sessions
	Total Talk Time	Total talk time of connected sessions
	Total Hold Time	Total hold time of connected sessions
Average Call	Average Call Time	Average call time of all sessions

Time	Average Ring Time	Average ring time of all sessions
	Average Connection Time	Average connection time of connected sessions
	Average Talk Time	Average talk time of connected sessions
	Average Hold Time	Average hold time of connected sessions
Maximum Call Time	Maximum Call Time	Maximum call time of all sessions
	Maximum Ring Time	Maximum ring time of all sessions
	Maximum Connection Time	Maximum connection time of connected sessions.
	Maximum Talk Time	Maximum talk time per connected session
	Maximum Hold Time	Maximum hold time per connected session
State Changes	Login Count	Number of agent logins
	Ready Count	Number of times the agent status changed to the Ready state
	Idle Count	Number of times the agent status changed to the Idle state
	Talk Count	Number of times the agent status changed to the Talk state
	Wrap-up Count	Number of times the agent status changed to the Wrap-up state
	Work Count	Number of times the agent status changed to the Work state
Total State Times	Total Online Time	Total time the agent was online
	Total Available Time	Total time the agent was in the Ready state
	Total Idle Time	Total time the agent was in the Idle state
	Total Talk Time	Total time the agent was in the Talk state
	Total Wrap-up Time	Total time the agent was in the Wrap-up state
	Total Work Time	Total time the agent was in the Work state
Average State Time	Average Online Time	Average time the agent was online per login
	Average Ready Time	Average time the agent was in the Ready state per login
	Average Idle Time	Average time the agent was in the Idle state per login
	Average Talk Time	Average time the agent was in the Talk state per login
	Average Wrap-up Time	Average time the agent was in the Wrap-up state per login
	Average Work Time	Average time the agent was in the Work state per login
Maximum State Time	Maximum Online Time	Maximum time the agent was online per login
	Maximum Ready Time	Maximum time the agent was in the Ready state per login
	Maximum Idle Time	Maximum time the agent was in the Idle state per login

	Maximum Talk Time	Maximum time the agent was in the Talk state per login
	Maximum Wrap-up Time	Maximum time the agent was in the Wrap-up state per login
	Maximum Work Time	Maximum time the agent was in the Work state per login
State Ratios	Online Rate	Rate that the agent has been online since start of business for that day
	Ready Rate	Rate that the agent was in the Ready state while online
	Idle Rate	Rate that the agent was in the Idle state while online
	Talk Rate	Rate that the agent was in the Talk state while online
	Wrap-up Rate	Rate that the agent was in the Wrap-up state while online
	Work Rate	Rate that the agent was in the Work state while online
Others	Session Connection Rate	Connection rate of distributed sessions
	Session Disconnection Rate	Disconnection rate of distributed sessions
	Call Volume	Agent call volume calculated by the total call duration of all sessions divided by the total online time.

Actions

Field	Description
Ready Alert Idle Alert Talk Alert Wrap-up Alert Work Alert	Used to configure the agent state duration in milliseconds used as the threshold for related alerts. The alert is triggered when the agent state duration exceeds this threshold.

8.7.5. Call

These reports contain real time information for active calls.

Columns

Type	Column name	Description
Real Time Information	Call Type	Call types includes Unknown, Incoming, Outgoing, and Internal Call
	Date/Time	Date and time that the call started
	DNIS / ANI	DNIS appears for incoming calls. ANI appears for outgoing calls.
	Customer Phone Number	Customer phone number
	Customer Information	Additional customer information
	Originating Agent	ID of the agent that originated the call
	Call Status	Type of device used to interface with customers
	Call Results	Result of calls
	Total ACD Assignment Count	Number of calls processed by ACD
	Total Queue Count	Number of calls placed in queue

	Call Time	Time since the call started
	Completion Time	Time needed to complete the call Represents the time from the agent receiving the call until call completion for incoming calls. Represents the time from the customer answering the call until call completion for predictive calls.
	Customer Ring Time	Ring time of customer-initiated calls Represents the time from after the customer dialed the number until the call was either answered or disconnected.
	Total ACD Assignment Time	Total processing time of ACD calls
	Maximum ACD Assignment Time	Maximum ACD processing time per call
	Total Queue Time	Total time of calls waiting in queue
	Maximum Queue Time	Maximum wait time per queue placement
	Assigned ACD	Current ACD that is processing calls
	ACD Assignment Start Date/Time	Date and time that the current ACD was first assigned
	Assigned ACD Running Time	Time that has elapsed since the current ACD was assigned
	Current Queue	Current queue used for calls
	Queue Start Date/Time	Date and time that the current queue was first started
	Queue Running Time	Time that has elapsed since the current queue was started
	Queue Position	Queue position within the current queue

8.8. Real Time Charts

8.8.1. Overview

These reports contain real time status information in graphical format. This screen provides administrative capabilities including creating, customizing, configuring, and viewing real time charts.

8.8.2. Real Time Chart Menu

This menu displays a list of viewable reports available for the current login user. Clicking the icon corresponding to the desired report in the tree displays the Admin screen for that report to the right of the menu. Reports can also be created and deleted from this menu if report customization is enabled.

Menu Bar Options

Menu Option		Description
New	Create New Chart	Used to create new real time charts. Selecting this menu option displays the chart creation dialog. Enter a name for the report and create a new report from this

		dialog. This option is only available when chart customization is enabled.
Edit	Copy Chart	Used to copy the report selected in the tree. This option is only available when chart customization is enabled.
	Delete Chart	Used to delete the report selected in the tree. This option is only available for reports that are editable.
Show	Show with Group	Used to change the grouping of reports that appear in the tree. Available options include **Categories**, **Resource Type**, and **Owner**.
	Expand All	Used to expand all objects in the tree.
	Collapse All	This object is used to collapse all objects in the tree.

8.8.3. View

Reports are displayed in the **View** tab. The window of the selected report always appears in a view. Window layouts can be changed and sub reports can be opened in the **View** tab. Note that this **View** tab is different from **My Reports** in that the view state is not saved, and so the current view state is lost when a user moves away from the admin screen of the selected report.

If the configuration of the report currently displayed in the **View** tab is changed, this configuration is saved as the default user setting for the report. This default setting is applicable whenever this report is opened, including in **My Reports** or as a sub report.

8.8.4. Report Windows

Report windows are instances of real time charts accessible from the **View** tab.

Charts are configured with three display areas. These areas include a filter area used to filter information in accordance with specified conditions, an information area that displays a summary of the report, and the actual chart. Note that the filter and information areas may not appear depending on the configuration of the report settings.

Menu Bar Options

Menu Option		Description
Show	Filter	Used to toggle the display of the filter on and off. This option may be unavailable depending on the configuration of the report settings.
	Info	Used to toggle the display of the information area on and off. This option may be unavailable depending on the configuration of the report settings.
	Action	Used to enable and disable actions accessed by hovering the mouse over the graph. The default available actions include **Tooltip**, **Magnify**, **Highlight**, and **MoveSlice**. This option will enable/disable the currently selected action. The available actions vary depending on the plot type.
Settings	General	Used to change the report settings of the current report window. Select the menu option to display the settings dialog. Settings changes take effect immediately after applied. To reset the report settings to the defaults, click the **Reset** button. Excluding some special scenarios, each report window instance is configured individually with these settings. Refer to the Report Settings section for more information.

8.9. Real Time Chart Settings

8.9.1. Chart

This section describes the basic settings of real time charts. The configuration of these settings is used as the default settings. Settings are inherited hierarchically from System to Tenant and then to User.

General

Setting	Description
State	Used to enable and disable the report. Disabled reports are hidden from all users except administrators.
Refresh interval (msec)	Used to specific the interval in milliseconds at which the report content is refreshed. Using a shorter update interval improves the real time performance of the report, but this also increases the load on the CDR server and browser. Configure this setting to an appropriate value so as to obtain a suitable balance between system performance and real time performance.

Info

Setting	Description
Show	Used to show or hide the information area in report windows.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Filter

Setting	Description
Show	Used to show or hide the filter in report windows.
Filter Values	These settings are used to set the default values of the filter. The filter criteria available here vary depending on the data source of the report.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Chart

Setting	Description
Theme	Used to specify the chart theme. Select a theme from the available options. Theme changes may not have taken effect on reports for which the color scheme has been predetermined.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Plot 1/Plot 2

Setting	Description
Plot Type	Used to specify the type of chart to be drawn using Plot 1 and Plot 2. Real time charts are drawn using two plot ranges. These plot ranges can each be of a different type. Available default plot types that can be selected for each plot region include line chart, bar chart, and pie chart. The available plot ranges and plot types vary depending on the report definitions.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Legend

Setting	Description
View Position	Used to specify the position at which the legend appears on charts. Available options include **Top**, **Bottom**, **Left**, and **Right**.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

Non-Hours Info

Setting	Description
Show	Used to specify whether to include information for non-business hours into charts drawn along a time axis.
Change	Used to specify whether settings can be changed by users in lower hierarchical levels.

8.9.2. Window Settings

This section describes the settings related to report window sizing.

Size

Setting	Description
Width (W)	Used to specify the width of the window in pixels.
Height (H)	Used to specify the height of the window in pixels. The height of the window includes the title bar.

Resize

Setting	Description
Resize	Used to enable and disable resizing of windows in report views.
Max Width (W)	Used to specify the maximum width to which a window may be resized.
Max Height (H)	Used to specify the maximum height to which a window may be resized.
Min Width (W)	Used to specify the minimum width to which a window may be resized.
Min Height (H)	Used to specify the minimum height to which a window may be resized.

8.9.3. Security

This section describes settings related to report access.

Access permission

Setting	Description
View Access to SV	Used to enable and disable supervisor viewing access.

8.10. Real Time Chart Definitions

8.10.1. Charts

This section describes the definitions configured for real time charts.

✓ *Refer to "Brekeke Contact Analytics v2.7 Real-Time Report Customization Guide" for more information on real-time chart definitions.*

Basic Settings

Setting	Description
Chart Name	Used to specify the name of the real-time chart. This is a required setting.
Categories	Used to specify a text string used to categorize the real time chart. This setting is optional. If specified, however, reports appear in the **Report List** and other trees organized by category.
Data source	This setting defines the data source of the real time chart. Available options include **dnis**, **ani**, **acd**, **agent**, and **call**. System variables are defined to retrieve call center object information for each data source. This information can be referenced in the information area and chart expressions.
Data Mode	Used to specify the type of raw data retrieved from a data source. Available options include **record**, **record-timeline**, **total**, and **total-timeline**. With the **record** option, information from multiple call center objects is retrieved as multiple records from a data source. With the **record-timeline** option, record information is retrieved once every hour. With the **total** option, a single record as an aggregation of data from multiple objects is retrieved. With the **total-timeline** option, this same information is retrieved once every hour.
Chart Type	Used to specify the base chart type. Available options include **fields-x**, **fields-y**, **fields**, **records-x**, **records-y**, **records**, **timelines-x**, and **timelines-y**. This setting determines the type of chart to be created from the raw data retrieved from a data source. The **fields-x** and **fields-y** options are used to create a chart using the fields as the X and Y axes. The **fields** option is used to create a chart using the fields but without any axes. The **records-x** and **records-y** options are used to create charts using the records retrieved from a data source as the X and Y axes. The **records** option is used to create a chart using the records but without any axes. The **timelines-x** and **timelines-y** options are used to create a chart using timelines as the X and Y axes. Available chart types vary depending on the data mode of the report.
Multi Series	Used to specify the type of element used for multiple datasets. Available options include **none**, **fields**, and **records**. Line and bar charts with X and Y axes multiple datasets can be arranged and stacked on numerical value axes. With the **fields** option, multiple chart fields can be added to charts. With the **records** option, multiple records retrieved from a data source can be added to charts. The **none** option disables the use of multiple datasets.

Information Settings

HTML is the language used to describe and format the information area that appears in report windows. Configuration specifications are the same as that for the real time table. Refer to the Information Settings sub-section in the Real Time Table Definitions section for more information.

Field Settings

These parameters are used to define charts. The following table describes the available settings.

Setting	Description
Column Name	The parameter name is used in chart labels and legends.
Formula	Javascript is used to define parameter expressions. Charts are drawn in accordance with the values derived from expressions when a report is generated. Expressions can include default system variables, functions, operators, and other data types. The available system variables and functions vary depending on the report definitions.
Options	This parameter defines style options of chart elements. Style options applied to charts with multiple datasets are described in JSON format. The following example description specifies border width, color, and the fill color of the element to be drawn. { "stroke": { "color": "blue", "width": 3 }, "fill": "#ff0000" }

8.10.2. Options

This section describes the option settings available to customize real time charts.

Plot 1/Plot 2

These options are used to customize plot ranges are described in JSON format.

Tooltip 1/Tooltip 2

These options are used to customize the tooltips that appear in charts are described in JSON format.

X axis/Y axis

These options are used to customize the X and Y axes that appear in charts are described in JSON format.

8.11. Real time Maps

8.11.1. Overview

This reporting function is used to present real time information on agents in a map layout. This screen provides administrative capabilities including creating, customizing, configuring, and viewing real time maps.

8.11.2. Real Time Map Menu

This menu displays a list of viewable reports available for the current login user. Clicking the icon corresponding to the desired report in the tree displays the admin screen for that report to the right of the menu. Reports can also be created and deleted from this menu if report customization is enabled.

Menu Bar Options

Menu Option		Description
New	Create New Map	Used to create new real time maps. Selecting this menu option displays the chart creation dialog. Enter a name for the report and create a new report from this dialog. This screen appears only to users with map creation rights. The setting used to grant supervisors creation rights can be changed in the **Settings** option under the **Real Time Report** menu.
Edit	Copy Map	Used to copy the report selected in the tree. This screen appears only to users with map creation rights.
	Delete Map	Used to delete the report selected in the tree. This option is only available for reports that are editable.
Show	Show with Group	Used to change the grouping of reports that appear in the tree. Available options include **Categories** and **Owner**.
	Expand All	Used to expand all objects in the tree.
	Collapse All	This object is used to collapse all objects in the tree.

8.11.3. View

Reports are displayed in the **View** tab. The window of the selected report always appears in a view. Window layouts can be changed and sub reports can be opened in the **View** tab. Note that this **View** tab is different from **My Reports** in that the view state is not saved, and so the current view state is lost when a user moves away from the administration screen of the selected report.

8.11.4. Report Windows

Report windows are instances of real time maps accessible from the **View** tab. Agent information appears in real time via the icons arranged in the rectangular display area.

When an agent that belongs to the management group currently being monitored requests help, a red border around the icon corresponding to this agent begins flashing to alert the supervisor.

Menu Bar Options

Menu Option		Description
Edit	Start editing	Used to transition to edit mode for real time maps. This option is available only to users with map edit rights. Refer to the following section for more information on edit mode.

8.11.5. Editing Real Time Maps

Editing real time maps requires you to switch from normal mode to edit mode. In edit mode, you can add, delete, and arrange agent icons as well as edit their properties. Use the menu bar or the right-click menu to add agent icons and then drag them to the desired positions in the arrangement. Newly created agent icons are not yet configured with key information to map the icon to a particular agent. As such, icons are disabled and appears in the inactive state in normal mode until this information is configured. To enable the agent icon, open the icon properties and configure the Phone ID or Agent ID to map the icon to an agent. To exit edit mode, select **End editing** from the menu and save your changes. You will lose your changes if you transition to another screen without saving the changes made to a map.

Edit Mode Menu Options

Menu Option	Description
End editing	Used to exit from edit mode and display the edited map in normal mode. To save changes, select **Yes** from the save confirmation dialog. To discard changes, select **No**.
Add an icon	Used to add new agent icons to the map. After adding an icon, drag it to the desired position in the arrangement.
Delete icon	Used to delete the currently selected agent icon.
Icon Property	Used to open the properties for the selected agent icon. Refer to the next section for more information on these properties.

Agent Icon Properties

Property	Description
Key type	This property is used to specify the type of key used to map the icon to an agent. Available options include **Phone ID** and **Agent ID**.
Key	This property is used to configure the key used to map the icon to an agent. If this option is left blank, the icon will be disabled in normal mode.
Icon type	The map icon type property is used to define the appearance of the icon including shape, display label, and format. The available options vary depending on version and edition.

8.12. Real Time Map Settings

8.12.1. Map Settings

This section describes the basic settings of real time maps.

General

Setting	Description
Map Name	Used to specify the report name of the real time map. This is a required setting.
Categories	Used to specify a text string used to categorize the real time map. This setting is optional. If specified, however, reports appear in the **Report List** and other trees organized by category.
State	Used to enable and disable the report. Disabled reports are hidden from all users except owners and administrators.
Refresh interval (msec)	Used to specific the interval in milliseconds at which the report content is refreshed. Using a shorter update interval improves the real time performance of the report, but this also increases the load on the CDR server and browser. Configure this setting to an appropriate value so as to obtain a suitable balance between system performance and real time performance.

Size

Setting	Description
Width (W)	Used to specify the width of the rectangular display area of the map in pixels.
Height (H)	Used to specify the height of the rectangular display area of the map in pixels.

Background

Setting	Description
Background Color	Used to specify the background color of the map using HTML color codes such as red or #ff0000.
Background image	This pull-down menu is used to disable the display of a background image or select an uploaded image file for use as the background image. Only image files that have been previously uploaded for use as map background images are available for selection.
Upload background image	Used to upload background images. Only one background image can be uploaded for each map.

8.12.2. Window Settings

This section describes the settings related to report window sizing.

Size

Setting	Description
Sizing Method	Used to specify the window sizing method. Used to select either automatic sizing or manual sizing. When automatic sizing is selected, the window is automatically sized in accordance with the size of the rectangular display area of the map. When manual sizing is selected, the width and height of the window must be manually specified in pixels.
Width (W)	Used to specify the width of the window in pixels. This setting is ignored when the automatic sizing method is in use.
Height (H)	Used to specify the height of the window in pixels. The height of the window includes the title bar. This setting is ignored when the automatic sizing method is in use.

Resize

Setting	Description
Resize	Used to enable and disable resizing of windows in report views.
Max Width (W)	Used to specify the maximum width to which a window may be resized.
Max Height (H)	Used to specify the maximum height to which a window may be resized.
Min Width (W)	Used to specify the minimum width to which a window may be resized.
Min Height (H)	Used to specify the minimum height to which a window may be resized.

8.12.3. Edit Settings

This section describes the settings related to real time map edit mode.

Icon

Setting	Description
Default Type	Used to specify the default type of icon added in edit mode. The available options vary depending on version and edition.

Grid

Setting	Description
Horizontal interval	Used to specify the snap to grid spacing used when dragging icons on the map in edit mode. The horizontal spacing (X axis) is specified in pixels. Use this setting to make it easier to arrange icons that are equal distances apart.
Vertical interval	The vertical spacing (Y axis) is specified in pixels.

8.12.4. Action

This section describes the settings related to action triggers. Default action triggers are available for use with real time maps to detect when the status of an agent has not changed for a predetermined amount of time. Each icon on the map is checked whenever the map is updated to determine if an agent state has changed within the configured time. If the agent state has not changed within the configured time, the icon for the agent flashes as notification.

Ready Alert, Idle Alert, On Call Alert, Post-processing Alert, and Working Alert

Setting	Description
State Duration (ms)	Used to configure the state duration in milliseconds used as the threshold for related alerts. If the state duration exceeds this threshold, the alert is triggered via the icon of the corresponding agent.
Action	Used to specify the operation performed when the alert is triggered. Available options include **Do nothing** and **Blink the icon**.

8.12.5. Security

This section describes settings related to report access.

Access permission

Setting	Description
View Access to SV	Used to enable and disable supervisor viewing access.

8.13. Settings

8.13.1. Overview

This section describes the settings related to real time report administration.

8.13.2. Roles

Rights are configured separately for the two roles available, which include Admin and SV.

General

Setting	Description
Maximum viewable windows	Used to specify the number of report windows that can be opened in the **View** tab. A larger number of simultaneously viewable windows increases the load on the CDR server and browser accordingly. Configure this setting to an appropriate value so as to obtain a suitable balance between server performance and the number of simultaneous users.

My Reports

Setting	Description
Show Window	Used to enable and disable the viewing of the **My Reports** page.
Number of Views	Used to configure the number of available views in the **My Reports** page.

Table

Setting	Description
Show Window	Used to enable and disable the viewing of the table administration screen. Supervisors only have rights to access views in the administration screen.

Chart

Setting	Description
Show Window	Used to enable and disable the viewing of the chart administration screen. Supervisors only have rights to access views in the administration screen.

Map

Setting	Description
Show Window	Used to enable and disable the viewing of the map administration screen.
Create Map	Used to enable and disable the creation of maps.

9. Historical Reports

9.1. Overview

Historical reports contain statistics on calls, agents, and other information organized by category. Reports can be output in either PDF or CSV format.

The two available report generation methods are Quick Report and Scheduled Reports.

Generation Method	Description
Quick Report	This method is used to generate a report by specifying the report type, format, period, and time range. This method is always available for use.
Scheduled Reports	This method is used to generate daily, weekly, and monthly reports in accordance with the scheduled report settings. The Reports server automatically generates reports in accordance with settings.

The following table describes the available report types.

Type	Description
DNIS Report by DNIS	Incoming call information is organized per DNIS.
DNIS Report by Timeline	Incoming call information is organized per timeline.
DNIS Report by DNIS & Timeline DNIS Report by DNIS & Timeline	Incoming call information is organized per DNIS and timeline.
ANI Report by ANI	Outgoing call information is organized per ANI.
ANI Report by Timeline	Outgoing call information is organized per timeline.
ANI Report by ANI & Timeline	Outgoing call information is organized per ANI and timeline.
ACD Report by Agent	ACD operation information is organized per agent.
ACD Report by ACD	ACD operation information is organized per ACD.
ACD Report by DNIS	ACD operation information is organized per DNIS.
Agent Report by Agent	Agent operation information is organized per agent.
Agent Report by Group	Agent operation information is organized per group.
Agent Report by Agent & Timeline	Agent operation information is organized per agent and timeline.
Agent Report by Group & Timeline	Agent operation information is organized per group and timeline.

9.2. Quick Reports

9.2.1. Overview

This method is used to generate a report by specifying the report type, format, period, and time range. Quick reports can be created whenever desired.

9.2.2. Report Parameters

Parameter	Description
Date range	Used to specify the applicable period of the report. Data is collected from all CDRs corresponding to the specified period. If the start and end dates are set to the same date, the period is defined as the entire 24 hours of that date.
Time range	Used to specify the applicable time range of the report. Data is collected from all CDRs corresponding to the specified time range. If the start and end times are set to the same time, the time range is defined as the entire 24 hours of all dates in the configured period.
Report Type	Used to specify the type of report to generate. Refer to the historical report overview or the sections on each report type for more information on the available reports.
Output format	Used to specify the file format in which to output the report. Available options include **PDF** and **CSV**.
Export	Used to generate reports. The time required to generate a report varies between several seconds to several hours depending on the report type and the number of CDRs. The file download dialog appears once the report generation process is complete. Use the dialog to save the report to the desired folder.

9.3. Scheduled Reports

9.3.1. Overview

This section describes the settings used to configure daily, weekly, and monthly reports. The Reports server automatically generates reports in accordance with these settings once the corresponding period ends.

Configure common settings such as the output directory for scheduled reports on the **Settings** tab available from the **Historical report** option in the main menu.

9.3.2. Daily Report Settings

Setting	Description
Daily report output	Used to enable and disable generation of daily reports. Daily reports are not generated when disabled.
time	Used to specify the applicable time range of the daily report. Data is collected from all CDRs corresponding to the specified time range. If the start and end times are set to 00:00, the time range is defined as the entire 24 hours. A time range that spans more than one day cannot be specified.
Export format	Used to specify the type of daily report and the file format in which to output the report. Reports will be generated in each format for each report type as selected.

9.3.3. Weekly Report Settings

Setting	Description
Weekly report output	Used to enable and disable generation of weekly reports. Weekly reports are not generated when disabled.
time	Used to specify the applicable time range of the weekly report. Data is collected from all CDRs corresponding to the specified time range. If the start and end times are set to 00:00, the time range is defined as the entire 24 hours. A time range that spans more than one day cannot be specified.
day	Used to specify the ending day of weekly reports. For example, if Sunday is specified as the ending day, the weekly report content starts on Monday and ends on Sunday.
Export format	Used to specify the type of weekly report and the file format in which to output the report. Reports will be generated in each format for each report type as selected.

9.3.4. Monthly Report Settings

Setting	Description
Monthly report output	Used to enable and disable generation of monthly reports. Monthly reports are not generated when disabled.
time	Used to specify the applicable time range of the monthly report. Data is collected from all CDRs corresponding to the specified time range. If the start and end times are set to 00:00, the time range is defined as the entire 24 hours. A time range that spans more than one day cannot be specified.
day	Used to specify the ending date of monthly reports. For example, if the 20th is specified as the ending date, the monthly report content starts on the 21st and ends on the 20th. If the final date of the month is specified, the system will automatically adjust the final date in accordance with the actual final date of each month. For example, if the 31st is specified as the ending date, the monthly report content starts and ends on the following dates for April, May, and June: April 1-30, May 1-31, and June 1-30.
Export format	Used to specify the type of monthly report and the file format in which to output the report. Reports will be generated in each format for each report type as selected.

9.3.5. Report List

The **Report List** displays the scheduled historical reports generated and stored in the specified output directory. Click the report name to download the report. Generated report files are not automatically deleted. As such, the system administrator must purge or delete unnecessary reports as appropriate.

9.4. Settings

9.4.1. Overview

This section describes the settings used to configure common historical report settings and to maintain the Reports server.

9.4.2. Basic Settings

Setting	Description
Short call	Used to configure the reference value in milliseconds used to determine short calls. To enable this short call determination, set the reference to a value greater than 0 using integers. A short call determination is made when the call is disconnected within the time configured by this setting after the DNIS connection is established. Short calls are excluded from reports. Configuring this setting with a value of 0 disables short call determination.
Service level reference value	Used to configure the reference value in milliseconds used to determine SLA compliance. Set this reference to a value of at least 1 using integers. An SLA compliance determination is made when the call is transferred to an agent within the time configured by this setting after the DNIS connection is established.

9.4.3. Scheduled Report Settings

Setting	Description
Scheduled report directory	Used to specify the absolute path to the local directory in which scheduled reports are stored. The directory must already exist before configuring this setting.
System startup delay	Used to specify a delay in seconds between the end of the report period and the generation of the report. Set a value of at least 1 using integers. Configuring a delay enables the report generation processing to be performed during idle times or wait for information on calls that have continued past the configured end time.
Language	Used to specify the language in which scheduled are output.

9.4.4. Reports Server Settings

Setting	Description
Start up server	Used to start the Reports server.
Stop server	Used to stop the Reports server. No scheduled reports will be generated while the Reports server is stopped.

9.5. DNIS Reports

9.5.1. Overview

DNIS reports contain details on calls organized by DNIS categorization. All calls that started in the configured period and timeline are included in the reports.

9.5.2. Report Information

Metric	Description
DNIS	DNIS number
Incoming	Total number of calls, excluding short calls, received by the DNIS
Short Calls	Number of calls received by the DNIS that were disconnected within a predetermined amount of time (excluded from incoming calls metric)
dropped calls	Number of incoming calls that were disconnected before the customer was successfully transferred to an agent
IVR calls	Number of dropped calls that were disconnected during the IVR process
completed calls	Incoming calls that were successfully transferred to an agent or other intended recipient
ringing time	Total ring time of all incoming calls
connected time	Total connection time of all incoming calls
service level	Number of calls successfully transferred to an agent by the DNIS within a predetermined amount of time

9.5.3. Categorization

Category	Description
Per DNIS	Data is organized per DNIS.
Per Timeline	Data is organized per shift in 1-hour increments. This data includes all DNIS statistics.
Per DNIS & Timeline	Data is organized per shift in 1-hour increments by DNIS.

9.6. ANI Reports

9.6.1. Overview

ANI reports contain details on calls organized by ANI categorization. All calls that started in the configured period and timeline are included in the reports.

9.6.2. Report Information

Metric	Description
ANI	ANI number
Outgoing	Total number of outgoing calls, excluding short calls, originating from the ANI
Short Calls	Number of calls originating from the ANI that were disconnected within a predetermined amount of time (excluded from outgoing calls metric)
Unconnected calls	Number of outgoing calls that were disconnected before the connection was successfully established
dropped calls	Outgoing calls that were disconnected before the customer was successfully transferred to an agent or other intended recipient This metric is derived from data on predictive outgoing calls only.
completed calls	Outgoing calls that were successfully transferred to an agent or other intended recipient
ringing time	Total ring time of all outgoing calls
connected time	Total connection time of all outgoing calls
Customer connected	Ratio of outgoing calls that were successfully received by customers

9.6.3. Categorization

Category	Description
Per ANI	Data is organized per ANI.
Per Timeline	Data is organized per shift in 1-hour increments. This data includes all ANI statistics.
Per ANI & Timeline	Data is organized per shift in 1-hour increments by ANI.

9.7. ACD Reports

9.7.1. Overview

ACD reports contain details on calls organized by ACD categorization. All calls that started in the configured period and timeline are included in the reports.

9.7.2. Report Information

Metric	Description
ACD	ACD ID
Processed calls	Number of calls processed by ACD
Completed calls	Number of processed calls that were successfully transferred to agents by the ACD system
Dropped calls	Number of processed calls that were not successfully transferred to agents by the ACD system
Calls in Queue	Number of calls placed in the ACD queue
Average waiting time	Average wait time per call in the ACD queue
Agent - Incoming calls	Number of calls assigned to agents by the ACD
Agent - Connected calls	Number of assigned calls that were successfully connected to an agent.
Agent - Average ringing time	Average ring time per call before an agent accepted an assigned call
Agent - Average talking time	Average time per call once the agent accepted the assigned call
Agent - Onhold calls	Total number calls that were placed on hold by the agent
Agent - Average onhold time	Average time per call placed on hold by agents

9.7.3. Categorization

Category	Description
Per Agent	Data is organized per agent by ACD.
Per ACD	Data is organized per ACD.
Per DNIS	Data is organized per DNIS by ACD.

9.8. Agent Reports

9.8.1. Overview

Agent reports contain details on calls and agents organized by agent categorization. All calls that started in the configured period and timeline as well as corresponding agent information are included in the reports.

9.8.2. Report Information

Metric	Description
Number of incoming calls	Number of calls assigned to agents
Number of connections	Number of assigned calls that were successfully connected to an agent.
Onhold calls	Total number of times calls were placed on hold by agents
Ringing time	Total ring time of all calls before an agent accepted an assigned call
Talking time	Total call time of all successfully connected agent sessions
Onhold time	Total time of all calls that were placed on hold by agents
Number of Signin times	Number of logins per agent
Number of ready times	Number of times the agent status changed to the Ready state
Number of idle times	Number of times the agent status changed to the Idle state
Number of talking times	Number of times the agent status changed to the Talk state
Number of wrap up	Number of times the agent status changed to the Wrap-up state
Number of work times	Number of times the agent status changed to the Work state
Online time	Total time the agent was online
Ready time	Total time the agent was in the Ready state
Idle time	Total time the agent was in the Idle state
Talking time	Total time the agent was in the Talk state
Wrap up time	Total time the agent was in the Wrap-up state
Work time	Total time the agent was in the Work state

9.8.3. Categorization

Setting	Description
Per Agent	Data is organized per agent by agent group.
Per Agent Group	Data is organized per agent group.
Per Timeline	Data is organized per timeline by group or agent.

10. Call Records

10.1. Overview

Users can search agent call records to display detailed information on calls and play recordings of calls. Login users with Supervisor (SV) rights can only view information corresponding to their admin groups.

You will need the optional Brekeke Recording File Server to access recordings. Refer to the Brekeke RFS documentation for more information on Brekeke RFS.

10.2. Search Page

10.2.1. Overview

The Search screen is used to search and filter agent call records as well as play recordings of calls. Searches with multiple terms are always AND queries.

10.2.2. Search Filters

Filter	Description
Call start date	Filters records by call start date. If only the left value is configured, the system searches from the specified date and after. If only the right value is configured, the system searches from the specified date and before.
Call starting time	Filters records by call start time. The search will not generate any results if the left and right values are both set to the same time.
Type of call	Filters records by call type. Available options include **Incoming**, **Outgoing**, and **Internal line**.
DNIS/ANI/External Number	Filters records by DNIS, ANI, or external number. Partial matching is used.
ACD	Filters records by ACD. Partial matching is used.
Agent ID	Filters records by agent ID. Partial matching is used.
Agent name	Filters records by agent name. Partial matching is used.
Rows	This menu is used to specify the number of rows that appear per page of search results.
Sort	These menus are used to sort the search results. Specify both the sort column and sort order.

10.2.3. Search Results Columns

Column	Description
Call ID	Click a specific Call ID to transition to the details page for that call.
Type of call	The three call types include **Incoming**, **Outgoing**, and **Internal**

	line.
DNIS/ANI	Lists the DNIS or ANI number.
External number	Lists the customer's telephone number.
Group	Lists the group to which the agent belongs.
Agent	Lists the agent ID and name.
Start date and time	Lists the start date and time of calls.
End date and time	Lists the end date and time of calls.
Connected time	Lists the total time that the agent was connected to the call.
Number of connected users	Lists the number of PBX users connected to the call.
Call audio	Provides the link to the audio file of the call. The **Link** column appears only when your system configuration includes the Brekeke RFS, an audio file for the call exists, and the user has the corresponding access rights. Click the file to begin playback. Download the file from the right-click menu.

10.3. Call Details Page

10.3.1. Overview

The **Call details** page displays basic call information, information on the PBX users connected to the call, and session information.

10.3.2. Call Information

Field	Description
Call ID	Call ID
Type of call	Type of call
Call result	Result of the call
DNIS/ANI	DNIS or ANI number
Start date and time	Start date and time of call
End date and time	End date and time of call
Talking time	Duration of call
The number of sessions	Number of sessions during call

10.3.3. Connected Users

Column	Description
Group	Lists the group to which a user belongs. This column appears only for agents.
ID	Lists the user ID.
Name	Lists the username. This column appears only for agents.
Connected time	Lists the total time that the user was connected to the call.
Number of call on hold	Lists the total number of times the call was placed on hold.
Hold time	Lists the total hold time for the call.
Call audio	Provides the link to the audio file of the call. The **Link** column appears only when your system configuration includes the Recording File Server, an audio file for the call exists, and the user has the corresponding access rights.

10.3.4. Session Information

Column	Description
Session ID	Lists the session ID.
ACD	Lists the ACD. This column is blank if the session is not an ACD session.
UA type	Lists the type of UA. Some UA types include **Agent**, **Customer**, **IVR**, and **Internal line**.
UA number	Lists the UA number.
Connection result	Lists the resulting session connection state. The two connection states include **Connected** and **Unconnected**.
Disconnected by	Lists which side of the connection disconnected from the session. **PBX** indicates that the connection was disconnected by the PBX. **UA** indicates that the connection was disconnected by the UA.
Start time	Lists the start time of the session.
End time	Lists the end time of the session.
Connected time	Lists the total time of the session from connection establishment to disconnection.