



Reporting & Data Sources

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US Commercial Sales - Contact Center and Customer Experience

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Contact Center Data: Why are they important?

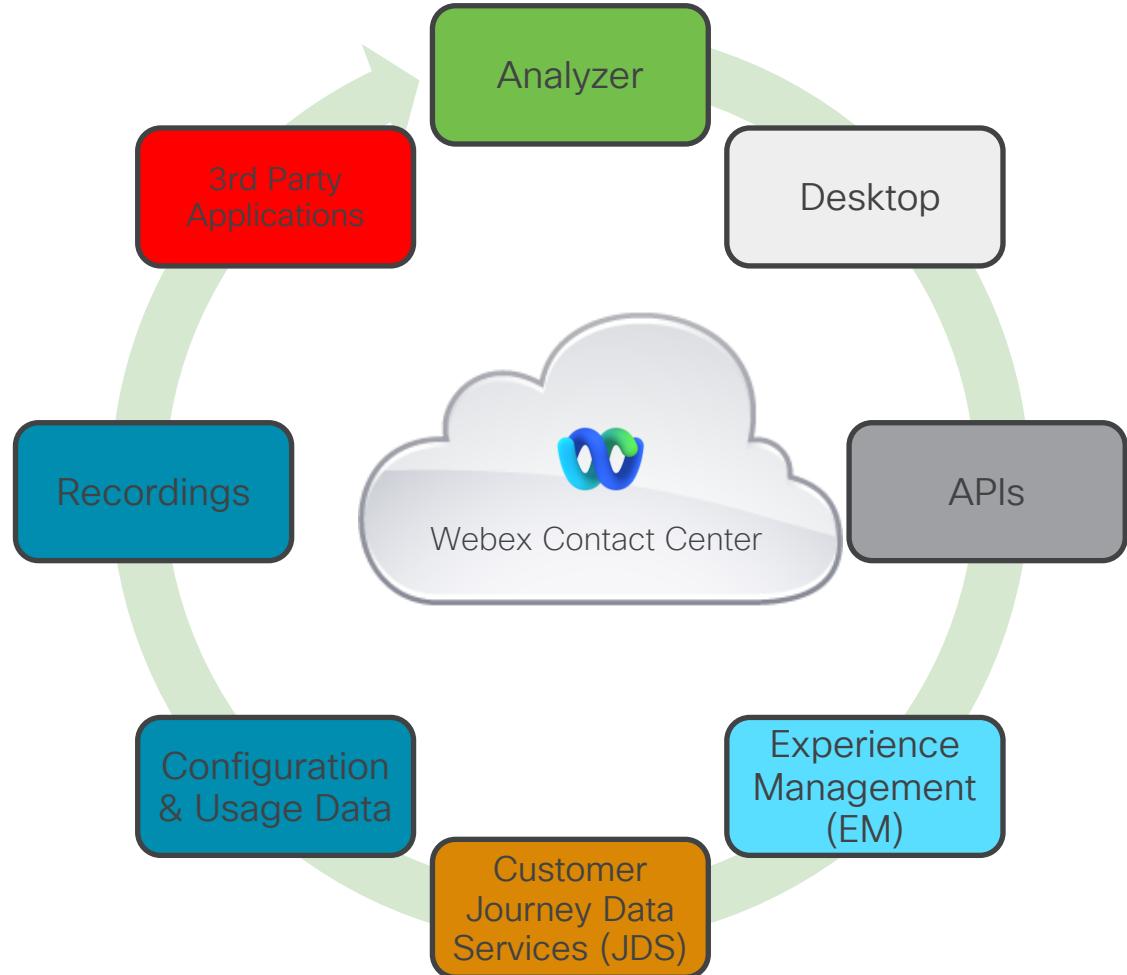


Measure → Analyze → Actions

Business Outcomes:

- ✓ Improve Customer Experience
- ✓ Boost Agent Performance
- ✓ Reduce Cost
- ✓ Improve Sales Conversions

Webex CC Data Sources



- **Analyzer:** The primary reporting portal for Webex Contact Center. Analyzer mines real-time and historical data and visualizes into specific business views.
- Analyzer stores information related to customer interactions and logged-in agent activity.

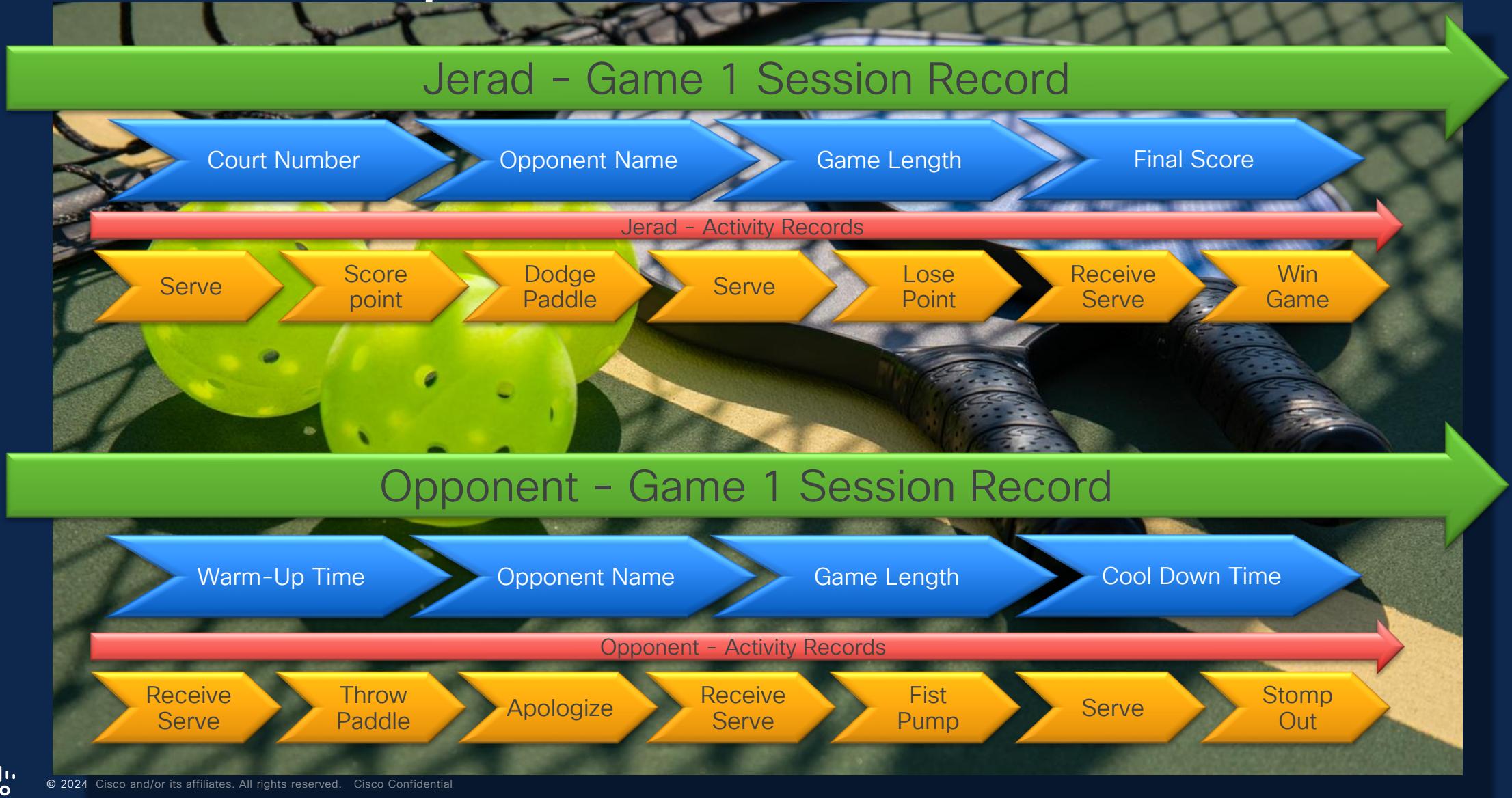
Agenda

- Understanding the Data
- Exploring the Data
- Processing the Data
- Visualizing the Data
- Sharing the Data
- Extracting the Data
- Closure

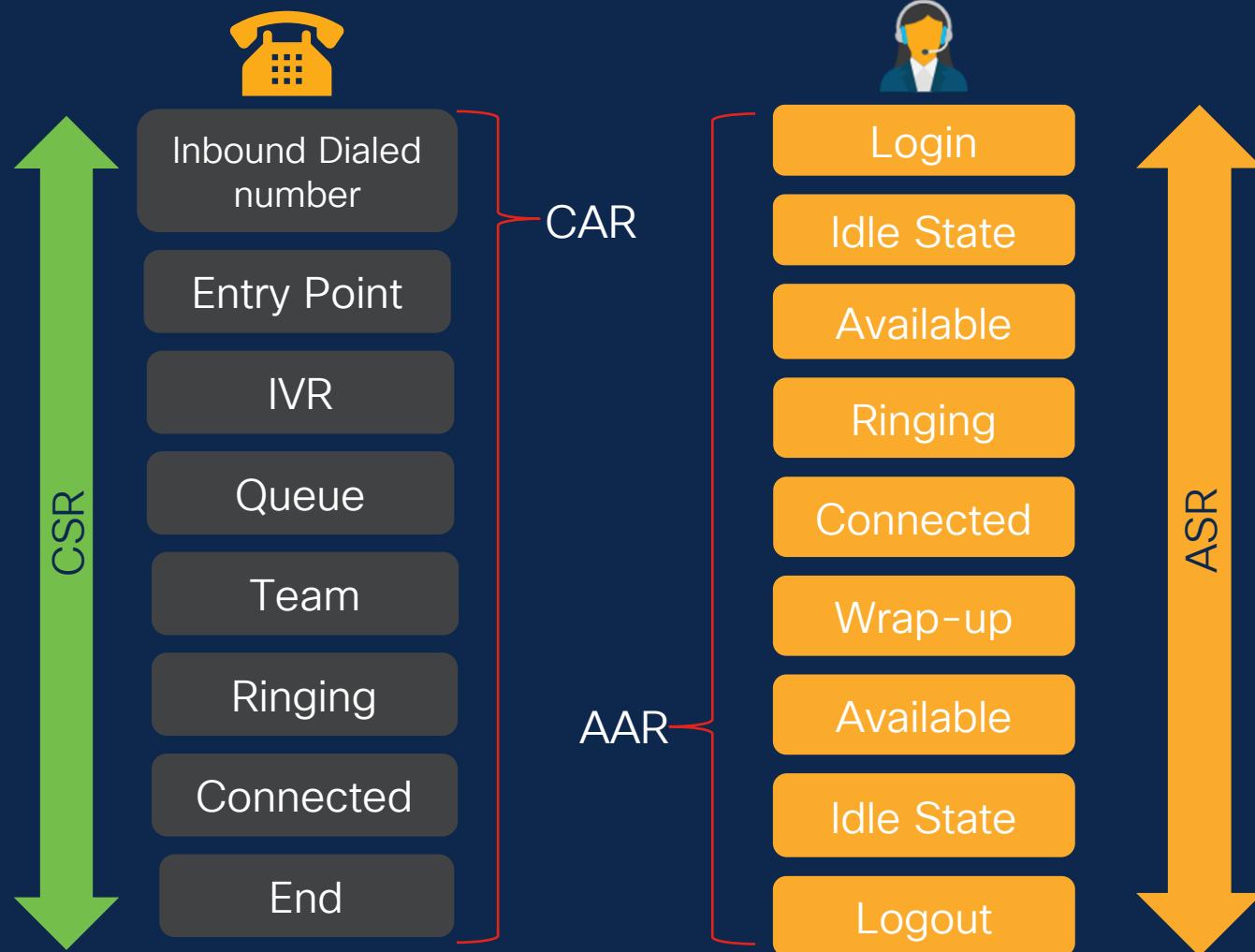
Understanding the Data



Pickleball Repositories



Analyzer Repositories



Customer

- Customer Session Record (CSR)
- Customer Activity Record (CAR)

Agent

- Agent Session Record (ASR)
- Agent Activity Record (AAR)

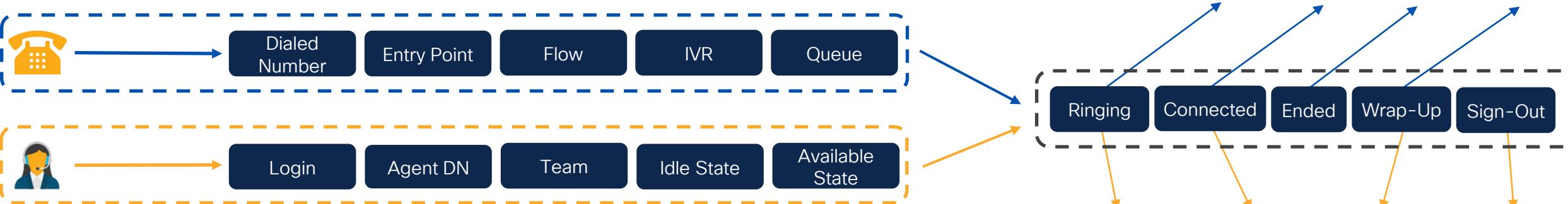
Data Creation and Storage

Customer Activity Record

Customer Session Record

Activity State	Activity Start Timestamp	Activity End Timestamp	Queue Name	Activity Duration
new	2024-03-18 03:31:52 PM	2024-03-18 03:31:52 PM	N/A	0:00:01
ivr-connected	2024-03-18 03:31:52 PM	2024-03-18 03:32:08 PM	N/A	0:00:16
parked	2024-03-18 03:32:08 PM	2024-03-18 03:32:55 PM	KT_TelephonyQ	0:00:47
connect	2024-03-18 03:32:55 PM	2024-03-18 03:33:03 PM	KT_TelephonyQ	0:00:08
connected	2024-03-18 03:33:03 PM	2024-03-18 03:33:23 PM	KT_TelephonyQ	0:00:20
Ended	2024-03-18 03:33:23 PM	2024-03-18 03:33:23 PM	KT_TelephonyQ	0:00:00

CSR Session ID	ANI	Call Start Time	DNIS	Entry Point	Flow Name	IVR Time	Queue	Queue Duration	Team	Agent	Ringing Duration	Connected Duration	Call End Time	Wrap Up Time
6f45bd49-8334-4fb7-b1c5-7d18597b694b	+14692553791	2024-03-18 03:31:52 PM	+14152307687	Main_EP	Demo_Flow	00:00:16	DemoQ	0:00:47	Support_Main	Clark Kent	0:00:08	0:00:20	2022/05/23 03:33:23 PM	00:00:05



ASR SessionID	Agent Name	Login Timestamp	Agent Endpoint (DN)	Team Name	Idle Duration	Available Duration	Ringing Duration	Connected Duration	Wrapup Duration	Logout Timestamp
f2f45e74-8fe6-4361-a48d-bd9487ce8e58	Clark Kent	2024-03-18 03:32:40 PM	+14695622405	Support_Team	0:00:14	0:00:06	0:00:08	0:00:20	0:00:05	2024-03-18 03:33:32 PM

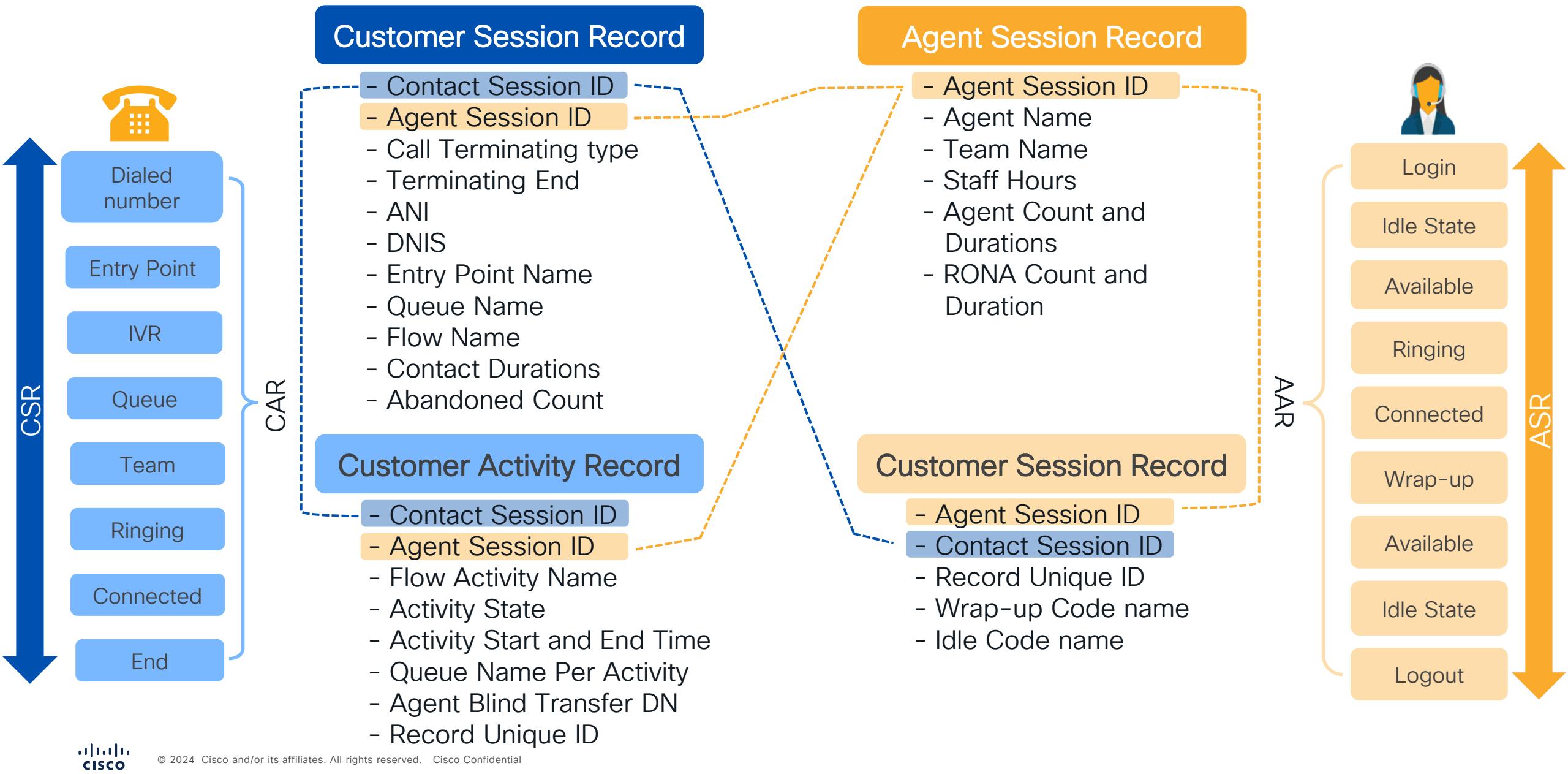
Agent Session Record

Agent Activity Record

Activity State	Contact Session ID	Activity Duration	Activity Start Timestamp	Activity End Timestamp
idle	N/A	00:00:14	03/18/2024 03:32:40 PM	03/18/2024 03:32:55 PM
available	N/A	00:00:02	03/18/2024 03:32:55 PM	03/18/2024 03:32:57 PM
ringing	6f45bd49-8334-4fb7-b1c5-7d18597b694b	00:00:07	03/18/2024 03:32:57 PM	03/18/2024 03:33:03 PM
connected	6f45bd49-8334-4fb7-b1c5-7d18597b694b	00:00:20	03/18/2024 03:33:03 PM	03/18/2024 03:33:23 PM
wrapup	6f45bd49-8334-4fb7-b1c5-7d18597b694b	00:00:05	03/18/2024 03:33:23 PM	03/18/2024 03:33:27 PM
logged-out	N/A	00:00:00	03/18/2024 03:33:27 PM	03/18/2024 03:33:32 PM

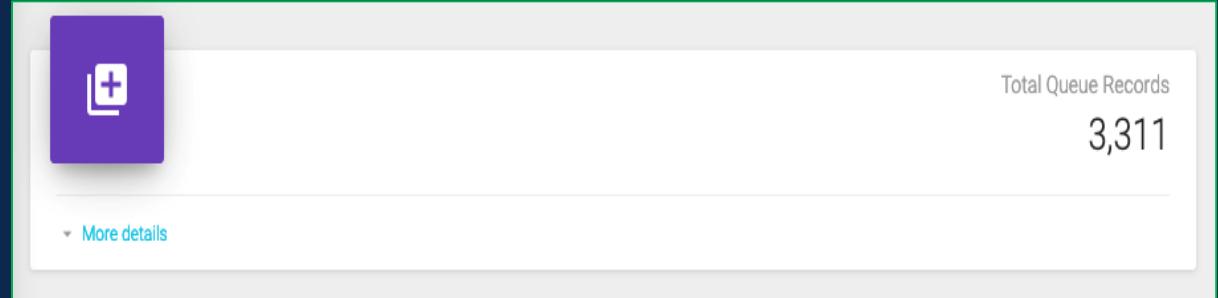


Repository Interconnection



Queue Based Reporting

Challenge: Using CSR repository, we did not have access to critical duration and field metrics with respect to each queue a contact went through, as all information was aggregated on last queue.



- With Queue-Based Reporting (QBR), we are allowing for high visibility of reporting attributes **at each single Queue level**.
- *QBR is currently in EA, going GA in the coming weeks.*
- **3 new stock reports added to familiarize yourselves with the new repository.**



The 5th Repository – Queue Record (CLR)

Customer Session Record

A CSR shows the last Queue/Team/Agent that handled the interaction

Contact Session ID	ANI	DNIS	Queue	Site	Team	Agent	Call Start Time ↑	Call End Time	Call Duration	IVR Time	Queue Time	Connected Time
ca3817cf-2b02-4d93-be06-36d46c190820	+14692553791	+15084337864	Q_Admin	WCCAnalyzerLab-Site	Team-1	John Smith	03/18/24 09:52:43	03/18/24 05:14:05	00:01:23	00:00:07	00:00:10	00:00:22

Customer Activity Record

Contact Session ID	Record Unique ID	Activity State	Entrypoint Name	Queue Name	Activity Start Timestamp	Activity End Timestamp	Activity Duration	Agent Name
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419163075-new	new	EP_WCCAnalyzerLab	N/A	03/18/2024 09:52:43 AM	03/18/2024 09:52:43 AM	00:00:00	N/A
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419163507-treatment	ivr-connected	EP_WCCAnalyzerLab	N/A	03/18/2024 09:52:43 AM	03/18/2024 09:52:50 AM	00:00:07	N/A
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419170776-connect	connect	EP_WCCAnalyzerLab	SBR_QV_Team1	03/18/2024 09:52:50 AM	03/18/2024 09:53:11 AM	00:00:20	John Smith
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419191192-con-to-agent-error	con-to-agent-error	N/A	SBR_QV_Team1	03/18/2024 09:53:11 AM	03/18/2024 09:53:11 AM	00:00:00	John Smith
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419207676-dequeued	dequeued	EP_WCCAnalyzerLab	Q_Admin	03/18/2024 09:53:27 AM	03/18/2024 09:53:27 AM	00:00:00	N/A
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-1675419217311-connect	connect	EP_WCCAnalyzerLab	Q_Admin	03/18/2024 09:53:37 AM	03/18/2024 09:53:43 AM	00:00:07	Lisa Jones

Queue Record

Value of Contact Session ID ↓	Value of CallLeg ID	Value of CallLeg Start Timestamp	Value of CallLeg End Timestamp	Value of Queue Name	Value of Agent Name	Value of Handle Type	Value of Service Level Threshold	Value of Is CallLeg Handled	Value of Is Within Service Level
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-callLeg-1675419163075	03/18/2024 09:52:43 AM	2024-03-18 09:53:27 AM	SBR_QV_Team1	John Smith	dequeued	30.0	0.0	0.0
ca3817cf-2b02-4d93-be06-36d46c190820	ca3817cf-2b02-4d93-be06-36d46c190820-callLeg-1675419207676	03/18/2024 09:53:27 AM	2024-03-18 05:14:05 AM	Q_Admin	Lisa Jones	normal	60.0	1.0	1.0

Let's zoom in a repository!

Field: Count, Value, Cardinality
Measure: Sum, Average, Min, Max, Count, Value

When creating a report, we can select our data to be either Value only or the rest of options (all but value).

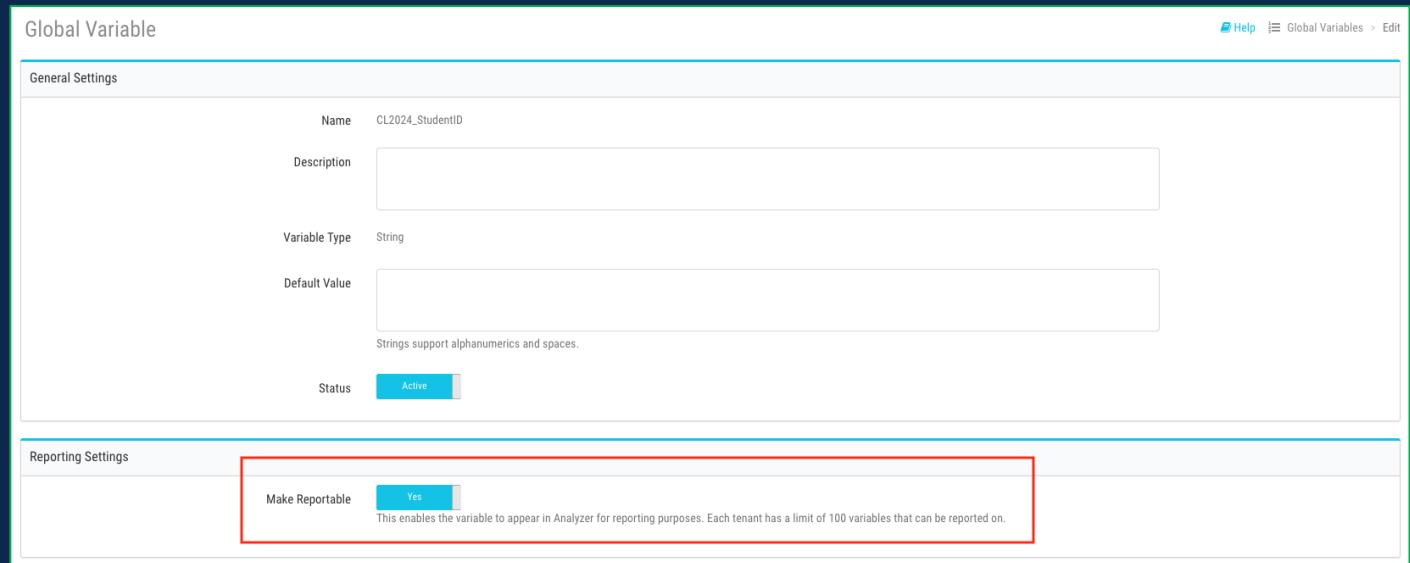
Team Name	Agent Name	Transfer Count	Queue Duration	Connected Duration
Team-1	Agent-1	0	00:07	2:37
Team-1	Agent-2	0	01:03	1:46
Team-2	Agent-1	1	00:22	3:03
Team-2	Agent-3	0	00:00	0:55

Field (Textual)

Measure (Numeric)

Global Variables in Reporting

- **Global Variables** are configured in Management Portal and can be used in the flows.
 - They can be used to store information for flow operations, to store custom information for Reporting or to provide additional context to agents.
 - To be visible in Analyzer, they need to be set as **Reportable** during configuration.
 - They can be of type **String**, **Integer**, **Date Time**, **Boolean** or **Decimal**.
 - We can have up to maximum **100 Global Variables** set as Reportable in a tenant.



There is no way to manually insert, modify or delete data in Analyzer repositories. Global Variables are the only way we can “alter” these tables besides the variables defined natively by Cisco.

Secure Global Variables in Reporting

Global Variables can now be designated as sensitive.

This action ensures these variables are not reportable, and will be encrypted during transit to various services within Webex Contact Center

This feature offers a much higher level of security for customers wanted to save PHI, PCI, and PIII data in the system which can be used to present to agents as part of Inbound or Outbound operations.

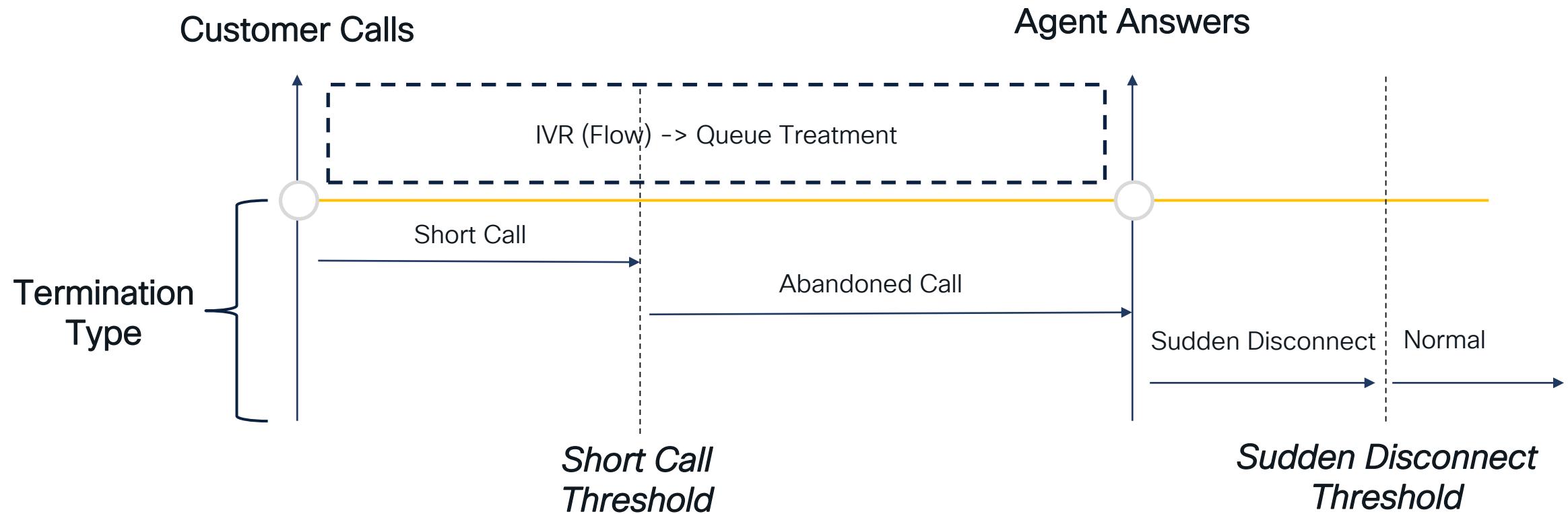
Global Variables							
+ New Global Variable							
Name	Variable Type	Reportable	Sensitive	Agent Viewable	Status		
... AccountNumber	String	No	Yes	Yes	Active		
... ani	String	No	No	Yes	Active		
... Appliances	String	Yes	No	Yes	Active		
... CampaignId	String	No	No	Yes	Active		
... campaignId	String	Yes	No	Yes	Active		
... City	String	Yes	No	Yes	Active		
... Cleaning	String	Yes	No	Yes	Active		
... creditRisk	String	Yes	No	Yes	Active		
... Customer_Number	String	Yes	No	Yes	Active		
... CustomerNumber	String	Yes	No	Yes	Active		

Understanding the Data: Grab Bag



Webex CC Handle/Termination Types

- Termination Type specifies how a call was terminated based on what point of the call journey the contact was ended as well as the threshold timers configured by the administrators. Administrators can configure three threshold timers: (1) Sudden Disconnect Threshold (2) Short Call Threshold (3) Service Level Threshold. In the diagram below, you can see what is the expected termination type based on the point the call was ended.



Service Level Calculation

- A call is considered as **Is Within Service Level** if it was handled (accepted) or abandoned before the Service Level Threshold (SLT).
- For CSR, the calculation is done based on the timestamps of the **parked -> connected/ended** events of the first queue.
- For blind/consult transfers, there is no **parked** event, so timer starts from the **transferred** event (only relevant for CLR).
- SL Calculation should be **irrespective** of the handle/termination type of the contact.

The above behaviour is controlled by a FF. If you notice differences in your tenants' behaviour and you would like to follow the above rules, please reach out to Cisco.

Agent Multiple States

- ASR or AAR reports show multiple entries for same agent

- An agent has an entry in the repository for each of their channel types:
 - If the agent has a MM profile of e.g. 1 voice, 5 chat, 5 email, 5 social, then by default they will get 16 entries for a single status change.
 - If this causes confusion, you can use filter *channel type=telephony* (for Voice only agents).

Exploring the Data



Analyzer User Interface

webex Control Hub

Contact Center Overview

Current cycle agent license usage
Billing cycle: n/a

No license data
Please contact partner for more license information.

Helpful resources

- What's new in Webex Contact Center
- Agent Desktop User Guide
- Supervisor Desktop User Guide
- Analyzer Desktop User Guide
- Flow Designer Guide
- Google CCAI Guide

Quick Links

Contact Center Suite

- Desktop
- Analyzer Analyzer
- Create new flow

- Webex Contact Center Management Portal
- Webex Connect Bot Builder

Digital Channels

- Webex Engage

<https://analyzer-v2.wxcc-us1.cisco.com/analyzer/home>

- Accessible via Control Hub, Management Portal or directly from the URL.
- Time Zone support: Browser or Tenant
- Search Folders & Visualizations: Search via Report ID
 - Name is not unique for a report (only inside the same folder)
- Hover over a report and click on the 3 dots to see all the possible actions

Analyzer User Interface

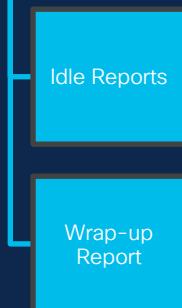
The screenshot shows two views of the Cisco Analyzer interface. The top view is the 'Home' dashboard, which includes a sidebar with 'Home', 'Visualization', 'Dashboard', and 'Variables'. It displays four cards: 'Total Agent Activity Records' (142,403), 'Total Agent Session Records' (15,598), 'Total Customer Activity Records' (380,723), and 'Total Customer Session Records' (47,083). The bottom view shows a 'Visualizations' section with a report titled 'Agent Handled' (ID 22295). A context menu is open over this report, listing actions: Run, Edit, Details, Export as Excel, Export as CSV, Export Template, Schedule job(s), and Delete.

- Accessible via Control Hub, Management Portal or directly from the URL.
- Time Zone support: Browser or Tenant
- Search Folders & Visualizations: Search via Report ID
 - Name is not unique for a report (only inside the same folder)
- Hover over a report and click on the 3 dots to see all the possible actions

Stock Reports

Stock Report

Historical



Realtime

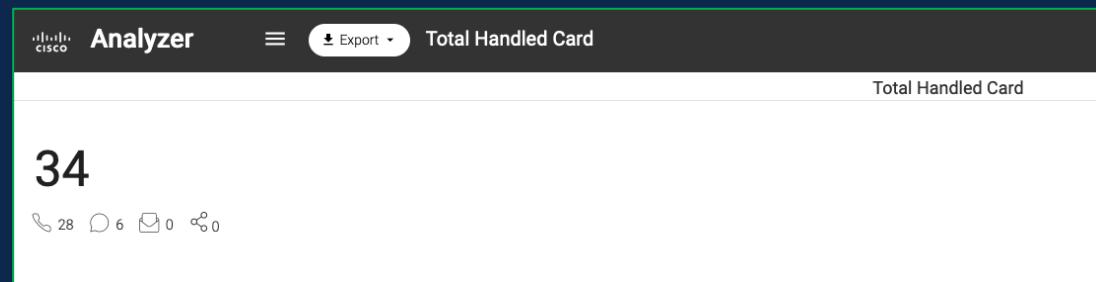
Business Metrics



100+ Stock Reports

Stock Reports (Simplified)

- Can be run directly or can be used as **building blocks** for your tailored custom visualizations.
- Use a simple **search** word (e.g. “Queue”, “abandoned”, “idle”)
- Many stock reports provide the same data with a different segmentation (e.g. “Site Idle Auxiliary”, “Team Idle Auxiliary”, “Agent Idle Auxiliary”)
- **Card** format stock reports



Stock Reports “Cheat Sheet”

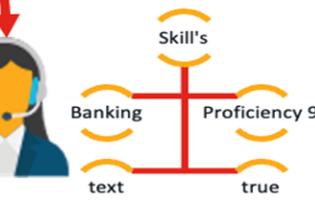
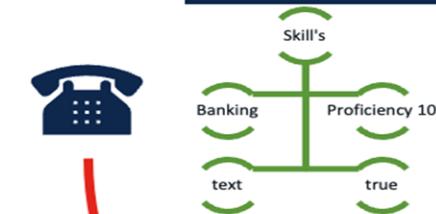
- **Service Level & Queue Statistics** → CSQ All Fields Report (-1265), Contact Details in Queue (-1209), Contact Details in Queue – Today Real-Time (-1212), Queue Service Level Realtime (-152)
- **Self Service Statistics** → IVR & CVA Dialog Flow (-1251)
- **Abandoned Statistics** → Abandoned Contact Details (-1184), Queue Abandoned (-124), Abandoned Realtime (-148), Abandoned Call Detail Activity Report (-1258)
- **Agent/Team Status Tracking & Call Handling** → Agent Details (-100), Team (-105), Agent Trace (-108), Agent Interval Realtime (-1190)
- **Agent Not Ready Statistics** → Agent Idle Auxiliary (-109)
- **Callback Statistics** → Callback Report (-1249)
- **Troubleshooting Report (Call-By-Call)** → CSR Report – Yesterday (-1189)
- **More Queue Statistics** → Queue All Fields Report (-1268), Queue Activity by Queue (-1269)

Skill-Based Reporting (SBR)

- Skill-Based Reporting provides insight on the assigned skills both for a contact as well as for an agent.
- From a call perspective, we are able to see both the skill requirements of the call and the skills of the agent that ultimately answered the call.
 - CSR / CAR / Queue Record Variables
 - Required Skills
 - Matched Skills
 - Skill Profile
- Similarly, we can see the skill profile & skills with which an agent logged in their shift:
 - ASR / AAR Variables
 - Skill Profiles
 - Skills

Required Skills	Matched Skills	Skill Profile	Call #
▼ Loans=Auto loan (1)	▼ Loans=Auto loan (1)	▼ SkillProfile-GT1 (1)	2
▼ OS-Expert=Linux (1)	▼ OS-Expert=Linux (1)	▼ SkillProfile-GT1 (1)	1

Call Skills



Agent Skills

Agent Skills	Skill Profile	Agent Name
▼ BooleanSkill-Expert-LIC Policy=True, French=8, Text=Test123 (1)	▼ GT2 (1)	▼ Agent8 Chorus (1)
▼ Chinese=7, English-GT=7, French-GT=7, Enum-GT="Loans, Sales", Loans=Auto loan, OS-Expert=Linux (1)	▼ SkillProfile-GT1 (1)	▼ chorus-org-qaus1 chorus-org-qaus1 (1)
▼ Chinese=7, English-GT=7, French-GT=7, Enum-GT="Loans, Sales", OS-Expert=Linux (1)	▼ SkillProfile-GT1 (1)	▼ chorus-org-qaus1 chorus-org-qaus1 (1)

Transition Reports

- Cisco provides a smoother transition for UCCX customers with a set of stock reports that resemble the look & feel of major UCCX reports.
- In total, **9 stock reports** are available:
 - Abandoned Call Detail Activity Report
 - Agent Call Summary Report
 - Agent Detail Report
 - Agent summary Report
 - Application Summary Report
 - CSQ Activity Report by Window Duration
 - CSQ Agent Summary Report
 - CSQ All fields Report
 - Multi Channel Agent Summary Report
- The reports are now enabled by default.



Reference

Callback Report

Queue Name	Callback Request Time	Callback Connected Time	Callback Num...	Agent Name	Team Name	Last Callback Status
chmouli-DD-Q	2021/01/20 13:29:23	2021/01/20 17:44:55	4699103588	chmouli chmouli	chmouli-team	Success
chmouli-DD-Q	2021/01/20 13:36:00	2021/01/20 17:46:30	4699103588	chmouli chmouli	chmouli-team	Success
chmouli-DD-Q	2021/01/20 13:40:36		4699103523	N/A	N/A	Not Processed
chmouli-DD-Q	2021/01/20 13:46:12	2021/01/20 17:47:16	4699103588	chmouli chmouli	chmouli-team	Success
chmouli-DD-Q	2021/01/20 13:48:53		469901254	N/A	N/A	Not Processed
chmouli-DD-Q	2021/01/20 13:50:50	2021/01/20 17:47:42	4699103588	chmouli chmouli	chmouli-team	Success
chmouli-DD-Q	2021/01/22 19:54:54	2021/01/22 19:55:22	4699103589	rakrish2 rakrish2	chmouli-team	Success
rkprabhu_q_voice	2021/01/23 21:21:45	2021/01/23 21:22:17	+14083214502	rkprabhu rkprabhu	rkprabhu_T1	Success

This report provides below details for last 7 day interval (CSR Value report)

- Queue Name
- Callback Request Time
- Callback Connected Time
- Agent Name
- Callback Number
- Last Callback Status



Drill-Down

- Allows expanding a specific value in the table to see all the records involved in the computation.
- Drilldown-ception is possible (drill-down inside a drill-down)
- After drill down, user can add additional columns for more insight by clicking the variables on the left.
- Great troubleshooting tool, two usual cases:
 - Drill-Down a count of contacts to the contacts that comprise it
 - Drill-Down a contact Session ID to see a call's full path

The image displays three screenshots of a contact management application interface, showing the drill-down process across three tables:

- Contact Details in Queue:** Shows a summary table with columns: Interval, Channel Type, Queue Name, # Contacts, Avg Queue Wait Time, Longest Contact in Queue, and # Abandoned Contacts. A blue arrow points from the "Queue Name" column of the first row to the "Fields" dropdown menu of the middle screenshot.
- Drill Down (Middle):** A modal window titled "Drill Down" with a "Search" bar and a "Fields" dropdown menu. The "Fields" menu lists various contact-related variables like Abandoned Type, Abandonment Reason, Agent Endpoint (DN), Agent ID, etc. A blue arrow points from the "Contact Session ID" column of the top table to this menu.
- Drill Down (Bottom):** Another modal window titled "Drill Down" with a "Search" bar and a "Fields" dropdown menu. This menu includes Activity Name, Activity State, Activity Type, Agent Endpoint (DN), Agent ID, Agent Login, Agent Name, Agent Session ID, Agent System ID, ANI, Channel ID, and Channel Type. A blue arrow points from the "Contact Session ID" column of the middle table to this menu.
- Data Tables:** Three main data tables are shown below the drill-down modals:
 - Top Table:** "Contact Details in Queue" with data rows corresponding to the expanded queue names in the first screenshot.
 - Middle Table:** "Drill Down" table showing contact session details for the selected queue. It has columns: ID, Channel Type, Final Queue Name, and Contact Session ID. A blue arrow points from the "Contact Session ID" column of this table to the "Fields" menu of the middle drill-down modal.
 - Bottom Table:** "Drill Down" table showing activity states for the selected contact session. It has columns: ID, Contact Session ID, Queue ID, Activity State, Next State, and Entrypoint N. A blue arrow points from the "Activity State" column of this table to the "Fields" menu of the bottom drill-down modal.

Run-Mode Filtering

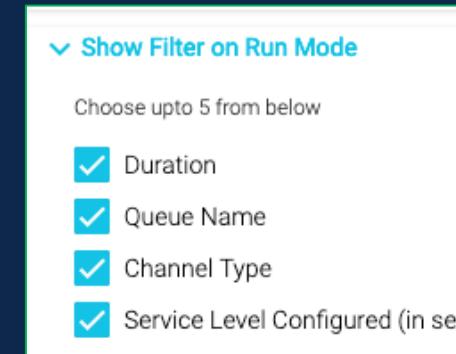
Allows user to filter and visualize the data without editing the report, dynamically updating the report results upon selection.

You can only select the following as run-mode filters:

- **Duration** (available by default for all reports)
- All the variables added as **Row Segment** in that report.

Maximum of [5 filters](#) can be applied.

Queue Name	Channel Type	Service Level Configur...	Duration
All	All	All	Last 7 days



Access Controls

Reference

Complete Information on permissions and access controls can be found in the [Analyzer User guide](#), under Introduction > Access Controls.

Resources	Roles	Restrictions
<ul style="list-style-type: none">• APS Reports on the Agent Desktop• Management Portal Dashboard• Browser Links	Administrators and supervisors with Cisco Contact Center disabled or with no associated Agent Profiles	Restrictions applied are based on the User Profiles
<ul style="list-style-type: none">• APS Reports on the Agent Desktop• Management Portal Dashboard• Browser Links	Administrators, supervisors with associated Agent Profiles and all agents	Restrictions applied for: <ul style="list-style-type: none">• Entry Points are based on the User Profiles• Queues are based on the Agent Profiles• Sites are based on the Agent Settings• Teams are based on the Agent Profiles
<ul style="list-style-type: none">• Analyzer Reports• Filters inside the Visualization create or edit page	All administrators and supervisors	Restrictions applied are based on the User Profiles

Dashboards

- Allows to add multiple visualizations under the same view.
- Users can combine reports of different type (historical/realtime, count/value based, different repositories).
- **Run-mode filtering** is possible and will be applied to all visualizations at the same time.

The screenshot shows a dashboard interface with the following components:

- Left Sidebar (Modules):** A list of available reports and dashboards:
 - DataLab Admin Only
 - Stock Reports
 - Queue Activity by Queue
 - Queue All Fields Report
 - Queue Call Distribution Sum...
 - Abandoned Call Detail Activit...
 - Agent Call Summary Report
 - Agent Detail Report
 - Agent Summary Report
- Top Bar:** Modules, Formatting, Save, Preview, Delete, Click to add title.
- Central Area:** A modal window titled "Agent Summary Report" displays a table of agent call statistics.

Agent Name	Calls
Agent Name 1 (1)	9609
Agent Name 2 (1)	7179
Summary	7126
- Bottom Area:** A chart titled "Agent - Chart" showing "Contacts Handled" over time, and a table titled "Agent" providing detailed contact handling statistics.
- Annotations:** A green arrow points from the sidebar to the modal window with the text "Drag & Drop". Another green arrow points from the bottom table to the modal window with the text "Move & Resize".

Analyzer Beta

- The future of Analyzer: A new look with enhanced capabilities and a more powerful backend architecture.
- New concepts are introduced:
 - All reports are treated as **widgets**
 - **Label** structure instead of folders
- Today, only stock Historical reports are available in Analyzer Beta, with more options coming soon.

The screenshot shows the Cisco Webex Analyzer Beta interface. At the top, there is a green banner with a megaphone icon and the text "Experience the Analyzer Beta" followed by a "Try Now" button. Below this, a modal window titled "Experience the Analyzer Beta" features a cartoon character of a person with a speech bubble, the text "Explore the all new Analyzer Beta with new features and enhanced user-interfaces. Any edits or changes made in the Analyzer Beta will not affect the existing version.", and two buttons: "Cancel" and "Launch". A large green arrow points from the "Launch" button to the main report table below. The main table has columns for Name, Labels, Last Edited By, Last Edited, Created By, and Actions. It lists various historical reports such as "Abandoned Call Detail Activ...", "Agent Call Summary Report", "Agent Detail Report", etc., each with a unique set of labels like "Stock", "Transition", "Historical", "Multimedia", etc.

Name	Labels	Last Edited By	Last Edited	Created By	Actions
Abandoned Call Detail Activ...	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Agent Call Summary Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Agent Detail Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Agent Summary Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Application Summary Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
CSQ Activity Report by Win...	Stock Transition	Cisco	09 May 2023	Cisco	⋮
CSQ Agent Summary Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
CSQ All Fields Report	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Multichannel Agent Summary	Stock Transition	Cisco	09 May 2023	Cisco	⋮
Queue Abandoned Historica...	Historical Multimedia Stock	Cisco	09 May 2023	Cisco	⋮

Analyzer Beta – What's Next?

- Realtime Stock & Custom Dashboard Creation
- Quick & Easy Permissions assignment per dashboard
- Multi-Level Formulas
- Custom Card format Dashboard creation
- Colour Coding Thresholds

Processing the Data



Types of Reports

Historical / Realtime

- Historical reports retrieve the data for a lengthy time range up to 12 months, within Last 13 months. e.g. **last 7 days**.
- Realtime reports provide a snapshot of the current status of the tenant looking back from a few minutes up to the start of the day. Realtime reports provide the option to refresh automatically every few seconds (min 5 seconds).

Count / Value Based

- Count Based reports provide aggregated data (e.g. count, sum, avg) of the requested events in the report (*e.g. # of Agents in available state*)
- Value Based reports provide raw data for each unique activity in the report (*e.g. Name of each agent in available state*)

Note: Both the time period and the type of data in a report are defined at the start of its creation and cannot be changed afterwards.



Anatomy of a Visualization

The screenshot shows a visualization configuration interface with the following elements:

- Top Bar:** Type Agent Session Record, Visualization - 01/31/2024 21:01:00, Save button.
- Left Sidebar (Module):** Modules (selected), Formatting, Module: Module1, +, Start Time (Last 7 days, If run today), Start Date: 2024-01-24, End Date: 2024-01-30, Including: All Days, Compute (highlighted with a green circle containing '3'), Show Filter on Run Mode, Add Filter button.
- Middle Section:** Row Segments (Team Name, Agent Name), Profile Variables (Average of Co..., Average of To...), Column Segments (Profile Variables), Click to add title, Output Type Table, Show summary, Table level, Customize.
- Data Table:**

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Anatomy of a Visualization

The screenshot shows a visualization configuration interface with the following elements:

- Top Bar:** Type Agent Session Record, Visualization - 01/31/2024 21:01:00, Save button.
- Left Sidebar (Module):** Modules (selected), Formatting, Module: Module1, +, Start Time: Last 7 days (highlighted with a green circle labeled 2), If run today, Start Date: 2024-01-24, End Date: 2024-01-30, Including: All Days, Compute (highlighted with a green circle labeled 3), Show Filter on Run Mode, Add Filter button.
- Central Area:** Click to add title, Row Segments, Profile Variables (highlighted with a green circle labeled 4), Column Segments, Profile Variables, Output Type Table, Show summary, Table level, Customize, and a data table.
- Data Table:**

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Define the Data Set

4. Choose the Profile Variables

Profile Variables: Visualization Building Blocks

Field

- Textual value of a variable, e.g. Agent Name, Contact Session ID, Queue Name
- It can be:
 - Count: # of times the variable appears
 - Value: the actual value of the variable
 - Cardinality: Total Number of unique records of the variable

		Value of Agent Name	Count of Agent Name
Team Name	Agent Name	Cardinality Agent Name	Count Agent Name
akgosain_team (2)	akgosain agent1 (1)	1.0	2
	akgosain sa_admin (1)	1.0	4
Summary		2	6

Cardinality of Agent Name

Measure

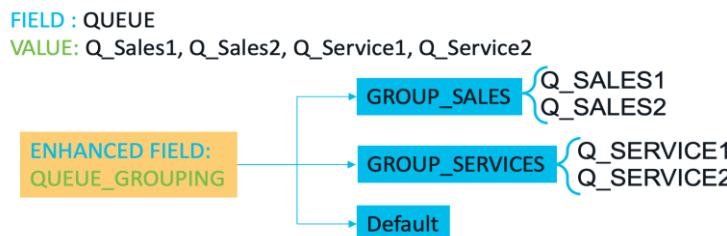
- Measures are computed values/aggregations (integer or decimal), e.g. Connected Duration, Hold Count
- It can be either the value or an arithmetic operation:
 - Sum
 - Average
 - Count
 - Value
 - Minimum
 - Maximum

Sum of Total Connected Duration
Average of Total Connected Duration
Count of Total Connected Duration
Minimum Total Connected Duration
Maximum Total Connected Duration

Profile Variables: Visualization Building Blocks

Enhanced Field

- Combine multiple values of a field in one or more groups.
- Enhanced Fields created in one report can be saved and re-used in other visualizations.



Formula

- Formulas can be created either from Fields or Measures.
- Arithmetic operations supported are +, -, × or ÷.
- Example: Average Speed of Answer = Average of Queue Duration + Average of Ringing Duration

*Name
Average Speed of Answer

Formula Arithmetic Expression

Average of Total Ringing Duration + Average of Queue Duration

*Type a numeric value or select a column

Average of Queue Duration

* Multi-variable formulas need to be created step-by-step,
e.g. $x=a+b+c$, first we make $x_1=a+b$ and then $x = x_1 + c$ *

Anatomy of a Visualization

The screenshot shows the 'Type Agent Session Record' visualization configuration screen. The interface is divided into several sections:

- Top Bar:** Shows the title "Type Agent Session Record" and the date/time "Visualization - 01/31/2024 21:01:00".
- Left Sidebar (Modules):** Includes sections for "Module" (set to "Module1"), "Start Time" (set to "Last 7 days"), "Including" (set to "All Days"), "Compute" (button 3), and "Show Filter on Run Mode".
- Central Configuration Area:** Features a "Save" button and a "Click to add title" placeholder. It includes sections for "Row Segments" (with "Team Name" and "Agent Name" options), "Profile Variables" (with "Average of Co..." and "Average of To..."), "Column Segments" (with "Profile Variables" selected, indicated by a green circle with number 5), and "Output Type Table" (selected, indicated by a green circle with number 4).

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00
- Bottom Bar:** Contains a "Add Filter" button.

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Define the Data Set

4. Choose the Profile Variables
5. Optionally, add segmentation

Row / Column Segments

- Segments allow to logically group the data under specific **Field only** variables.
 - Order of segments during edit mode is important.
 - Row Segments** are used more commonly compared to Column Segments.
- If we add an Interval to our visualization, this by default also becomes a row or column segment.

The diagram illustrates the relationship between the Row Segment configuration in the visualization editor and the resulting data structure in the table.

Row Segment Fields:

- Agent Name
- Interval (highlighted in orange)
- Site Name
- Team Name
- Agent Endpoint
- Channel Type

A green arrow points from the "Interval" field in the Row Segment list to the "Interval" column in the data table, indicating that the "Interval" segment is mapped to the "Interval" column.

Data Table Structure:

Agent Name	Interval	Site Name	Team Name	Agent Endpoint (DN)	Channel Type	Login Time	Sign Out Time	Sign Out
Agent1 Lab (16)	01/05/2024 (4)	001_Site (4)	001_TeamA (4)	1000 (4)	chat (1)	01/05/2024 9:39:31 AM	01/05/2024 10:15:53 AM	3
	01/08/2024 (4)				email (1)	01/05/2024 9:39:31 AM	01/05/2024 10:15:53 AM	3
	01/09/2024 (4)				social (1)	01/05/2024 9:39:31 AM	01/05/2024 10:15:53 AM	3
	01/10/2024 (4)				telephony (1)	01/05/2024 9:39:31 AM	01/05/2024 10:15:53 AM	1
Agent100 Lab (40)	01/10/2024 (8)	CL2024_Site (8)	CL2024_CCAI_Team (4)	webrtc-605bf588-87ec-4c6b-98f9-58156...	chat (1)	01/08/2024 4:52:43 AM	01/08/2024 10:04:42 AM	18
	01/09/2024 (4)				email (1)	01/08/2024 4:52:43 AM	01/08/2024 10:04:42 AM	18
	01/10/2024 (4)				social (1)	01/08/2024 4:52:43 AM	01/08/2024 10:04:42 AM	18
	01/11/2024 (4)				telephony (1)	01/08/2024 4:52:43 AM	01/08/2024 10:04:42 AM	6
	01/12/2024 (4)				chat (1)	01/09/2024 9:16:44 AM	01/09/2024 10:32:51 AM	3
	01/13/2024 (4)				email (1)	01/09/2024 9:16:44 AM	01/09/2024 10:32:51 AM	3
	01/14/2024 (4)				social (1)	01/09/2024 9:16:44 AM	01/09/2024 10:32:51 AM	3
	01/15/2024 (4)				telephony (1)	01/09/2024 9:16:44 AM	01/09/2024 10:32:51 AM	1

Count or Value?

- The most common source of confusion for report users -> "Do I use a Count or Value based variable?"
 - By Count, we mean either Count or Cardinality for **Field** variables or the arithmetic operations (Count, Sum, Avg, Min, Max) for **Measure** variables.

Count of Contact Session ID
Value of Contact Session ID
Cardinality of Contact Session ID

Sum of Connected Duration
Average of Connected Duration
Count of Connected Duration
Minimum Connected Duration
Maximum Connected Duration
Value of Connected Duration

Ask Yourself:

- Do I want to see aggregations of multiple entities -> **Count based** (e.g. # of Calls handled by a team, # of different Agents that handled a call for a specific Queue)
- Do I want to see the raw data (each in a separate row) for each unique call or agent separately -> **Value based** (e.g. all session IDs of the calls handled, the name of each agent that handled a call for a specific queue)

Count or Value?

Count of Final Queue Name	Count of Contact Session ID
26	62
CL2024_CCAI_Queue	5
CL2024_ChatQ	3
CL2024_Data_ChatQueue	1
CL2024_SBR_QV_Team51	13
CL_DEMO	4
N/A	36

Value of Queue Name	Value of Contact Session ID
CL2024_Queue1	29eb9d9f-04d0-42b0-8462-edb62ee22dc2
CL2024_SBR_QV_Team51	8fc21eab-2d61-49c7-b251-0502547e5dc2
CL2024_SBR_QV_Team51	53af22b6-a6b6-431a-bda7-bd5d50ec9f0a
CL2024_SBR_QV_Team51	79ea065d-e412-4908-b106-e585c0a46b36
CL2024_SBR_QV_Team51	947cc7b3-06ba-484a-8fc2-08c489324fd6
CL2024_SBR_QV_Team51	b3b89fc1-4ac9-461e-9230-7edfb804d366
CL2024_SBR_QV_Team51	d8f6ec43-8768-4936-8554-1c79971a8603
CL2024_SBR_QV_Team51	d3614edf-4d3a-4ede-a8af-722521e25774
CL2024_SBR_QV_Team51	b0db5b47-eacf-444d-aa7f-b25afb45baae
CL2024_Data_ChatQueue	c2cbc415-1227-4265-9c90-815b8e98bf16
CL2024_SBR_QV_Team52	fafac343-ed0b-4c82-aa94-186f03399999

- Count based reports will provide the total tenant's values unless segmented.
 - Segments allow us to combine value fields (e.g. Queue Name) with aggregation statistics.
 - We cannot use Segments in value-based reports.

Note: A report is considered count or value based on what we selected on the 1st profile variable we added. After that, all profile variables we try to add will only show Count or Value options respectively.

Final Queue Name	Count of Contact Session ID
CL2024_CCAI_Queue (1)	5
CL2024_ChatQ (1)	3
CL2024_Data_ChatQueue (1)	1
CL2024_SBR_QV_Team51 (1)	13
CL_DEMO (1)	4
N/A (1)	36

Anatomy of a Visualization

The screenshot shows a visualization configuration interface with the following components and numbered callouts:

- 1**: Type Agent Session Record
- 2**: Start Time (Last 7 days)
- 3**: Compute
- 4**: Profile Variables (Average of Connected Count)
- 5**: Column Segments (Profile Variables)
- 6**: Row Segments (Team Name, Agent Name)
- 6**: Add Filter

The visualization output is a Table level summary:

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Define the Data Set

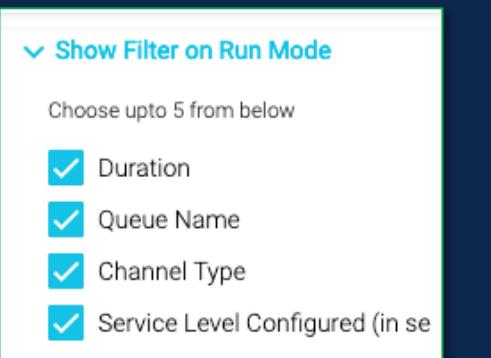
4. Choose the Profile Variables
5. Optionally, add segmentation
6. Optionally, create filters

Filters

- There are 3 different places we can setup a filter inside a visualization.

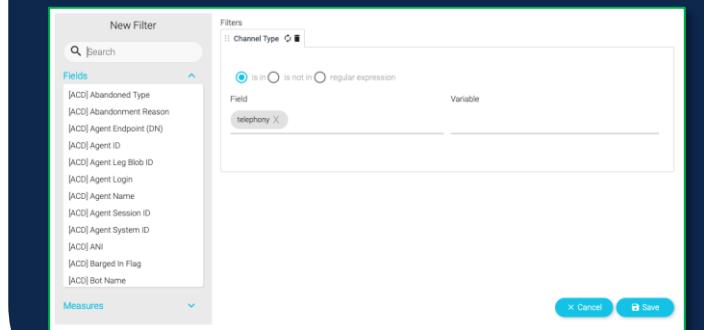
Run-Mode Filtering

- ❖ Set in “Edit Mode”, can be Duration or any Row Segment (up to 5).
- ❖ It can be updated dynamically during report execution.



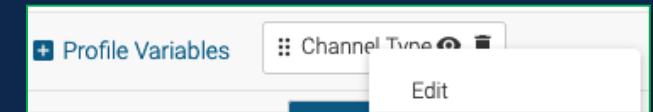
Report Filter

- ❖ When set, it applies for the whole report.
- ❖ It can be inclusive (**is in**), exclusive (**is not in**), an operation (**>**, **=**, **!=**, **between**) or a RegEx.



Column Filter

- ❖ It is configured the same way as a Report Filter, but it only applies to a specific column.
- ❖ It is configured by right-clicking on a variable and selecting “Edit”.



The Power of RegEx

- Regular Expression (RegEx) is a sequence of characters that specifies a match pattern in text.
 - For example, asterisk “.” is used to match all possible characters.
 - Thus, if I used RegEx string *StudentID..* to match a text, I would match all strings like **StudentID51**, **StudentID52**, **StudentID53** etc (but not **StudentID100** for example, as it has more than 2 characters).
- As filters in Webex CC Analyzer allow to use RegEx, we can create powerful generic filters. Some common use cases include:
 1. **.*** -> This filter specifies that I want to match any character (“.”) infinite times (“*”). Basically, as this filter matches all strings, it is a great way to filter out N/A (empty) results in a report.
 - For example, if we use “.*” as filter in **Queue Name** variable, it will return all contacts that had a queue assigned (so not the calls that ended before reaching queue).
 2. **((31)|(32)).*** -> This filter specifies that I want to match any string which starts with 31 or (“|”) 32 and then can have an infinite number of characters. RegEx allows us to use this OR operator to match multiple scenarios in a single pattern.
 - With this example, we can filter out all ANIs that come from the Netherlands (+31 Country Code) or Belgium (+32 Country Code).
 3. **.*Sales.*** -> Similarly with example 2, we can also use any string between .* to find all the values that include the word “Sales” in them, for example if we want to fetch all the Sales teams.

Anatomy of a Visualization

The screenshot shows a visualization configuration interface with the following numbered elements:

- 1 Type Agent Session Record
- 2 Start Time: Last 7 days
- 3 Compute
- 4 Profile Variables: Average of Connected Count
- 5 Column Segments: Team Name, Agent Name
- 6 Row Segments: Team Name, Agent Name
- 7 Output Type: Table

The interface includes a sidebar for Modules, a save button, and a summary table:

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

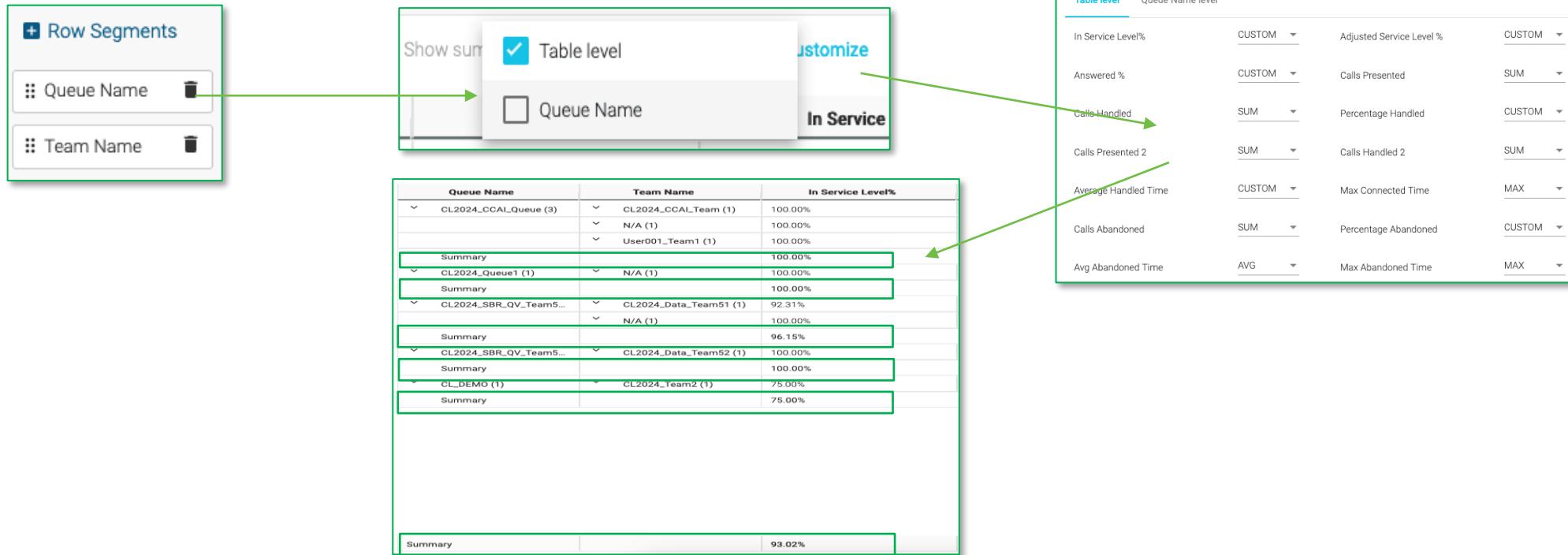
1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Define the Data Set

4. Choose the Profile Variables
5. Optionally, add segmentation
6. Optionally, create filters
7. Optionally, customize report summary

Customize Report Summary

- Report Summary allows us to define the formula used to summarize the results of a specific column in a report. Report Summary is available on:
 - Table Level (for all Reports)
 - Top-Level Row Segment (for reports with at least 2 Row Segments)



Anatomy of a Visualization

The screenshot shows a visualization builder interface with the following numbered components:

1. Type Agent Session Record
2. Start Time: Last 7 days
3. Compute
4. Profile Variables: Average of Connected Count
5. Column Segments: Team Name
6. Row Segments: Agent Name
7. Output Type: Table
8. Modules: Module 1

The visualization is titled "Visualization - 01/31/2024 21:01:00". The table output shows the following data:

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical) or Duration & Refresh (Realtime)

Define the Data Set

4. Choose the Profile Variables
5. Optionally, add segmentation
6. Optionally, create filters
7. Optionally, customize report summary
8. Optionally, you can create multiple modules

Compound Visualizations (Modules)

- A compound visualization (Module) allows users to have different views for the same visualization.
- Each module can have differing date ranges, intervals, and filters.
- Compound visualizations cannot be scheduled or exported.

CSQ All Fields									
Queue Name	Last Week				Last Month				
	In Service Level%	Calls Presented	Calls Handled	Percentage Handled	In Service Level%	Calls Presented	Calls Handled	Percentage H%	
CL2024_CCAI_Queue (1)	100.00%	9	4	44.44%	100.00%	23	11	47.83%	
CL2024_Queue1 (1)	100.00%	1	0	0.00%	100.00%	5	0	0.00%	
CL2024_SBR_QV_Team5...	92.86%	28	6	21.43%	92.86%	28	6	21.43%	
CL2024_SBR_QV_Team5...	100.00%	1	0	0.00%	100.00%	1	0	0.00%	
CL_DEMO (1)	75.00%	4	1	25.00%	94.44%	36	8	22.22%	
CL_Outdial_Queue (1)					50.00%	2	0	0.00%	
User33_VoiceQueue (1)					80.00%	10	0	0.00%	

Module 1 Module 2

Analyzer Variables Tab

- Not the variables we have talked about so far!
- Variables tab allows to group & create a predefined set of values, that can then be used in report filters.
- We can define the scope of these variables:
 - USER:** Only to be used by the creator
 - GLOBAL:** Available across the organization



New Variable

*Name: CL2024_Variable_Teams *Associated Column: INTERACTION-Team Name

Values: CL2024_Data_Team51 X, CL2024_Data_Team52 X, CL2024_Data_Team53 X

Description:

Scope: User Global

Cancel Save

This screenshot shows the 'New Variable' dialog box. It includes fields for the variable name ('CL2024_Variable_Teams') and associated column ('INTERACTION-Team Name'). A 'Values' section lists three items: 'CL2024_Data_Team51', 'CL2024_Data_Team52', and 'CL2024_Data_Team53'. There is a 'Description' field which is currently empty. The 'Scope' section contains two radio buttons: 'User' (which is selected) and 'Global'. At the bottom right are 'Cancel' and 'Save' buttons.

New Filter

team

Fields: [ACD] Callback Team Name, [ACD] Team ID, [ACD] Team System ID

Measures:

Filters: Team Name

Is in (radio button selected) Is not in Regular expression

Field: Variable

Please select/enter a value

Variable: \${CL2024_Variable_Teams}

Value: \${ME}

This screenshot shows the 'New Filter' dialog box. It has a search bar with the text 'team'. Below it is a 'Fields' section with three listed: '[ACD] Callback Team Name', '[ACD] Team ID', and '[ACD] Team System ID'. There is also a 'Measures' section which is currently empty. In the 'Filters' section, there is a single entry 'Team Name' with a delete icon. Below the filters, there are three radio buttons: 'Is in' (which is selected), 'Is not in', and 'Regular expression'. In the 'Field' section, there is a 'Variable' dropdown menu with the value '\${CL2024_Variable_Teams}' selected. At the bottom, there is a note 'Please select/enter a value' and another dropdown labeled 'Value' with the value '\${ME}'.

Anatomy of a Visualization

The screenshot shows a visualization builder interface with various configuration options and a preview area.

- Top Bar:** Type Agent Session Record, Visualization - 01/31/2024 21:01:00, Save button.
- Left Sidebar (Modules):** Modules (selected), Formatting, Module dropdown (Module1), Add (+) button, Edit (pencil) button (8).
- Left Sidebar (Time Period):** Start Time dropdown (Last 7 days) (2), If run today, Start Date: 2024-01-24, End Date: 2024-01-30.
- Left Sidebar (Compute):** Compute button (3), Show Filter on Run Mode button (6), Add Filter button (6).
- Middle Area:** Row Segments (6), Profile Variables (4) (Average of Co..., Average of To...), Column Segments (5) (Profile Variables), Click to add title.
- Output Type:** Table (9), Show summary, Table level (7), Customize.
- Table Preview:** Team Name, Agent Name, Average of Connected Count.

Team Name	Agent Name	Average of Connected Count
Team Name 1 (2)	Agent Name 1 (1)	1038.00
	Agent Name 2 (1)	7669.00
Team Name 2 (2)	Agent Name 1 (1)	9777.00
	Agent Name 2 (1)	2728.00

Visualization Scope & View

1. Select the repository
2. Select time period (Realtime/Historical)
3. Select Interval (Historical)
or
Duration & Refresh (Realtime)

Define the Data Set

4. Choose the Profile Variables
5. Optionally, add segmentation
6. Optionally, create filters
7. Optionally, customize report summary
8. Optionally, you can create multiple modules

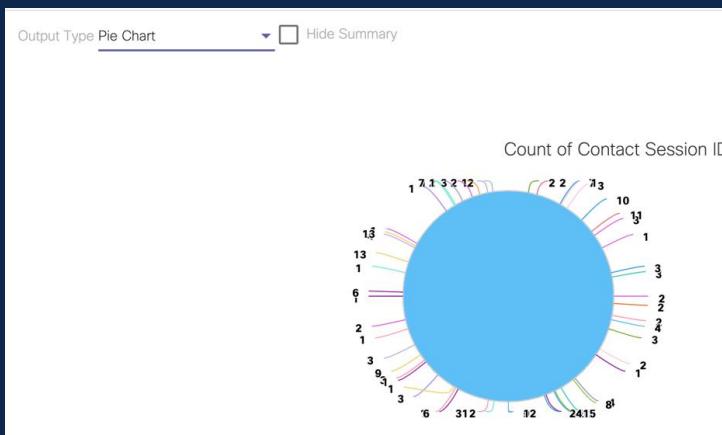
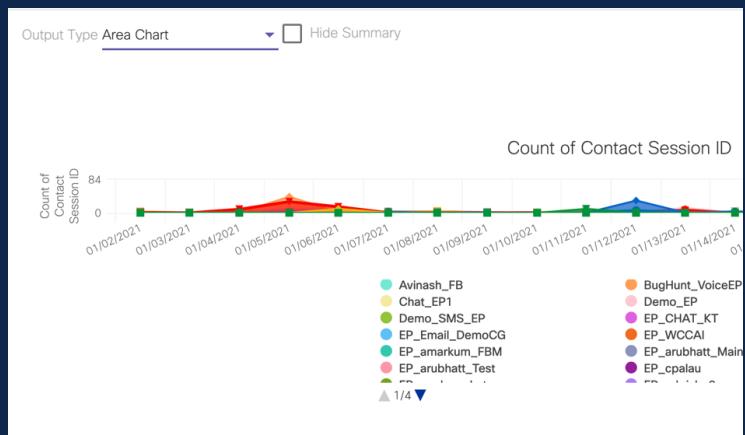
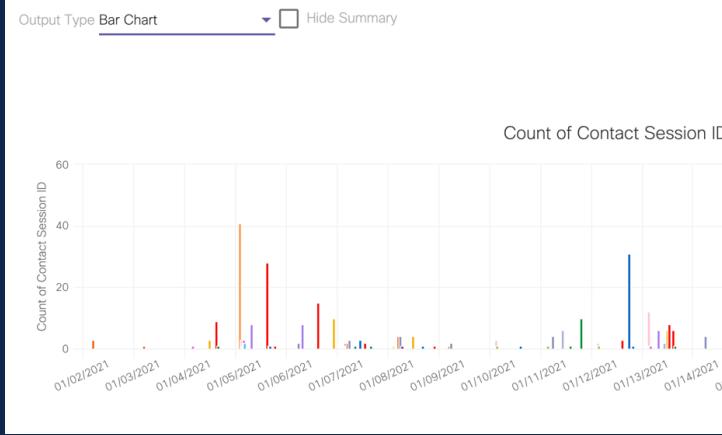
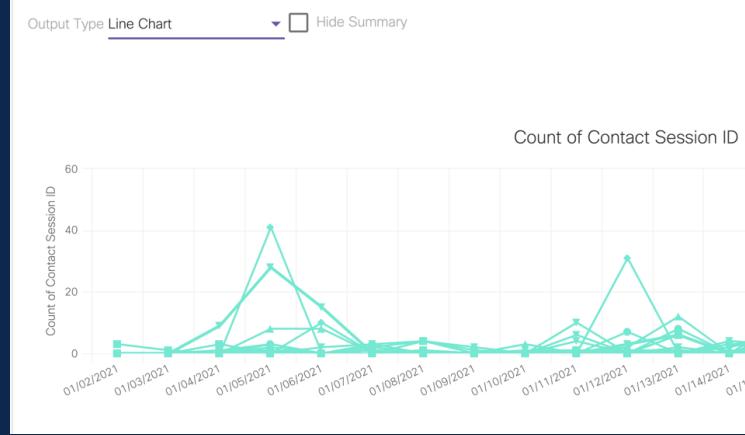
Define the Data Output

9. Select the Data Output format

Visualizing the Data



Custom Visualization Output Types



Supported Data Output Types*:

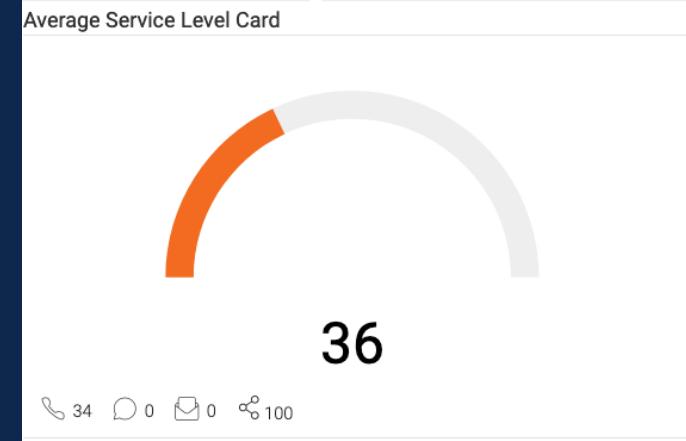
1. Table (Default View)
 2. Heat Map
 3. Row Heat Map
 4. Column Heat Map
 5. Line Chart
 6. Bar Chart
 7. Area Chart
 8. Pie Chart
 9. Sparkline Chart

- * Not all reports are -by default- eligible for all output types (e.g. may require row/column segments).

Stock Visualization Output Types

Table/Grid view is the primary output type for the majority of stock reports. However, there are some output types that are only available in stock reports today.

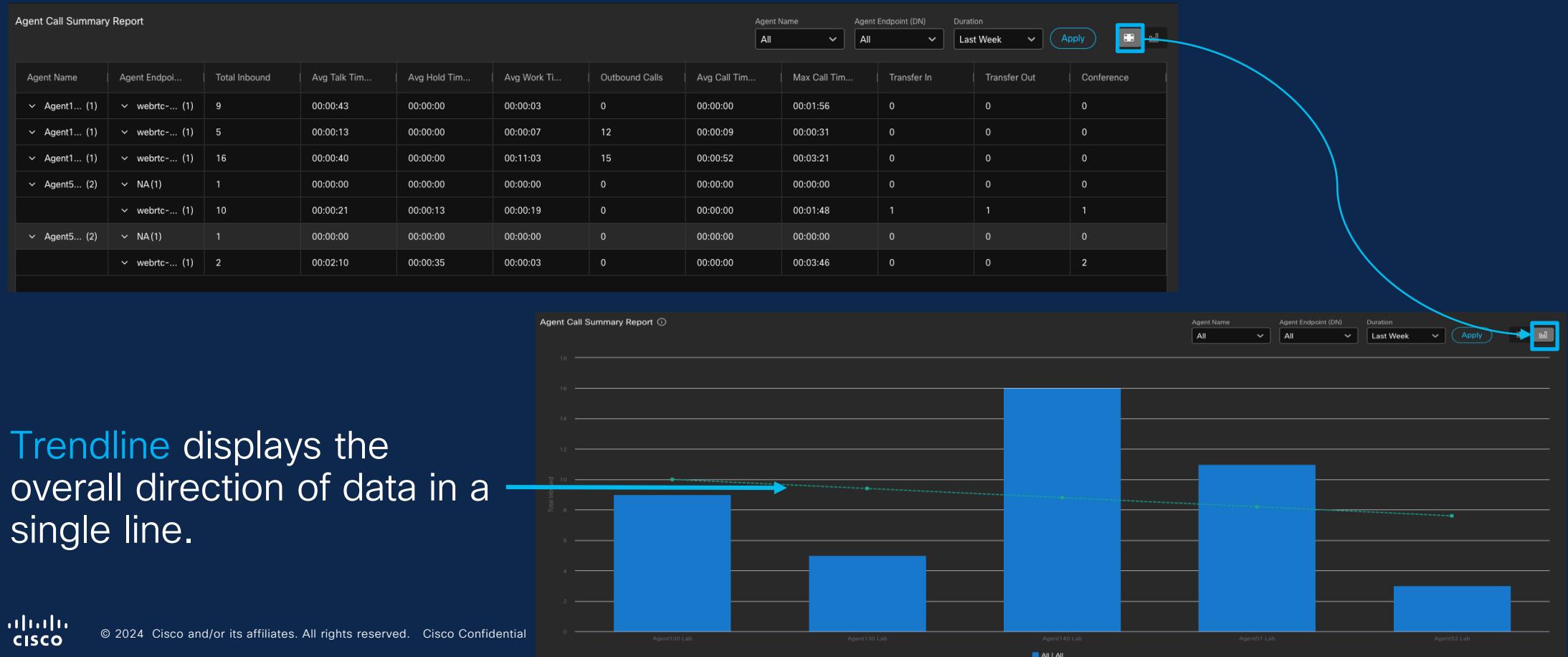
1. **Cards** are the second most common type of stock reports. Custom cards are not an option today but they are a future enhancement coming in Analyzer Beta.
2. There are some report output types that are **hardcoded** in Analyzer and are available in customization (e.g. Customer Journey, Usage Report)



Customer Journey Sankey Chart

Analyzer Beta Output Types

For the majority of its reports, Analyzer Beta allows for a quick switch options between the usual **Table** view and a **Chart** View.



The screenshot shows two views of the same report: a table view at the top and a chart view at the bottom. Both views have identical filters at the top: 'Agent Name' set to 'All', 'Agent Endpoint (DN)' set to 'All', 'Duration' set to 'Last Week', and an 'Apply' button. The table view displays a grid of data for multiple agents, including their names, endpoint details, and various call metrics like total inbound calls, average talk time, and conference counts. The chart view shows a bar chart of 'Total Inbound' calls for five specific agents: Agent100 Lab, Agent130 Lab, Agent140 Lab, Agent51 Lab, and Agent52 Lab. Each bar has a value of 10. A dashed trendline is overlaid on the chart, starting at approximately 10.5 for Agent100 Lab and ending at approximately 8.5 for Agent52 Lab. A blue arrow points from the table view to the chart view, indicating the transition between the two output types.

Agent Name	Agent Endpoi...	Total Inbound	Avg Talk Tim...	Avg Hold Tim...	Avg Work Ti...	Outbound Calls	Avg Call Tim...	Max Call Tim...	Transfer In	Transfer Out	Conference
Agent1... (1)	webrtc-... (1)	9	00:00:43	00:00:00	00:00:03	0	00:00:00	00:01:56	0	0	0
Agent1... (1)	webrtc-... (1)	5	00:00:13	00:00:00	00:00:07	12	00:00:09	00:00:31	0	0	0
Agent1... (1)	webrtc-... (1)	16	00:00:40	00:00:00	00:11:03	15	00:00:52	00:03:21	0	0	0
Agent5... (2)	NA(1)	1	00:00:00	00:00:00	00:00:00	0	00:00:00	00:00:00	0	0	0
	webrtc-... (1)	10	00:00:21	00:00:13	00:00:19	0	00:00:00	00:01:48	1	1	1
Agent5... (2)	NA(1)	1	00:00:00	00:00:00	00:00:00	0	00:00:00	00:00:00	0	0	0
	webrtc-... (1)	2	00:02:10	00:00:35	00:00:03	0	00:00:00	00:03:46	0	0	2

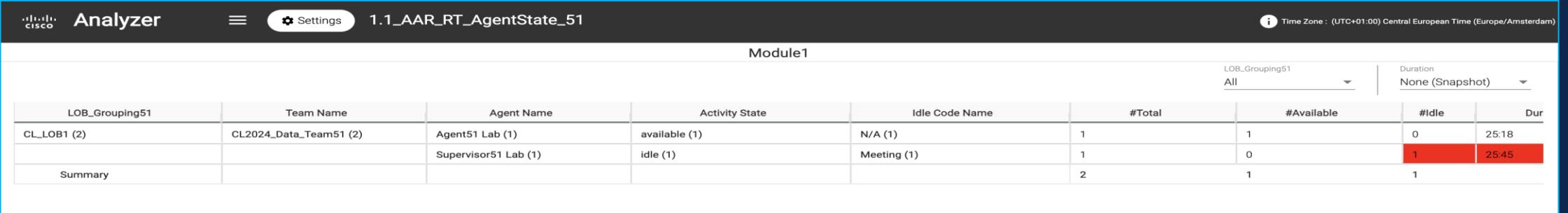
Trendline displays the overall direction of data in a single line.

Colour Coding Reports

Reference

Today, Analyzer does not provide the option to create colour-coded thresholds in the reports in order to change the colour of specific cells if certain threshold criteria are met.

The only alternative is to create a Row or Column Heat Map Output Type that uses different shades of red to identify outliers in the data of the row/column. The thresholds for each shade are automatically created by the system based on the total values and are not known to the user (thus can be misleading for a low number of data like the example below).



The screenshot shows the Cisco Analyzer interface with the following details:

- Header:** Analyzer, Settings, 1.1_AAR_RT_AgentState_51, Time Zone: (UTC+01:00) Central European Time (Europe/Amsterdam)
- Module:** Module1
- Filter:** LOB_Grouping51 All, Duration None (Snapshot)
- Table Data:**

LOB_Grouping51	Team Name	Agent Name	Activity State	Idle Code Name	#Total	#Available	#Idle	Dur
CL_LOB1 (2)	CL2024_Data_Team51 (2)	Agent51 Lab (1)	available (1)	N/A (1)	1	1	0	25:18
		Supervisor51 Lab (1)	idle (1)	Meeting (1)	1	0	1	25:45
Summary					2	1	1	

Color-coded thresholds is coming as an enhancement in a future phase of Analyzer Beta.

Reporting Limitations

Reference

- A report displays a maximum of 150,000 records.
- A maximum of 5 filters can be displayed in a report during run-time mode.
- You cannot select more than 1000 values inside a filter.
- Analyzer allows for a Custom Duration date range of up to 12 months (between start and end date) and the start date cannot be earlier than 13 months from current date.
- (Coming Soon) If high cardinality fields (Contact Session ID, Agent Session ID) are selected as Row Segments during custom report creation, a warning pop-up message will appear to suggest using filters for these fields to ensure optimal experience.
- (Coming Soon) The lowest refresh interval that will be supported in Realtime reports will be 5 seconds.

Sharing the Data



Browser Link Report Access

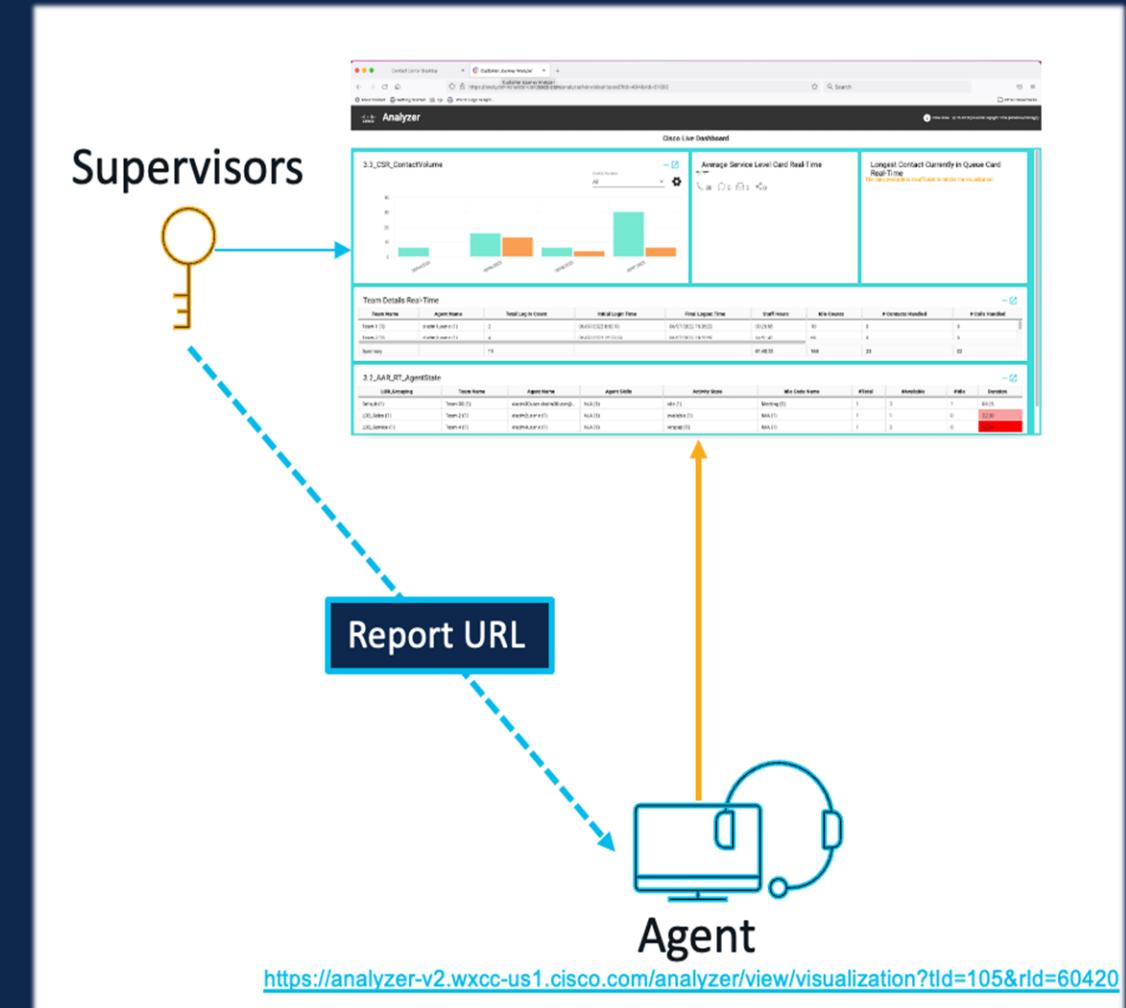
By default, access to Analyzer is restricted to **admins** and **supervisors**. This is a quick option for them to share specific visualizations with **Agents**.

Browser link access possible both for standard and **premium** agents.

Runs in browser timezone.

Agents will only see the data allowed based on their **access control**.

Note: Drilldown functionality is not available via browser link report access



Embedding the Report into Desktop

Desktop Developer Documentation

The screenshot shows the "iFrame Widgets" section of the documentation. It includes a bulleted list of widget types, a note about custom widgets, and a detailed explanation of the iFrame widget. A blue arrow points from this section to the GitHub repository.

OVERVIEW

- Header widgets
- Navigation (custom page) widgets
- Persistent widgets
- Headless widgets

For more information on custom widgets, see the *Desktop Layout* section in the *Provisioning* chapter of the [Cisco Webex Contact Center Setup and Administration Guide](#). For more information on sample custom widgets, see <https://github.com/CiscoDevNet/webex-contact-center-widget-starter/tree/master/Examples>.

iFrame Widgets

The iFrame widget is a special widget that can be used to embed a different application. The iFrame widget creates an HTML iFrame and renders your application. The Content Security Policy (CSP) headers are required in the iFrame widget URL's response headers. To enable CSP headers for your application that you are embedding, see [Content Security Policy \(CSP\)](#) and [CSP: frame-ancestors](#). The application should allow `*.cisco.com` as a valid frame-ancestor in the CSP header.

Example

Content-Security-Policy: frame-ancestors 'self' https://*.cisco.com;

Note: If the setTimeout and setInterval methods are used in developing a widget, consider the recent Google Chrome throttling impact. For more information, see <https://developer.chrome.com/blog/timer-throttling-in-chrome-88/>.

The `Web Workers` API can be used to run timers with a chain count of more than five, and each count is less than a minute. For more information, see https://developer.mozilla.org/en-US/docs/Web/API/Web_Workers_API/Using_web_workers.

Get Started

Analyzer Iframe Widget Sample (GitHub)

The screenshot shows the GitHub repository for the "Analyzer Iframe Widget Sample". It includes a file tree, commit history, and a README file. A blue arrow points from the "Analyzer CC iFrame Widget Sample - Analyzer Reporting Widget" section of the README to the Cisco Agent Desktop interface.

README.md

WebexCC iFrame Widget Sample - Analyzer Reporting Widget

Pre-requisites:

- Before you begin, you must create an Analyzer Report on WebexCC Analyzer.
- The URL is in the format: `https://analyzer.wxcc-_____cisco.com` where _____ is the datacenter (us1,eu1,eu2,etc.)
- Once the report is created, click on run. It will be in the format: `https://analyzer-v2.wxcc-us1.cisco.com/analyzer/view/visualization?tid=_____&rid=_____` where tid is the org ID and rid is the report ID.
- Copy the URL of your custom report, and into the Desktop Layout. In the attached JSON, the desktop layout has an iFrame Navigation tab widget seen in lines 102-128.
- Change the source ("src") tag for the iFrame element inside the Desktop Layout JSON and point it to the Analyzer Report.

Cisco live! Agent Desktop

Analyzer

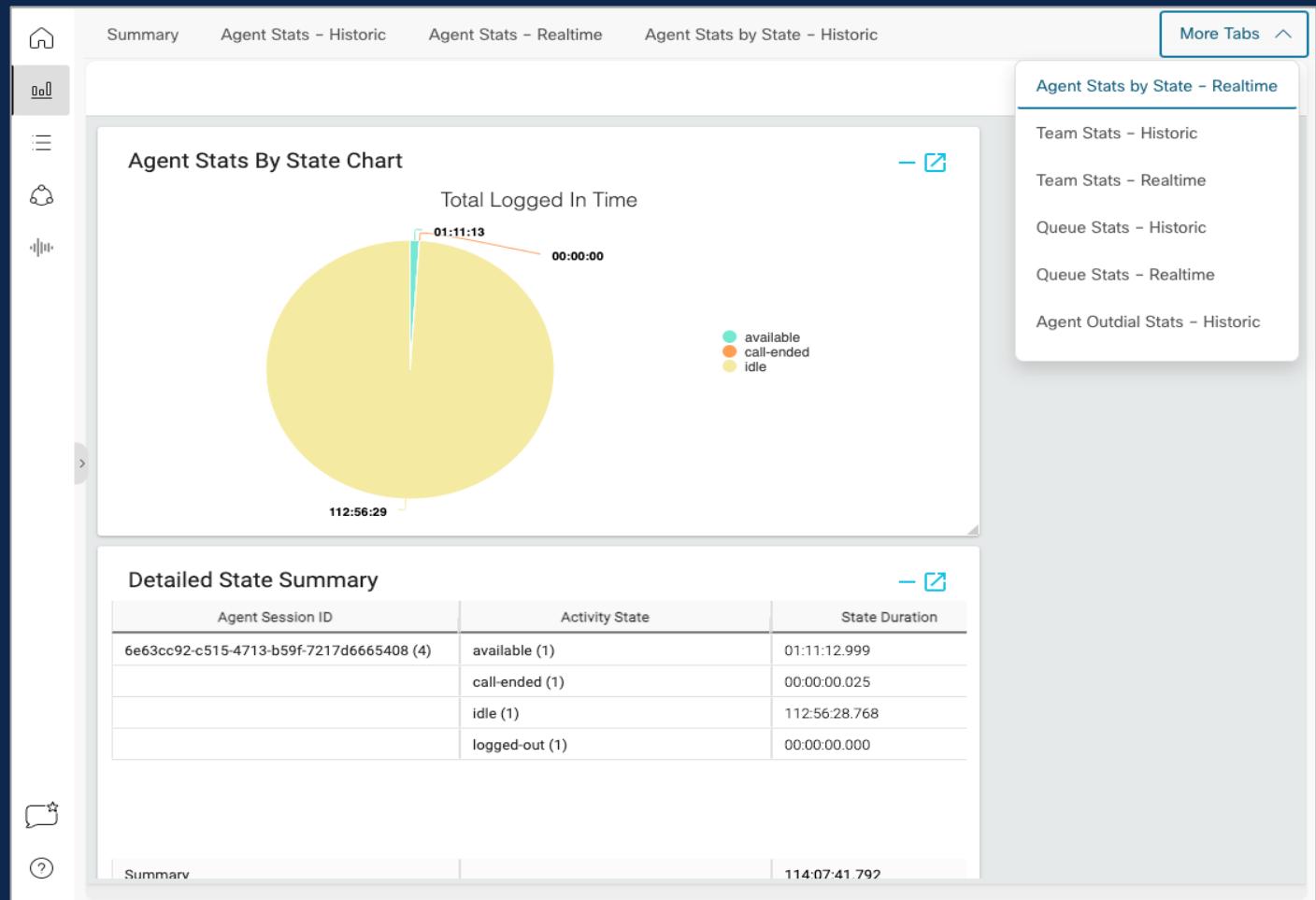
Module1

Agent Name	State	Idle Code	Duration
Tenant Admin PS	idle	Meeting	00:04:28



Agent Performance Statistics (APS)

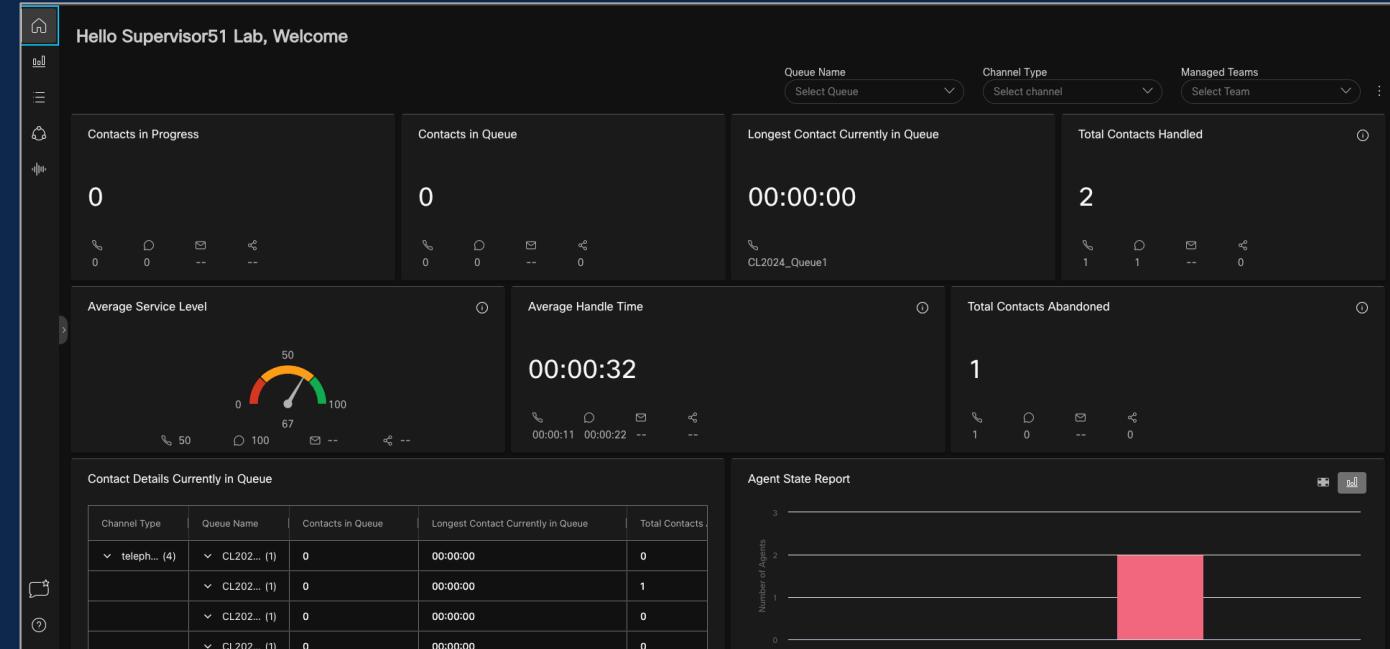
- APS offers multiple Dashboards with Agent, Queue or Team statistics (Historical or Realtime), available both in Agent & Supervisor Desktop.
- Access to APS is defined in the **Desktop Profile** of the user.
- APS reports are not editable, we can only apply **persistent filters**.
- APS dashboards do not exist in Analyzer as stock reports, but we can cross-launch them from Desktop in a new window.



Report refresh rate varies for each report, they are mainly between 5-60 seconds.

Supervisor Desktop (ESD) Reporting

- Supervisor Desktop **Home** offers a comprehensive **dashboard** with Queue, Team & Agent Statistics.
- Supervisors can **filter** the dashboards, remove unwanted widgets but cannot edit existing ones today.
- **Team Performance Details** tab offers Supervisors a real-time view of all their managed agents, their current status and details.

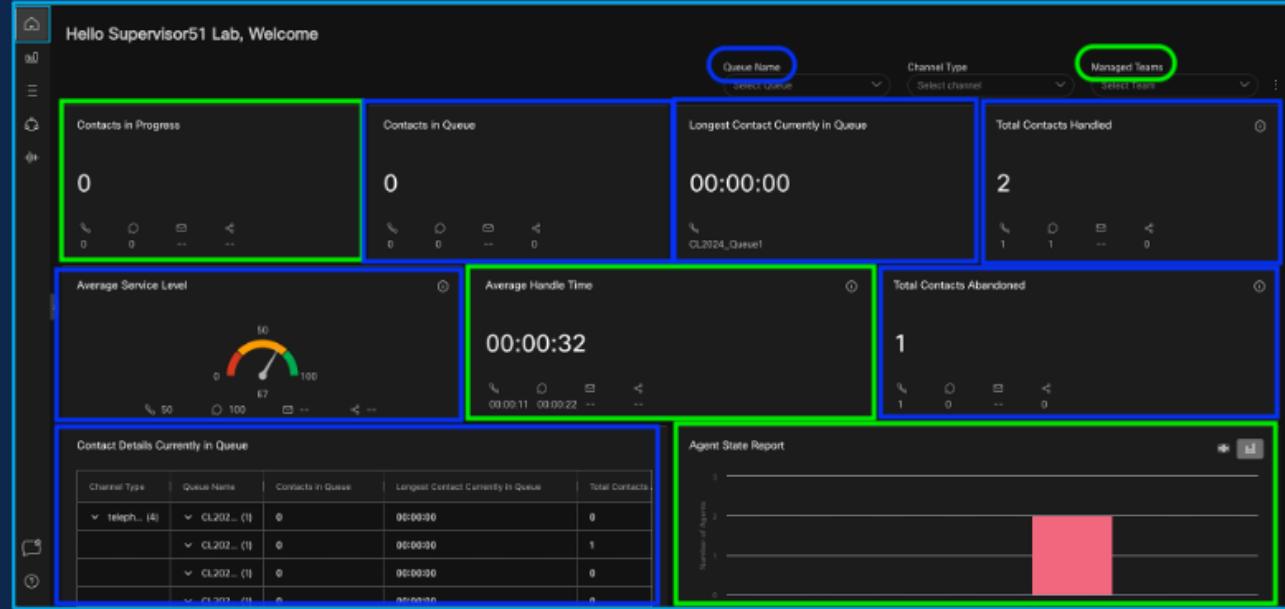


Team Performance Details									
Displaying 1 Agent									
Agent Name	Agent State	Agent State Duration	Phone Number	Site	Team	Contact Status	Time in Contact St...	Total C...	Actions
SC SA Admin Cisco	Meeting	24:07:33	Desktop	CL2024_Site	CL2024_CCAI_Team	-	-	-	
AL Agent51 Lab	Meeting	10:03:28	Desktop	CL2024_Site	CL2024_Data_Team51	-	-	-	

Supervisor Desktop Tips

Reference

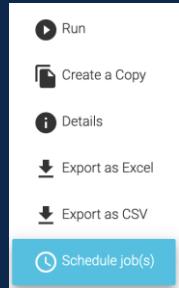
1. Desktop allows to filter on either Queue or Team. Out of the Desktop's 9 Widgets:
 - Contacts in Progress, Average Handle Time and Agent State Report metrics depend on **Teams**.
 - All the other results are based on selected **Queues** filter.



2. Customers sometimes have confusion when trying to compare the KPI cards of Desktop with Analyzer. Thus, Cisco create a dedicated [article](#) to explain all the necessary details when comparing.

Report Scheduling

- Allows to send a **Historical** (stock or custom) **Visualization** to one or multiple emails at a predefined time.
 - Received output is **Excel** or **CSV**.
 - Maximum file size is **10 MB** and maximum number of supported columns is **2000**.



Jobs
wxcclabs@gmail.com
Name Identifier for Job

Team Details

+ New Save C Add Recurrence Delete Job

Job Set Up
Job Name * Name Identifier for Job

Description

Start Time 3/4/2024 Time Stamp 07:00 Time Zone (+01:00) Amsterdam, Berlin, Rome, Stockholm, Vienna

Email Notification
Email * gkovaniis@cisco.com,gkovaniis2@cisco.com
(Use commas to separate email addresses.)
Subject *
Email - Subject

Message
Optional Message for Email Body

Output Format
 Excel CSV

Job Recurrence

Recurrence pattern
 Daily Weekly Recur every 1 week(s) on:
 Monthly Yearly Sun Mon Tue Wed Thu Fri Sat

Range of recurrence
 No end date
 End after: 10 occurrences
 End by: 3/5/2024 Choose a date

Cancel Remove Recurrence Ok

Extracting the Data



Export Visualization

- Download the data of historical visualization as an Excel or CSV file.
 - Option not available for real-time or compound visualizations.
 - Exporting a Card will download the underlying data in a table format.

A	B	C	D	E	F	G	H	I	J	
1	Time Zone: (UTC-05:00) Eastern Standard Time (America/New_York)									
2	Interval ↓	Team Name ↓	Agent Name ↓	Total Log In Count	Initial Login Time	Final Logout Time	Staff Hours	Idle Counts	# Contacts Handled	# Calls Handled
3	02/26/2024	131_Team1	Agent131 Lab	1	02/26/2024 05:46:54	02/26/2024 23:56:19	72:37:40	16	3.0	3.0
4		132_Team1	Agent132 Lab	1	02/26/2024 08:53:46	02/26/2024 09:07:45	00:55:54	8	1.0	1.0
5		131_Team1	Agent131 Lab	1	02/27/2024 01:15:49	02/27/2024 04:55:57	14:40:31	4	0.0	0.0
6		CL2024_Data_Team51	Agent51 Lab	1	02/27/2024 11:34:46	02/27/2024 11:50:33	04:12:34	62	3.0	3.0
7	02/27/2024	CL2024_Team2	Agent51 Lab	1	02/27/2024 10:45:17	02/27/2024 11:33:58	12:59:02	80	0.0	0.0
8		CL24_3002_Team	Agent2 Lab	2	02/27/2024 23:36:20	02/28/2024 00:01:30	06:13:53	48	0.0	0.0
9		CL24_3002_Team	Agent2 Lab	2	02/28/2024 00:02:36	02/28/2024 09:18:09	93:13:35	36	1.0	0.0
10	02/28/2024	130_Team	Agent130 Lab	1	02/29/2024 03:42:43	03/01/2024 09:28:14	119:02:03	12	0.0	0.0
11	02/28/2024	Summary	Summary				323:55:11 (SUM)	266 (SUM)	8.0 (CUSTOM)	7.0 (CUSTOM)
12	Summary	Summary								

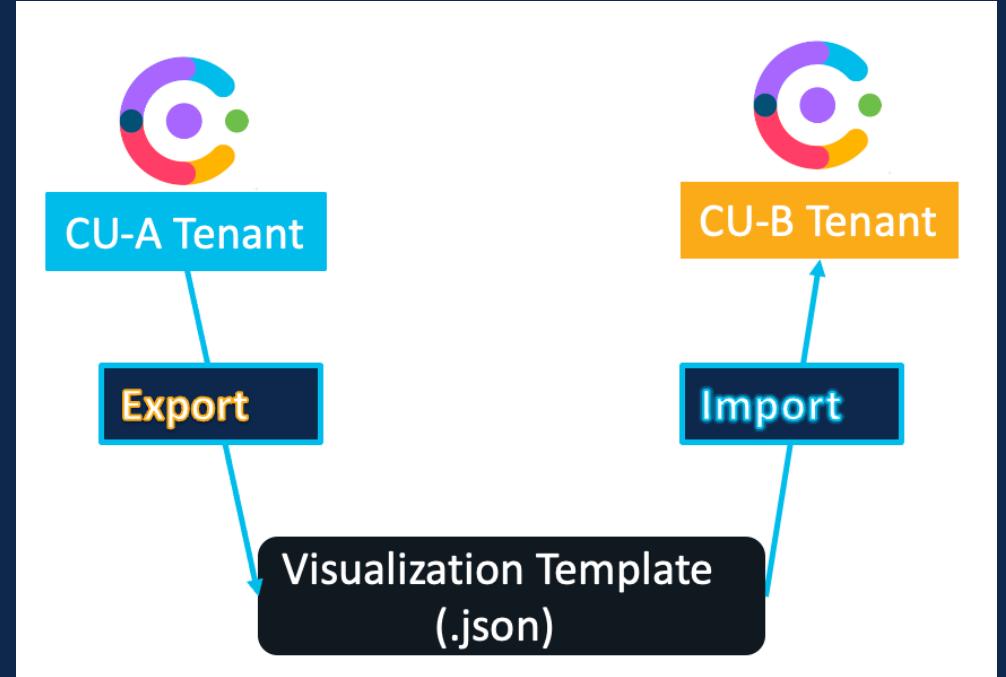
- Export option can be triggered either in browsing mode or during report execution.

The screenshot shows the Cisco Analyzer interface. On the left, a modal window titled "Team Details" displays information about a team with ID -1208, created by Cisco on Aug 5, 2022. On the right, the main interface has a "Analyzer" header with a "Settings" button and an "Export" dropdown menu. The "Export" menu is open, showing options: "Export as Excel" (which is highlighted in blue), "Export as CSV", and "Schedule job(s)".

Export/Import Template

Reference

- Useful for **reusability** of same report across multiple tenants or as **backup**.
- Possible to export a single report or a folder containing multiple reports (max 25 at a time).
- File saved in **JSON** format.
- Filter names are retained but filter values are removed during export.



Search APIs

- Search API allows the user to retrieve data from the Analyzer database programmatically.
- Search API utilizes GraphQL as an endpoint.
 - GraphQL is a query language for declarative data fetching.

The screenshot shows the 'Search Tasks' endpoint documentation. The left sidebar lists various API categories like Overview, Authentication, and API Reference. The main content area shows the 'Search Tasks' page with a 'POST /search' section. It includes a curl command example:

```
curl --request POST \
--url 'https://api.wxcc-us1.cisco.com/search?orgId=97cdbf45-ebe2-468
--header 'Accept: application/json'
--header 'Authorization: Bearer YOUR_TOKEN'
--header 'Content-Type: application/json'
--data '{"query": ""}'
```

The response section displays a JSON object representing search results:

```
1 {
2   "data": {
3     "task": {
4       "tasks": [
5         {
6           "id": "fb53f6d1-5535-4ac8-b081-53834e17d6f5",
7           "channelType": "telephony",
8           "createdTime": 162945000000,
9           "endedTime": 1630380960406,
10          "captureRequested": true,
11          "isActive": false,
12          "status": "ended",
13          "queue": [
14            {
15              "id": "e434a654-df4c-42dc-908b-3d9d0206a616",
16              "name": "cb_outdial_queue"
17            }
18          ],
19          "owner": {
20            "name": "callbackorg2user1 callbackorg2user1",
21            "id": "74ab6507-a32a-479c-bda7-15ff0b6c6c3c"
22          }
23        }
24      ]
25    }
26  }
```

Search APIs GitHub Documentation

- We created a comprehensive [Guide](#) & [GitHub repo](#) with definitions, examples & use cases.
- Data Dictionary provided also for every single available variable in the API.
- There is no 1:1 mapping between each Analyzer & API variable.

Getting started with the Search API using GraphQL

For a quick overview of the `/search` API and how to use our documentation, refer the video below:

Watch Getting Started With the Search API
[Watch: Getting Started with the /search API](#)

Introduction

A GraphQL API enables clients to construct queries to retrieve data. The queries are defined by the API server in the form of a GraphQL schema, which acts as a contract between the server and the client.

Note: For an introduction to GraphQL, refer : [GraphQL - 101](#)

The API allows access to the following:

1. Task related data stored as Customer Session Records (CSRs) and Customer Activity Records (CARs), accessible using the `taskDetails` graphql query.
2. Agent related data stored as Agent Session Records (ASRs) and Agent Activity Records (AARs), accessible using the `agentSession` graphql query.
3. Queue related data stored as Call Leg Records (CLRs), accessible using the `taskLegDetails` graphql query

Based on the operation, a query can be of two types:

1. Queries to fetch raw data containing individual records stored such as CSRs, ASRs, CARs, etc., with the ability to filter, sort, group, aggregate, etc.

CSR Data Dictionary

Customer Session Record (CSR) - It represents the customer workflow, consisting of a sequence of customer activities. The following fields are available in a CSR record.

Note - These fields are applicable only for the API and not for Analyzer UI.

Field Name	Field Type	Description	Is Aggregation allowed?	Is GroupBy allowed?	Is Filter allowed? (use 'filter' argument for all the fields)	Is Sortable?
<code>id</code>	String	A unique string that identifies the contact session.	Yes	Yes	Yes	Yes
<code>status</code>	String	Current state of the contact. Eg: available, idle, ringing, wrapup, etc.	Yes	Yes	Yes	Yes
<code>channelType</code>	String	The media type of the contact, such as telephony, email, or chat.	Yes	Yes	Yes	Yes
<code>createdTime</code>	Long	Time when the contact started.	Yes	Yes	No	Yes
<code>endedTime</code>	Long	Time when the contact ended.	Yes	Yes	Yes	Yes

Contents

- Filtering data
- Sorting Support
- Pagination support for fetching raw data
- Pagination Support**
 - Inner Pagination / Paginating CAR and AAR records
 - Pagination Support for Aggregation with Group Bys
- Global Variables Support**
 - Filtering based on global variables
 - Performing Aggregations on global variables
 - Performing group by operation on global variables
- Restrictions**
 - Recommendations and best practices
 - Sample Usecases and queries
 - Data Dictionary
- Support

Graph QL for Search API

- **GraphQL** is a query language for declarative data fetching.
- Relationship between Analyzer repositories and GraphQL queries:
 - CSR / CAR -> taskDetails
 - ASR / AAR -> agentSession
 - CLR (Queue Records) -> taskLegDetails

Search API has the same time range restrictions as Analyzer portal (e.g. can only fetch information from last 13 months).

- Two types of queries:
 - Query to fetch **raw data** (=Value based)
 - Query to perform **aggregations** (=Count Based)

The screenshot shows a GraphQL development environment. At the top, there are tabs for "Sample Code" and "Try Out". Below that, the "Request" section includes a "Header" area with a "Authorization" field containing a personal access token, and a "Parameters" area with an "orgId" parameter set to a specific value. The "GraphiQL" section contains a query editor with the following code:

```
1 query {
2   taskDetails(
3     from: 1705899600000,
4     to: 1706504400000,
5     filter: {
6       and: [
7         {
8           
```

Below the query editor are "QUERY VARIABLES" and "REQUEST HEADERS" sections. To the right, the "Documentation Explorer" pane displays the schema with a "ROOT TYPES" section showing a "query" type with a "Query" field.

Graph QL unlocks... Wallboards



[Sample Overview and Demo](#)

Graph QL unlocks... BI Integrations

The screenshot shows the Power BI Desktop interface with the 'Power Query Editor' open. The main area displays a table with 47 columns and 88 rows, with the first few rows of data visible:

	a ^b c_id	a ^b c_Owner	a ^b c_Origin	a ^b c_QueueDuration	a ^b c_WrapupDuration	a ^b c_EndedTime	a ^b c_LastTeam
1	57bc7622-f0c2-4a09-9f14-1c48a31f0e99	nwuthoo agent	+14806754094	0	-	1.65953E+12	MS_Dynamics_Pr
2	78f20349-31ea-4a2f-8c8a-d2db98c85e06	nwuthoo agent	+14806754094	0	31035	1.65953E+12	MS_Dynamics_Pr
3	7e8ee35-dda3-49b2-ee24-1284914564df	nwuthoo agent	+14806754094	0	15846	1.65953E+12	MS_Dynamics_Pr
4	85224605-ca5c-4b64-98dc-f55a84e1117	nwuthoo agent	+14806754094	0	4905	1.65953E+12	MS_Dynamics_Pr
5	afe128ca-0467-47bf-974e-e06377d0c69	nwuthoo agent	+14806754094	0	2900579	1.65953E+12	MS_Dynamics_Pr
6	c97ad8ae-f97a-42c3-adf4-c2a0ddda920f0	nwuthoo agent	+14806754092	0	40200	1.65953E+12	MS_Dynamics_Pr
7	84675eab-454a-453c-b888-74f50051a97a	nwuthoo agent	+14806754094	0	-	1.65953E+12	MS_Dynamics_Pr
8	c1204001-fc75-4703-b438-a61e45036a35	nwuthoo agent	+14806754094	0	1198435	1.65953E+12	MS_Dynamics_Pr
9	3e0b730f-fe40-401d-a4d1-85a6d7d4687d	nwuthoo agent	+14806754094	0	6184	1.65947E+12	Zendesk_Dev_Te
10	af65b5b2-241d-40ee-a1e9-47d0062a4e6	nwuthoo agent	+14806754094	0	4244	1.65947E+12	Zendesk_Dev_Te
11	6f808fb0-c00d-49c6-8802-a7e784e0ecad	nwuthoo agent	+14806754094	0	174798	1.65947E+12	MS_Dynamics_Pr
12	295e4665-7396-4b21-8b55-1b2fb555cd2	nwuthoo agent	+14806754094	8004	-	1.65947E+12	MS_Dynamics_Pr
13	111bc319-b252-443b-aacf-a25b5eff1c9	pkolli agent	pkolli@cisco.com	10288888	-	1.65948E+12	Team-PS
14	e4de0aac-32f5-425a-8c00-dfff3222781	Arunabh Bhattacharjee	+14806754111	0	30206	1.65947E+12	Team_arubhatt
15	380601bd-sh26-4ee5-508-3f006d02b0d	nwuthoo agent	+14806754092	0	13771	1.65947E+12	MS_Dynamics_Pr
16	3c76f562-10c2-4000-abed-ab41dfa19b9	nwuthoo agent	+14806754094	57295	134399	1.65947E+12	MS_Dynamics_Pr
17	bd906d71-e871-4f10-b2d4-df67d70e30a9	pkolli agent	support@imiconnect.com	2559003	-	1.65948E+12	Team-PS
18	098b0325-3ae1-4f18-a030-e8f07248233	pkolli agent	pkolli@cisco.com	2364004	-	1.65947E+12	Team-PS
19	93eb4e43-156e-42a8-aa87-200c32288885	nwuthoo agent	+14806754092	0	157863	1.65947E+12	MS_Dynamics_Pr
20	69493ecd-085d-4989-882e-d955ca75e0d0	nwuthoo agent	+14806754092	0	4162	1.65947E+12	MS_Dynamics_Pr
21	64fa1ea-6ae6-4e11-a23-492910ad9c9d	admin.admin_journey@email.carehybrid.com	+14806754084	0	858811	1.65947E+12	Team_Journey
22	94da86c1-099d-4049-85fe-741688d021a7	nwuthoo agent	+14806754092	0	6084	1.65947E+12	MS_Dynamics_Pr
23	e92ef711-5068-41b5-831-7ecb4ae5535	nwuthoo agent	+14806754092	0	4989	1.65947E+12	MS_Dynamics_Pr
24	e69b2966-ddd2-44e6-acde-f303397b1508	null	+14806754092	-	-	-1 null	
25	96623f47-9421-456d-8d08-e50bca0936	nwuthoo agent	+14806754092	0	8662	1.65947E+12	MS_Dynamics_Pr
26	d4480fe-acb7-44da-ba3c-15e97caa441	nwuthoo agent	+14806754094	0	5812	1.65947E+12	MS_Dynamics_Pr
27	74d4a5e3-1ada-4de6-beb1-6bcc8e8ef35	nwuthoo agent	+14806754094	0	85912	1.65947E+12	MS_Dynamics_Pr
28	c47d6c84-a25f-4b21-9b9c-896f4da33ed5	nwuthoo agent	+14806754094	0	189625	1.65947E+12	MS_Dynamics_Pr
29	263f1496-64da-4d1b-99ea-34c0281a649	null	+14806754084	46291	-	1.65947E+12 null	
30	27a45010-1cff-4a18-2113-0183cbc1cc8	agent journey	+14806754084	0	1343300	1.65947E+12	Team_Journey
31	7f43b9a3-da9d-446b-802c-3b107b57ad91	nwuthoo agent	+14806754094	0	668737	1.65947E+12	MS_Dynamics_Pr
32	d499c92a-25ac-4296-9dce-5bbcfcf89176	nwuthoo agent	+14806754094	0	731087	1.65947E+12	MS_Dynamics_Pr
33	90e94f90-5a41-4dc7-821b-bb1aa0b56178	nwuthoo agent	+14806754094	0	356500	1.65947E+12	MS_Dynamics_Pr
34	336b1431-dc56-4293-990b-36a75be150...	nwuthoo agent	+14806754094	0	3616	1.65947E+12	MS_Dynamics_Pr

The 'Query Settings' pane on the right shows the 'Changed Type1' step selected under 'APPLIED STEPS'. The status bar at the bottom indicates 'Column profiling based on top 1000 rows'.



Graph QL unlocks... Report Extracting

Reference

- *Can we extract the schema of a report to directly use an API instead of building it?*
- Each Analyzer version is utilizing a different architecture concept:
 - Analyzer -> REST APIs
 - Analyzer Beta -> GraphQL APIs
- This means we can only use **Analyzer Beta** reports.
- We can use the **Network** tab from the **Browser Developer tools** to inspect the report query ([guide](#)).
- *Note: The extracted JSON is not a ready drag&drop GraphQL query, we need to add information to the query for a successful API request. Thus, this capability is only used as a guideline on building a query, not as a direct fetch of an Analyzer report via API.*

The screenshot shows a web browser's developer tools Network tab. A specific POST request to 'http://www.ciscplayone-wxos-us1.streaming.splato' is selected, revealing its raw JSON query. The query is as follows:

```
query {__typename, ... on TaskDetails {from, to, initiator, type, transferred, size, duration, status, taskDuration, taskDurationUnit, creationTime, updateTime, lastUpdate, lastUpdateUnit, lastUpdateBy, origin, firstQueueName, lastQueueName, connectedDuration, holdDuration, wrapUpDuration, direction, pageInfo {hasNextPage, endCursor}}}
```

Closure

Call to Action

- Lots of Data Source Tech Summit Left!
 - Voice of Customer/Cisco Journey Data Service
 - Design Challenge & Use Cases
 - PM Feedback & QA
- Review and Save this presentation with reference slides.
- If you haven't already, go through the [Analyzer Deep Dive](#) lab.
- If you are interested in customizations, review the new Search API [guide](#) and the Cisco sample [GitHub repository](#).
- Discover, build (reusable) reports and discover some more!
- Reach out to us with feedback!



The bridge to possible