

The Cisco Live! logo, featuring the word "CISCO" in a dark blue, sans-serif font, followed by "Live!" in a dark blue, script font.

CISCO *Live!*

The text "Let's go" in a large, dark blue, sans-serif font, positioned to the left of a bright, multi-colored sunburst graphic that radiates from the right side of the image.

Let's go

#CiscoLiveAPJC



The bridge to possible

Journey Data Service

Unleash the power of Customer Journey Data Service (JDS) and its APIs for amazing customer experience

Rue Green, Principal Cloud Architect / Full Stack Developer
BRKCCT-2029



#CiscoLiveAPJC

Cisco Webex App

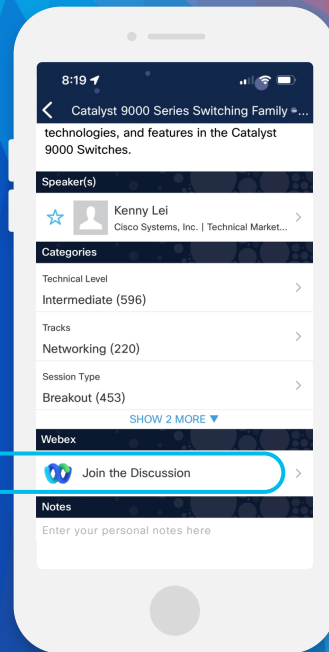
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until December 22, 2023.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKCCT-2029>

About the Presenter – Rue Green

- Sr. Solutions Engineer, Full Stack Software Developer
- Dual CCIE #9269
 - (Enterprise , Collaboration, DevNet Expert (Pursuing Lab))
- Author of Unified CVP Cisco Press book (2011)
- 18 years CC Experience
 - WxCC, WxCCE, CPaaS
- 28+ years in software development
 - Certified Full Stack Developer (MERN, MEAN)
- 18 years in Cisco
- Professional Beach Volleyball Player and Coach



Agenda

- Problem Statement
- Overview
- Journey Data Service
- Customer Journey Widget
- Use Case Deep Dive
- Key Concepts and FAQ's
- Timelines, Milestones and Q&A

Problem statement

Power of personalization

71%

consumers expect companies to deliver personalized interactions

76%

consumers get upset when that doesn't happen

Disconnect between business and customers

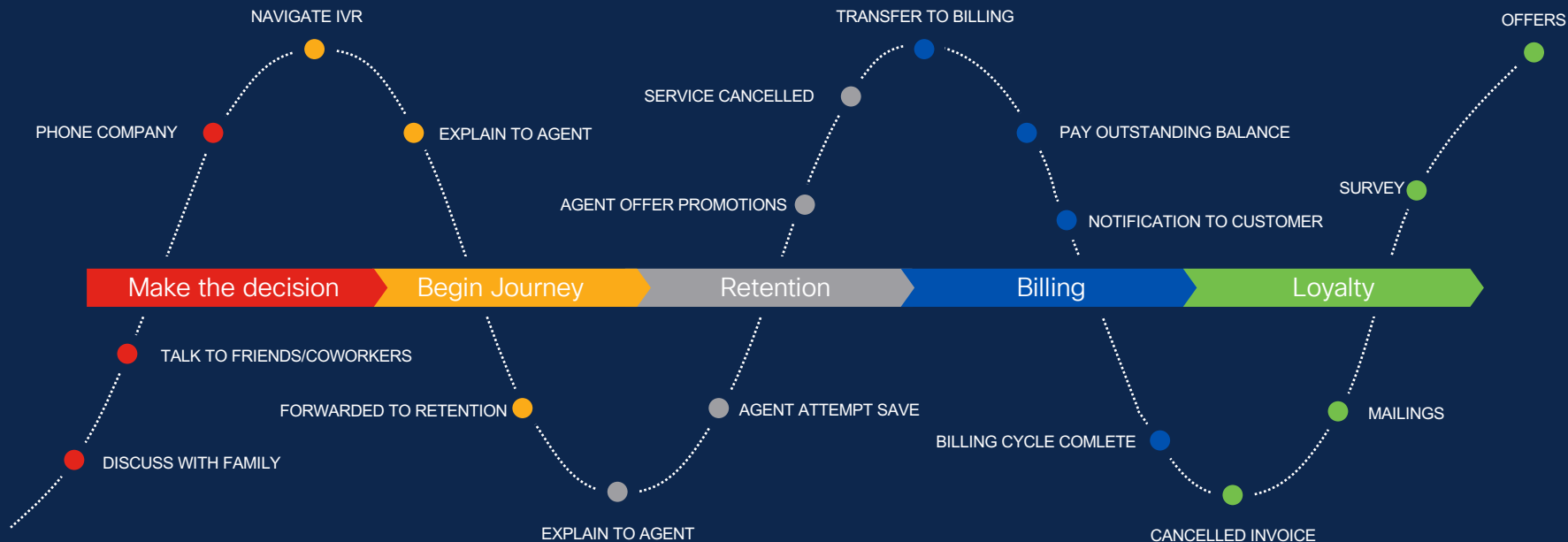
80%

of businesses believe they
deliver a superior
experience

8%

of their customers
agreed

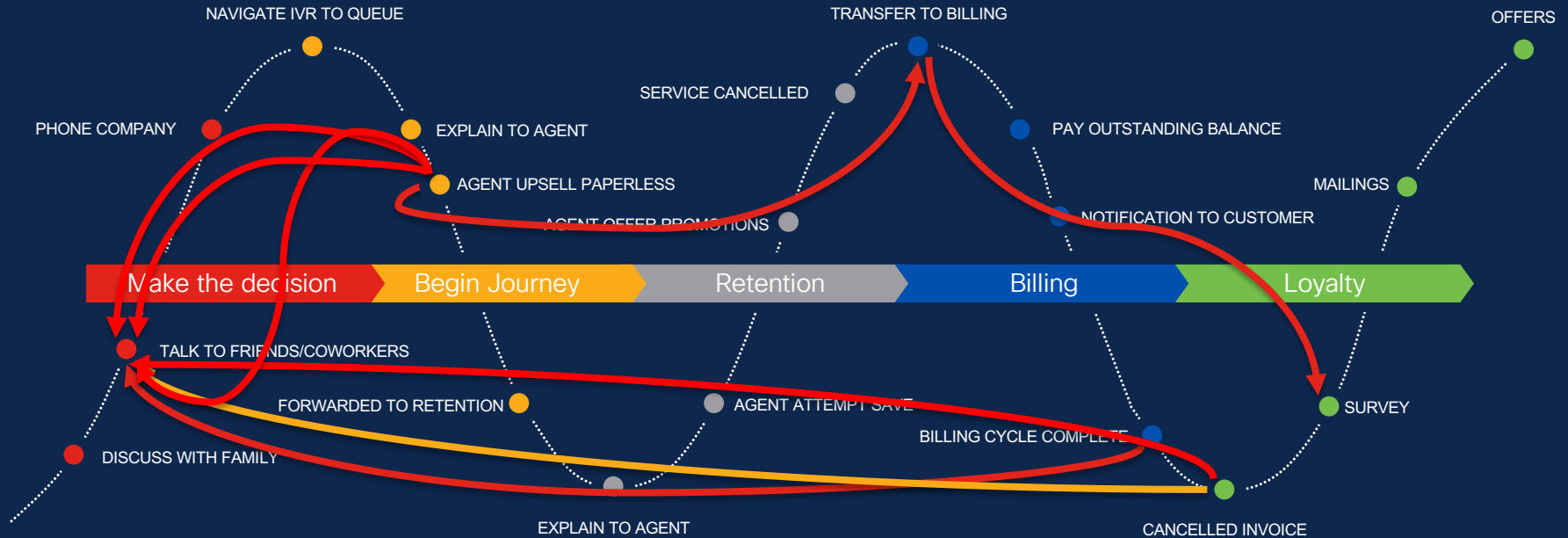
Inside the disconnect: Cancelling Service



Inside the disconnect: Cancelling Service



What actually happens: Cancelling Service



Disconnect between business and customers

80%

of businesses believe they
deliver a superior
experience

8%

of their customers
agreed

Overview

CX Challenges for Evolving Customer Expectation



Customer journey lifecycle for customer experience leaders



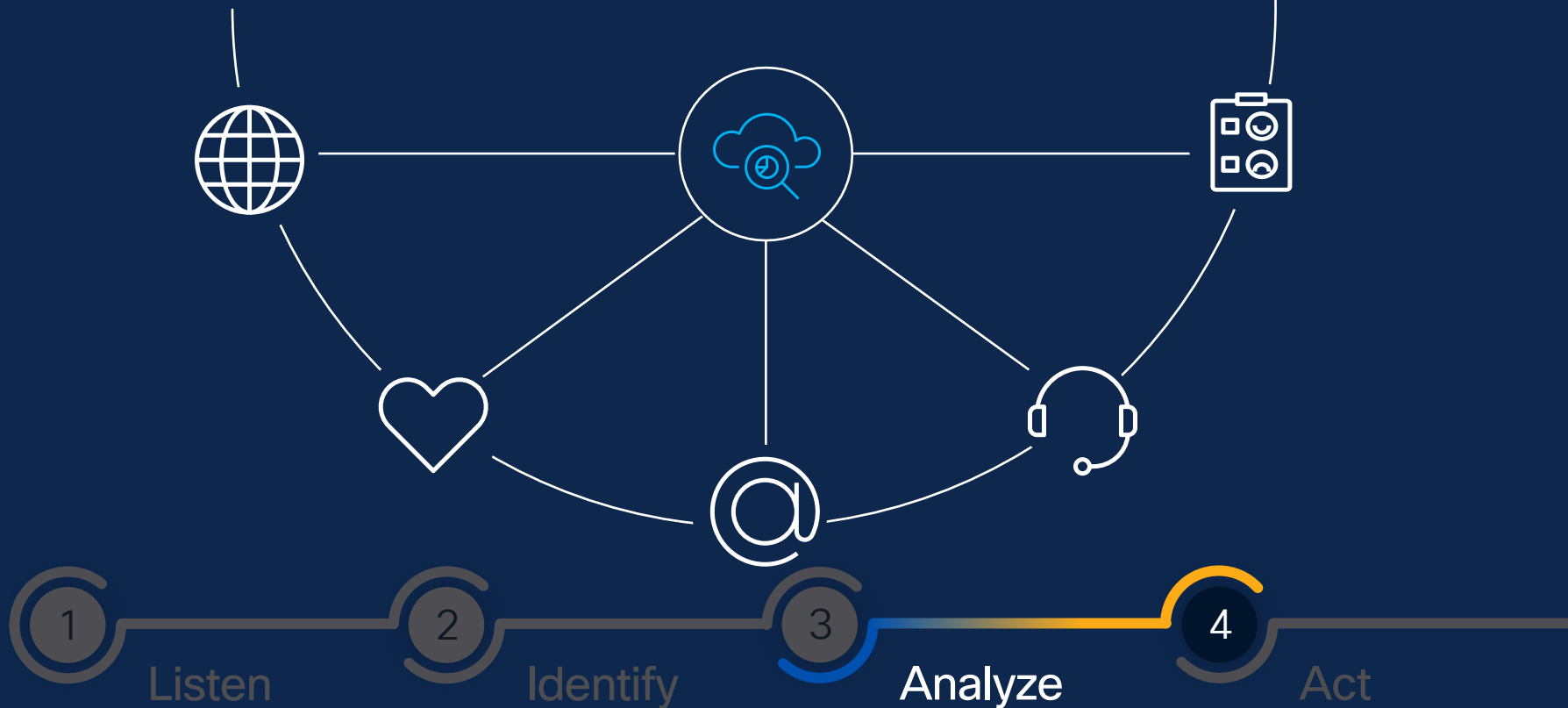
Listen: real-time journey tracking



Identify: dynamic profiling



Analyze: advanced analytics



Act: powerful orchestration

Real-time
activities



Trigger
action



Offer

Webex App video connect



Human agent



AI assistance



Offer / Voice of Customer



Listen



Identify

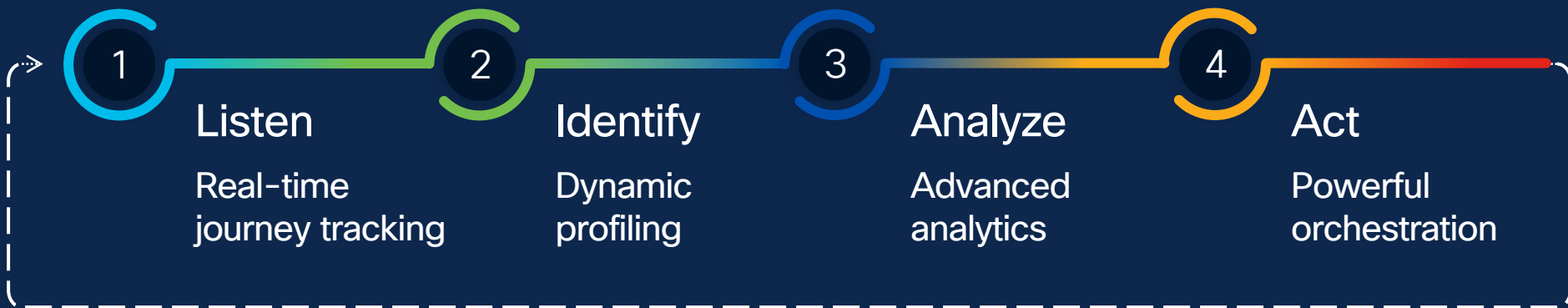


Analyze



Act

Customer journey lifecycle for customer experience leaders



Overall Portfolio

Business systems



Customer experience applications

Notifications

Webex
Notify

Contact Center

Webex
Contact Center

Collaboration

Webex
App

Experience management

Webex Experience
Management

Marketing

Webex
Campaign

Communications Platform as a Service (Webex Connect)

Orchestration
APIs

AI
APIs

Video
APIs

Voice
APIs

Data
APIs

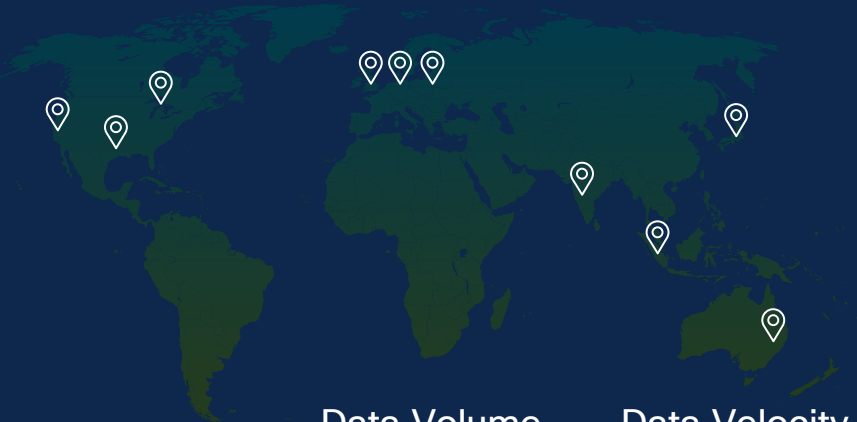
Digital channel
APIs

Journey data service

Customer communication channels



Webex Analytics Platform



Calling



Meeting



Devices



Messaging

Data Variety



Client

- Media Quality
- Operational
- Diagnostic
- Feature Usage



Server

- Media Quality
- Operational
- Diagnostic
- Cascade reports
- Usage
- Clickstream



User

- Identifier
- Relations
- Usage



Business

- Billing Usage
- Subscription



23TB/day



43TB/day



30GB/day



5GB/day

Data Volume



10K messages/sec



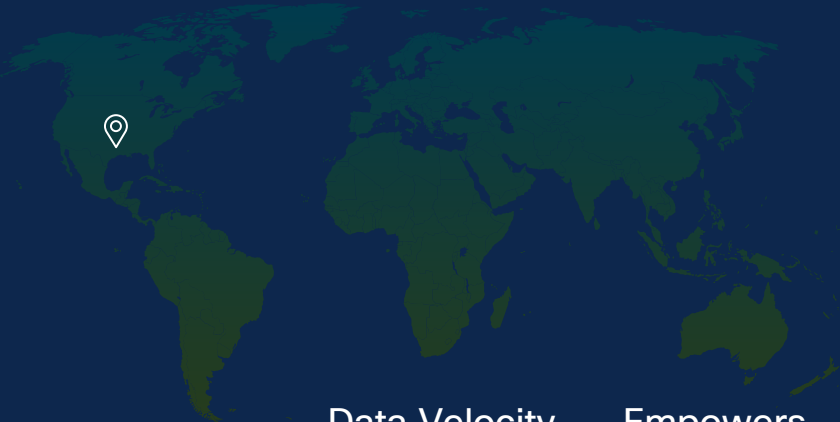
100K messages/sec

Data Velocity

Empowers

- End User Analytics e.g. People Insight
- IT analytics
- Fraud analytics
- Troubleshooting
- Business Intelligence
- Partner Analytics
- API – Partners

Webex Analytics Platform



Contact Center



Journey Data Service



Connect



Experience Management

Data Variety



Client

- Media Quality
- Operational
- Diagnostic
- Feature Usage



Server

- Media Quality
- Operational
- Diagnostic
- Cascade reports
- Usage
- Clickstream



User

- Identifier
- Relations
- Usage



Business

- Billing Usage
- Subscription



10K messages/sec



100K messages/sec



100K messages/sec

Empowers

- End User Analytics e.g. People Insight
- IT analytics
- Fraud analytics
- Troubleshooting
- Business Intelligence
- Partner Analytics
- API – Partners

Journey Data Service

API-First

Cisco Advances API-First Strategy to Empower Developers in the Digital Economy

Sample Files:

<https://github.com/CiscoDevNet/webex-contact-center-api-samples/tree/main/customer-journey-samples>

JOP

Journey Orchestration Platform

Personalize experiences across multiple touchpoints.

Real-time insights for understanding customer behavior.

Deliver consistent interactions across various channels.

Make data-driven decisions for next-best-action.

Optimize journeys through testing and continuous improvement

CRM

Customer Relationship Management

Manage customer data for efficient organization.

Streamline sales and marketing processes for effectiveness.

Improve customer service and support experiences.

Track and manage sales pipeline for growth.

Generate insights and make informed decisions.

Getting Started

- To get started with JDS

<https://developer.webex-cx.com/documentation/guides/journey---getting-started>

- This will give you a link to a smartsheet you need to fill
<https://app.smartsheet.com/b/form/7776df72239e47d0bbb73a392e32927f>
- Location of the latest desktop widget
<https://github.com/CiscoDevNet/cjaas-widgets/tree/main/CustomerJourney>
- Authentication for JDS API's
<https://app.vidcast.io/share/861a3320-669c-4edb-b284-3c1300130583>
- Event Schemas
<https://developer.webex-cx.com/documentation/journey>

Webex Control Hub

The screenshot displays the Webex Control Hub interface. The top navigation bar includes the 'webex Control Hub' logo, a search bar, and user profile icons. The left sidebar contains navigation links for Overview, Alerts center, and a MONITORING section with Analytics, Troubleshooting, Reports, and Customer Journey. The main content area is titled 'Customer Journey Data' and features tabs for 'Journey Projects' and 'Settings'. An introductory banner for 'Introducing Customer Journey Data' explains the service's purpose and provides a link to the developer portal. Below this, a section titled '2 Journey projects' contains a table with two entries. A 'Create a journey project' button is located in the top right corner of the main content area.

Project ID	Project name	Description	
6455acb3e2a7160ae1d49b18	sandbox	This is a sandbox environment	
6463c60771faa61fd63a0383	wxccNoConnector	This project does not receive WxCC Connector Events	

<https://admin.webex.com>

Journey Data Services Desktop

Customer Journey Widget

Lookup User

Profile

Rue Green

No of times contacted in the last 24 hours

4

No of times contacted in the last 7 days

204

No of times contacted in the last 7 days via email

1

No of times contacted in the last 7 days via chat

1

No of times contacted in the last 7 days via telephony

1

Aliases

Select type...

Enter a new alias

Add

Phone

13033249089

Phone

3033249089

Phone

+13033249089

Email

ruegreen@cisco.com

Journey

AllLast 24 HoursLast 7 DaysLast 30 Days

Livestream

10/11/2023

Payment Complete

Payment Complete

10/11/20238:14 AM

Past Due - 2nd Notification

Payment Notify

10/11/20238:14 AM

Past Due - 1st Notification

Payment Notify

10/11/20238:14 AM

phone

+13033249089

Reason

Late Payment Notification Sent - Notification

MessageForUser

We have noticed your Waterbill payment is overdue. The payment of \$544.73 was due Thursday, March 23rd.

LinkSent

https://buy.stripe.com/test_4gw8AnflUblBcbC8wB

Notification

1

Past Due Amount

\$544.73

category

Water

status

overdue

origin

Past Due - 1st Notification

channelType

Payment Notify

channelBreakout

sms

CISCO *Live!*

#CiscoLiveAPJC

BRKCT-2029

© 2023 Cisco and/or its affiliates. All rights reserved. Cisco Public

31

Journey Data Services Desktop

- Chronological journey
- Customizable data fields
- Clickable URL's
- Custom Icons and Colors
- Insert events from any platform

The screenshot displays the 'Journey' interface with a filter set to 'All' and a date of '10/11/2023'. The 'Livestream' toggle is turned on. The journey consists of three events:

- Payment Complete** (10/11/2023, 8:14 AM): Represented by a blue icon.
- Past Due - 2nd Notification** (10/11/2023, 8:14 AM): Represented by an orange icon.
- Past Due - 1st Notification** (10/11/2023, 8:14 AM): Represented by an orange icon.

The 'Past Due - 1st Notification' event is expanded, showing the following details:

phone	+13033249089
Reason	Late Payment Notification Sent - Notification
MessageForUser	We have noticed your Waterbill payment is overdue. The payment of \$544.73 was due Thursday, March 23rd.
LinkSent	https://buy.stripe.com/test_4gw8AnflUbLBcbC8wB
Notification	1
Past Due Amount	\$544.73
category	Water
status	overdue
origin	Past Due - 1st Notification
channelType	Payment Notify
channelBreakout	sms

Journey Data Services Desktop

Customer Journey Widget

Lookup User

Profile ^

Rue Green ✎

No of times contacted in the last 24 hours	4
No of times contacted in the last 7 days	204
No of times contacted in the last 7 days via email	1
No of times contacted in the last 7 days via chat	1
No of times contacted in the last 7 days via telephony	1

Aliases ⓘ ^

Select type... ▾

Add

Phone	13033249089	✕
Phone	3033249089	✕
Phone	+13033249089	✕
Email	ruegreen@cisco.com	✕

- Searchable
 - CustomerID
 - Phone
 - Email
- Search criteria can be variable driven or use default ANI
- Agent searchable or locked down

Journey Data Services Desktop

Customer Journey Widget

Lookup User

Profile

Rue Green

No of times contacted in the last 24 hours	4
No of times contacted in the last 7 days	204
No of times contacted in the last 7 days via email	1
No of times contacted in the last 7 days via chat	1
No of times contacted in the last 7 days via telephony	1

Aliases

Select type...

Enter a new alias

Add

Phone	13033249089	
Phone	3033249089	
Phone	+13033249089	
Email	ruegreen@cisco.com	

- Progressive Profile
 - Frequency may suggest unresolved concerns
 - Based on time period, agents can anticipate potential challenges
 - Measure and address customer satisfaction
- Out of the box or create your own

Journey Data Services Desktop

Customer Journey Widget

Lookup User

Profile ^

Rue Green ✎

No of times contacted in the last 24 hours	4
No of times contacted in the last 7 days	204
No of times contacted in the last 7 days via email	1
No of times contacted in the last 7 days via chat	1
No of times contacted in the last 7 days via telephony	1

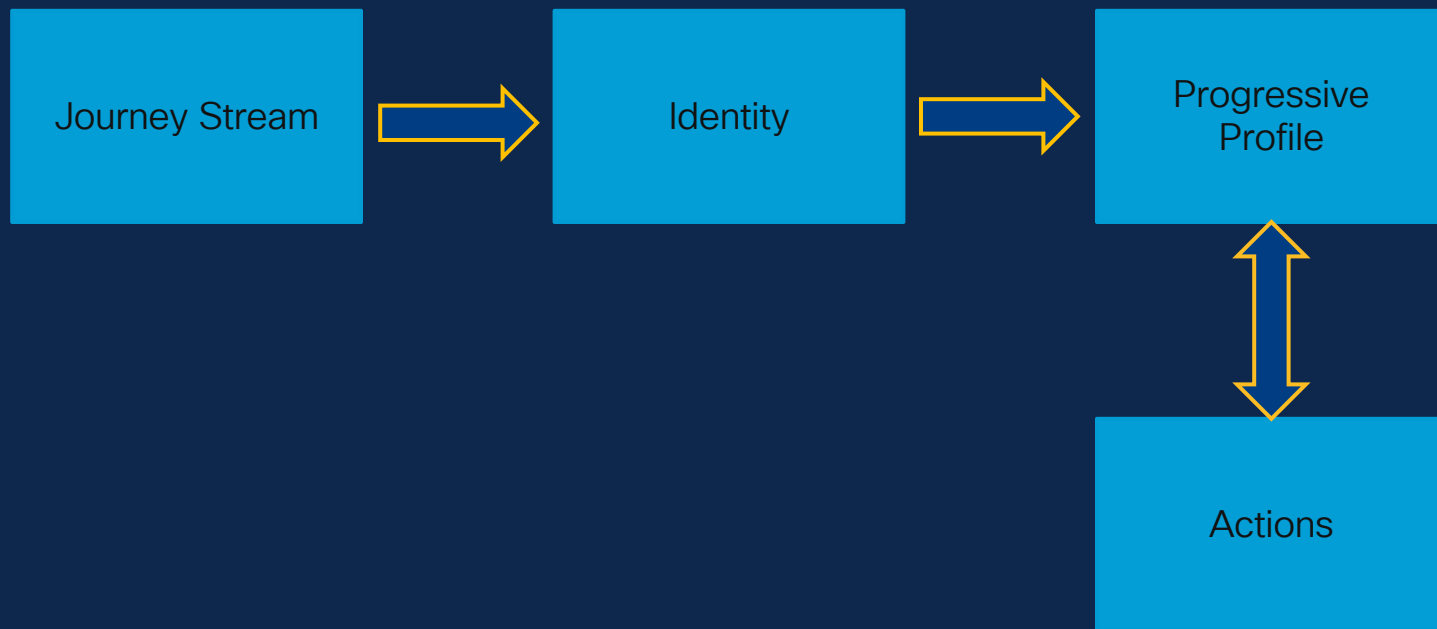
Aliases ⓘ ^

Select type... ▼ Add

Phone	13033249089	✕
Phone	3033249089	✕
Phone	+13033249089	✕
Email	ruegreen@cisco.com	✕

- Aliases
 - Verify identity by cross-referencing communication channels
 - Connect data from various sources and interactions associated with different names
 - Merge and aggregate data from various sources, channels or systems associated
- Agent editable or locked down

Journey Data Services



Identity and Event Feed

First: Rue

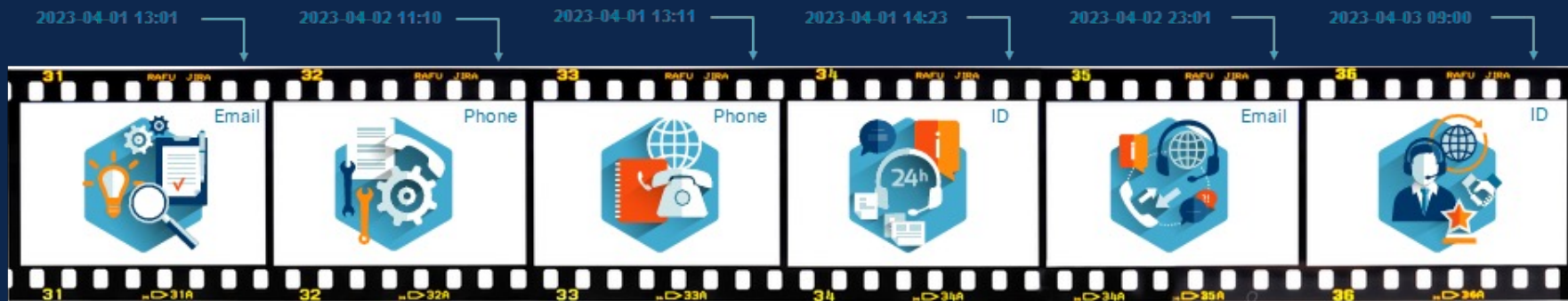
Last: Green

Phone: 111-222-3333
226-376-2555

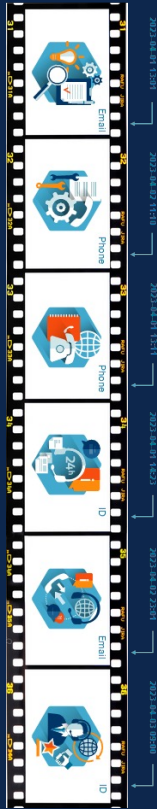
JDS chronologically links records together based on identity aliases

Email: ruegreen@cisc.com
rue@myhome.com

CustomerID: 2266445



Identity and Event Feed



- Chronological journey
- Customizable data fields
- Clickable URL's
- Custom Icons and Colors
- Insert events from any platform

Journey

All Last 24 Hours Last 7 Days Last 30 Days

☒ Livestream

4/1/2023

covid instructions
Information 4/1/2023 10:47 PM

SendNotes
Notes 4/1/2023 10:47 PM

+1 (516) 517-9309
2 events 4/1/2023 10:46 PM

Voice
Callback 4/1/2023 10:46 PM

phone	18505598991
agent	Agent1 Demo
origin	Voice
channelType	Callback
channelBreakout	SMS

OTP
OTP-pass 4/1/2023 10:43 PM

youtube about us
Information 4/1/2023 10:43 PM

phone	18505598991
agent	Agent1 Demo
url	https://www.youtube.com/watch?v=xVc9L7civGg
origin	youtube about us
channelType	Information
channelBreakout	SMS

POST Event Explained

HEADER: Content-Type application/json
 Authorization Bearer {{Token}}

{		
"id": "xxxx-xxxx-xxxx-xxxx",	Unique UUID	Required
"time": "",	Timestamp ISO 8601 format 2023-03-31T00:39:46.917Z	Not Required
"specversion": "1.0",	Version number	Required
"type": "Payment",	Free form text	Required
"source": "WxCC%20Desktop",	URI-reference (no spaces allowed must use hex %20)	Required
"identity": "13033249089",	Number used to identify stream (phone, email, customerId, UUID)	Required
"previousidentity": "",	Link journey records when no known identity	Not Required
"identitytype": "phone",	Categorize identity (phone, email, customerId, temporaryId)	Required
"datacontenttype": "application/json",		
"data": {		
"taskid": "",	Can be added to auto collapse multi-widgets	Not Required
"origin": "Bill Payment",	Used for Widget Title	Required
"channelType": "Webex",	Widget subtitle and Icon	Required
"agent": "Agent1 Demo",	Any additional Fields you want to add	Not Required
"channelBreakout": "SMS"	Any additional Fields you want to add	Not Required

Inspired by the CloudEvent Spec

<https://github.com/cloudevents/spec/blob/v1.0.2/cloudevents/spec.md>

temporaryId Events

temporaryId Events - Home

The screenshot displays a web application interface. The main content area features a live stream of a power line tower against a blue sky with clouds. A navigation bar at the top includes links for Home, About, Contact, and Login. A vertical sidebar on the right contains a 'Talk to an Expert' button. A customer journey widget on the right side of the page shows a list of events for a specific customer ID, including SendNotes, OTP, product info, youtube about us, and Test 5.

Home About Contact Login

Talk to an Expert

Customer Journey Widget

Customer ID 4689557617731186

Customer ID 18505598991

Journey

All Last 24 Hours Last 7 Days Last 30 Days

Livestream

5/22/2023

SendNotes
Notes 5/22/2023 4:57 PM

OTP
OTP-pass 5/22/2023 4:56 PM

product info
Information 5/22/2023 4:56 PM

youtube about us
Information 5/22/2023 4:56 PM

Test 5 - My title
Test 5 5/22/2023 4:56 PM

temporaryId Events – About

Home About Contact Login



Talk to an Expert

Customer Journey Widget

Customer ID 4689557617731186

Customer ID 18505598991

Journey

All Last 24 Hours Last 7 Days Last 30 Days

Livestream

5/22/2023

SendNotes

Notes

5/22/2023 4:57 PM

OTP

OTP-pass

5/22/2023 4:56 PM

product info

Information

5/22/2023 4:56 PM

youtube about us

Information

5/22/2023 4:56 PM

Test 5 - My title

Test 5

5/22/2023 4:56 PM

CISCO Live!

#CiscoLiveAPJC

BRKCCT-2029

© 2023 Cisco and/or its affiliates. All rights reserved. Cisco Public

42

temporaryId Events – Contact

The screenshot displays a web application interface. The main content area features a large image of a hand holding a chalkboard with the text "CONTACT US" written on it. The top navigation bar includes links for "Home", "About", "Contact", and "Login". A vertical sidebar on the right contains a "Talk to an Expert" button. The right-hand panel, titled "Customer Journey Widget", shows a list of events for a customer. The events are as follows:

Event Name	Event Type	Timestamp
SendNotes	Notes	5/22/2023 4:57 PM
OTP	OTP-pass	5/22/2023 4:56 PM
product info	Information	5/22/2023 4:56 PM
youtube about us	Information	5/22/2023 4:56 PM
Test 5 - My title	Test 5	5/22/2023 4:56 PM

temporaryId Events – SMS Expert

Text message with an expert
Less than 2 minute wait time

Name
Enter your full name

Mobile Number
Barry McLellan
Enter your mobile number

Pick your language
English

Close Send

Need Help?

Expert Advisor
We're here to help

Call Us - 8 min wait time
Talk with an expert now

WhatsApp - 2 minute wait time
WhatsApp message with an expert

Callback - 8 minute wait time
Don't wait in queue, we will call you

Email an Expert - 12-24 hour wait time
An expert will respond to your email

SMS an Expert - 2 minute wait time
Text message with an expert

Customer Journey Widget

Customer ID 4689557617731186
Customer ID 18505598991

Journey

All Last 24 Hours Last 7 Days Last 30 Days

Livestream

5/22/2023

SendNotes
Notes 5/22/2023 4:57 PM

OTP
OTP-pass 5/22/2023 4:56 PM

product info
Information 5/22/2023 4:56 PM

youtube about us
Information 5/22/2023 4:56 PM

Test 5 - My title
Test 5 5/22/2023 4:56 PM

temporaryId Events – Login

The screenshot displays a web application interface. On the left, a navigation bar includes links for Home, About, Contact, and Login. A login modal is open, featuring fields for Email (placeholder: 'Enter your email') and Password (placeholder: 'Enter your password'), along with a 'Login' button. The background of the page shows a hand holding a chalkboard with 'US' written on it. On the right, a 'Customer Journey Widget' is visible, showing customer IDs and a timeline of events for the date 5/22/2023. The events include 'SendNotes', 'OTP', 'product info', 'youtube about us', and 'Test 5 - My title'. A 'Talk to an Expert' button is located on the right side of the page.

Home About Contact Login

Login

Email

Enter your email

Password

Enter your password

Login

Customer Journey Widget

Customer ID 4689557617731186

Customer ID 18505598991

Journey

All Last 24 Hours Last 7 Days Last 30 Days

Livestream

5/22/2023

SendNotes
Notes 5/22/2023 4:57 PM

OTP
OTP-pass 5/22/2023 4:56 PM

product info
Information 5/22/2023 4:56 PM

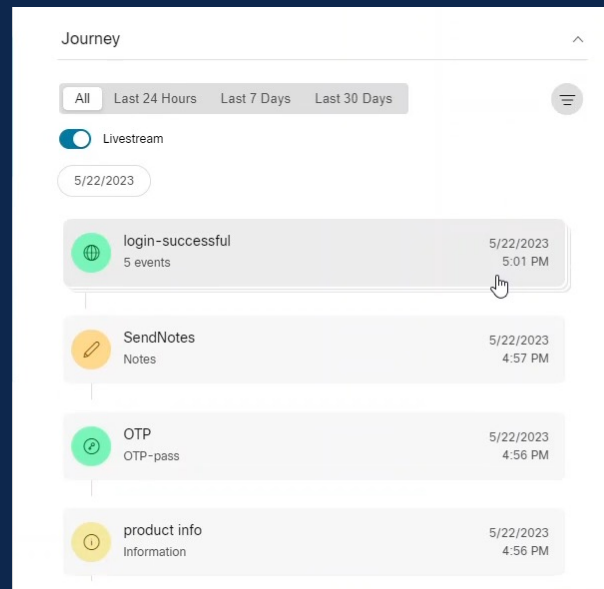
youtube about us
Information 5/22/2023 4:56 PM

Test 5 - My title
Test 5 5/22/2023 4:56 PM

Talk to an Expert

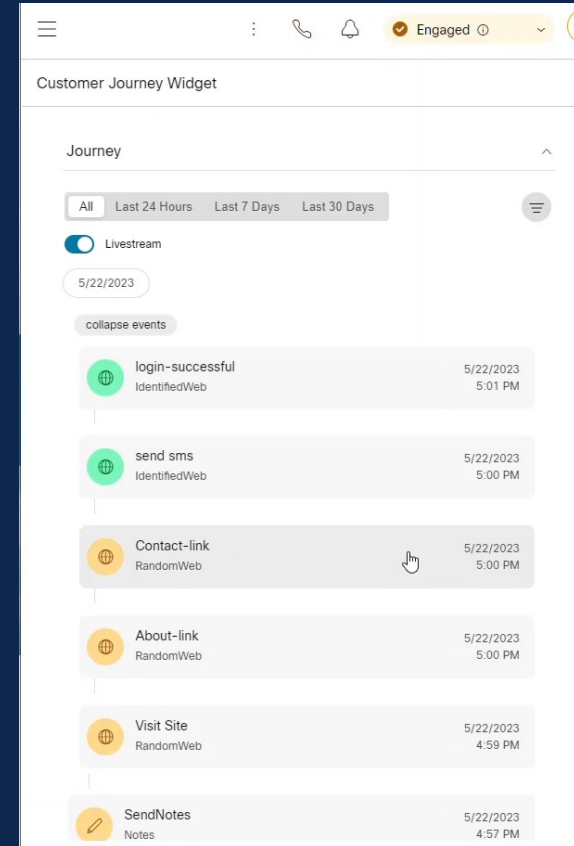
temporaryId Events – Collapsible Journey

- All web events tracked as one collapsible entry
- Color coded icon to denote last web selection



temporaryId Events – Site Interactions

- Expanded events show 5 clicks to website locations
- Yellow denotes unidentified website user
- Use chose SMS channel and we were able to tie back SMS number with user profile
- login-successful with already identified user



temporaryId Events – Expanded Event

- Website information sent to event
- Include identity type of identified user

The screenshot displays a 'Customer Journey Widget' interface. At the top, there's a status bar with 'Engaged' and a dropdown arrow. Below the widget title, a 'collapse events' button is visible. A list of events follows, each with a globe icon, a name, an identity type, and a timestamp. The 'send sms' event is expanded, revealing a detailed metadata table.

Event	Identity Type	Timestamp
login-successful	IdentifiedWeb	5/22/2023 5:01 PM
send sms	IdentifiedWeb	5/22/2023 5:00 PM
Contact-link	RandomWeb	5/22/2023 5:00 PM
About-link	RandomWeb	5/22/2023 5:00 PM
Visit Site	RandomWeb	5/22/2023 4:59 PM

Field	Value
taskId	f3876f11-0c5b-47cf-9636-0ababc648417
identityType	18505598991
appName	Netscape
appVersion	5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/113.0.0.0 Safari/537.36
userAgent	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/113.0.0.0 Safari/537.36
platform	Win32
origin	send sms
url	https://demowebsite-10871.web.app/#
channelType	IdentifiedWeb
channelBreakout	web

temporaryId Events to track unknown users

Website Visit

```
{  "id": "{{ $guid }}",
  "specversion": "1.0",
  "type": "webvisit",
  "source": "home.com:website",
  "identity": "954fcd6c-d-047ddb909",
  "identitytype": "temporaryId",
  "datacontenttype": "application/json",
  "data": {
    "notes": "Website Visit",
    "origin": "Website",
    "channelType": "NewVisit",
    "channelBreakout": "Web"  }
}
```

Need to keep track of identity
New type: identitytype as
temporaryId

Website Review Mortgage Rates

```
{  "id": "{{ $guid }}",
  "specversion": "1.0",
  "type": "webvisitMortgage",
  "source": "home.com:web:mortgage",
  "identity": "954fcd6c-d-047ddb909",
  "identitytype": "temporaryId",
  "datacontenttype": "application/json",
  "data": {
    "notes": "Website Mortgage Rates",
    "origin": "Mortgage Rates",
    "channelType": "MortgageRates",
    "channelBreakout": "Web"  }
}
```

Need to keep track of identity
New type: identitytype as
temporaryId

Log into Website

```
{  "id": "{{ $guid }}",
  "specversion": "1.0",
  "type": "webvisitLogin",
  "source": "home.com:login",
  "previousidentity": "954fcd6c-dd047ddb909",
  "identity": "ruegreen@cisco.com",
  "identitytype": "email",
  "datacontenttype": "application/json",
  "data": {
    "notes": "Website Login",
    "origin": "Website Login",
    "channelType": "LoginUser",
    "channelBreakout": "Web"  }
}
```

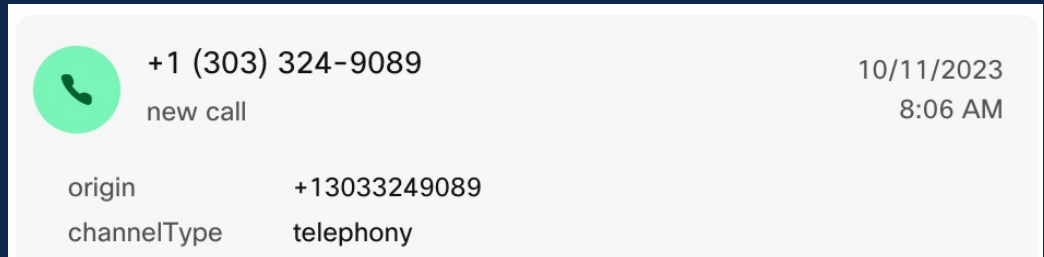
Once user is recognized next post
must contain the previous key
(identity) which will link the 2
previous journeys

Basic Entry required to insert into JDS

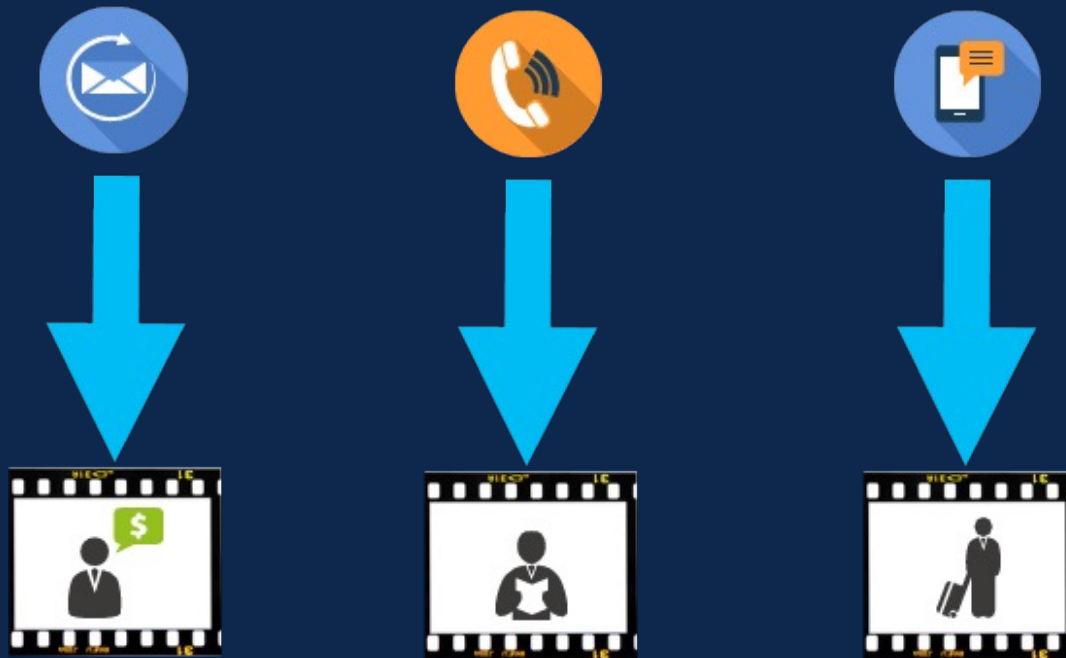
HEADER:

Content-Type application/json
Authorization Bearer {{Token}}

```
{  
  "id": "27fcb3bc-0e7d-47c8-9bca-639daa326c76",  
  "specversion": "1.0",  
  "type": "task:new",  
  "source": "Postman",  
  "identity": "+13033249089",  
  "identitytype": "phone",  
  "datacontenttype": "application/json",  
  "data": {  
    "origin" : "+13033249089",  
    "channelType": "telephony"  
  }  
}
```



Events inserted will automatically create identities



Events from different sources are not linked automatically

Managing identities

- Create identity or find an existing alias
- Merge Identities
- Add Aliases

```
{{baseUrl}}/admin/v1/api/person/merge-identities/workspace-id/{{workspaceId}}  
{  
  "firstName": "Rue",  
  "lastName": "Green",  
  "phone": [  
    "+13033249089",  
    "13033249089"  ],  
  "email": [  
    "ruegreen@cisco.com"  
  ]  
}
```

<https://developer.webex-cx.com/documentation/journey>

Event Feed Filtering to alter flow

[https://api-jds.prod-useast1.ciscowxdap.com/v1/api/events/workspace-id/XXXXX?identity=\(URI Encoded\) &filter=type=='Payment'&data=category=='Water'&pageSize=1](https://api-jds.prod-useast1.ciscowxdap.com/v1/api/events/workspace-id/XXXXX?identity=(URI%20Encoded)&filter=type=='Payment'&data=category=='Water'&pageSize=1)

- Return last record based on identity

.../events/workspace-id/{{id}}?identity={{id}}&pageSize=1

- Filter based on Source in the URL

.../events/workspace-id/{{id}}?filter=type=='Payment'

- Filter based on Data in the URL

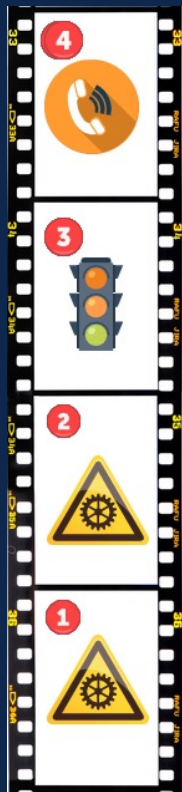
.../events/workspace-id/{{id}}?data=category=='Water'

- Combine Filters

.../workspace-id/{{id}}?filter=type=='Payment'&data=category=='Water'

```
{ "id": "{{ $guid }}",  
  "specversion": "1.0",  
  "type": "Payment",  
  "source": "SMS%20Notification",  
  "identity": "+13033249089",  
  "identitytype": "phone",  
  "datacontenttype": "application/json",  
  "data": {  
    "phone": "+13033249089",  
    "Reason": "Late Payment Notification Sent",  
    "category": "Water",  
    "status": "overdue",  
    "origin": "Past Due - 1st Notification",  
    "channelType": "Payment Notify",  
    "channelBreakout": "sms"  
  }  
}
```

Event Feed Filtering to alter flow



2023-04-02 23:16
source: Voice
category: Watermain
status: Customer Issue

2023-04-02 23:15
source: Outage
category: Watermain
status: Fixed

2023-04-03 12:01
source: Outage
category: Watermain
status: Notification

2023-04-02 11:10
source: Outage
category: Watermain
status: Information

1. Customer sent information about up-and-coming watermain work
2. Customer notification about watermain work to be done
3. Customer notified watermain has been fixed
4. Customer calls into IVR less than a day later.
** Most likely due to watermain outage **

Progressive Profile



2023-04-02 23:18
source: Campaign
Channel: SMS

2023-04-02 23:17
source: Web Form
Channel: Email

2023-04-02 23:16
source: IVR
Channel: Voice

2023-04-02 23:15
source: CCAI
Channel: Voice

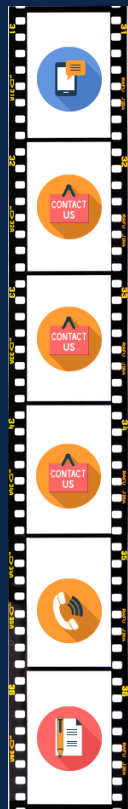
2023-04-02 23:10
source: Direct
Channel: SMS

2023-04-02 11:10
source: Payment
Channel: SMS

- Creates rolling data based on a series of events when applied against an Identity/Alias
- Used in a flow to consider conditional routing
- Examples:
 - How many times have they called into our queues today?
 - Has the customer ever used email before?
 - Has the customer tried out our voice bots before?
 - Have we sent them a campaign SMS in the last 5 days?

<https://{{baseUrl}}/v1/api/progressive-profile-view/workspace-id/{{workspaceId}}/person-id/{{personId}}/template-id/EmailCheck>

Journey Actions



2023-04-02 23:18
source: SMS
category: Call back

2023-04-02 23:17
source: Voice
category: Closed

2023-04-02 23:16
source: Voice
category: Closed

2023-04-02 23:15
source: Voice
category: Closed

2023-04-02 23:10
source: Voice
category: No Agents

2023-04-02 11:10
source: Payment
category: Late

- Auto execute a rules-based action based from values calculated in a progressive profile
- Examples:
 - Customer received 3 late payment notifications...
 - Customer has called and abandoned 10 times in 1 day...
 - Customer has added 3 items into their shopping cart....

Progressive Profile and Journey Actions

- Supported Data Types
 - string, integer, double, utc_datetime
- Create aggregations based on conditions
 - Value, Count, Sum, Max, Min, Average, Distinct
- Loop back period
 - days, hours, minutes
- Conditional branch AND / OR Logic
- Logical operators used for decisioning
 - EQ, NEQ, GTE, GT, LTE, LET

Customer journey widget



Customer Journey Widget

Lookup User

Profile

Rue Green

No of times contacted in the last 24 hours	4
No of times contacted in the last 7 days	204
No of times contacted in the last 7 days via email	1
No of times contacted in the last 7 days via chat	1
No of times contacted in the last 7 days via telephony	1

Aliases

Select type... Add

Phone	13033249089	
Phone	3033249089	
Phone	+13033249089	
Email	ruegreen@cisco.com	

Journey

All Last 24 Hours Last 7 Days Last 30 Days

☒ Livestream

10/11/2023

Payment Complete
Payment Complete 10/11/2023 8:14 AM

Past Due - 2nd Notification
Payment Notify 10/11/2023 8:14 AM

Past Due - 1st Notification
Payment Notify 10/11/2023 8:14 AM

phone +13033249089
Reason Late Payment Notification Sent - Notification
MessageForUser We have noticed your Waterbill payment is overdue. The payment of \$544.73 was due Thursday, March 23rd.
LinkSent https://buy.stripe.com/test_4qw8AnIUBL8cbC8w6
Notification 1
Past Due Amount \$544.73
category Water
status overdue
origin Past Due - 1st Notification
channelType Payment Notify
channelBreakout sms

Lookup any user in the event an identity is not found

Progressive Profile with counts

Aliases associated to this identity

Journey Filtering

Livestream Refresh

Expandable Journey Events

Requires WxCC Adapter for auto events

Coding Language

- Widget uses lit-element JS framework for development
- lit-element is a lightweight library for web components
- Responsive and fast with lit-element
- CSS used for widget's styling and layout
- Widget Source Code:
<https://github.com/CiscoDevNet/cjaas-widgets>

Custom Icons



- All icons that can be used are located at <https://momentum.design/icons>
 - Click the icon and copy the CSS Class Name. We've found size 16 looks the best.
 - Host your icon file on any accessible site.
 - Ensure you are handling any CORS configurations with your cloud provider.
 - ChannelType in your event feed must equal the name you give your icon.
 - Pick from 17 different colors:
blue, green, black, olive, cyan, violet, red, gray, orange, lime, cobalt, purple, yellow, gold, mint, slate, pink
- ```
ChannelType -> "Telephony": {
CSS Class Name -> "name": "icon-handset-active_16",
Color -> "color": "green"
 }
```
- Sample file: Sample icon file – icons  
<https://github.com/CiscoDevNet/cjaas-widgets/blob/592aab211e332d8af13d4b0c830443e38a50aa09/CustomJourney/src/assets/icons.json>
- See video for an example and demonstration  
<https://app.vidcast.io/share/b12ce3a4-848a-4312-8d46-67cf59156e53>

# JSON Layout

- See [github link](#) below for full sample layout to be added into your desktop config

```
"icon-data-path": "https://wxcc-dem.glitch.me/icons.json",
"disable-user-search": "true",
"read-only-aliases": "true ",
"cad-variable-lookup": "customerID"
"project-id": "6463c60771faa61fd63a0383", <- workspaceId in all API posts / project-id in Control Hub
"template-id": "journey-default-template2"
```

Hard coding search string

Change the line

```
"interactionData": "$STORE.agentContact.taskSelected"
to what you would like to search on
"customer" : "XXXXXXX",
```

[Link to more desktop configuration options](#)

<https://github.com/CiscoDevNet/cjaas-widgets/blob/main/CustomerJourney/README-VERSION-9.0.0.md>

# Use case deep dive

# Customer scenarios:

1

## Directing Customer Input

Last minute customers who remember it's time to pay a bill, don't need to wait for menus to take them to their options. Sometimes businesses need to take control as soon as the customer calls.

2

## Repeat Customer

Callers repeatedly hitting the queues are most likely very frustrated and in a hurry to talk with an agent.

3

## Saving the Customer

Things happen in call centers. Late callers, close to end of shift and eager to leave agents could leave a caller with no where to go other than to bed, mad!

# Customer scenarios:

4

Tracking customer journey across website and digital channels.

Once customer chooses a method of contact, or logs into the website we can track their individual journey



# Customer Journey Samples

The screenshot shows the GitHub repository page for `CiscoDevNet/webex-contact-center-api-samples`. The repository is public and has 20 watches, 17 forks, and 16 stars. The `Code` tab is selected, showing the file tree. The `customer-journey-samples` folder is expanded, showing subfolders like `UC1-directing-customer-input`, `UC2-tracking-the-repeat-caller`, `cjds-postman-example`, and `manage-identities-and-aliases`. The `README.md` file is selected, displaying the following content:

**Customer Journey Data Services (CJDS) Samples**

This is the main folder for the Customer Journey Data Services API Samples.

[Video: Overview of Customer Journey Data Services](#)

Explore each of the folders below to understand more of each of the samples below:

| Name                           | Last commit message | Last commit date |
|--------------------------------|---------------------|------------------|
| ..                             |                     |                  |
| UC1-directing-customer-input   | dialogflow-example  | 2 days ago       |
| UC2-tracking-the-repeat-caller | dialogflow-example  | 2 days ago       |
| cjds-postman-example           | dialogflow-example  | 2 days ago       |
| manage-identities-and-aliases  | dialogflow-example  | 2 days ago       |
| README.md                      | readme updates      | last week        |

<https://github.com/CiscoDevNet/webex-contact-center-api-samples/tree/main/customer-journey-samples>

# Use Case 1 – Directing Customer Input

**Directing Customer Input** – Last minute customers who remember it's time to pay a bill don't need to wait for menu's to take them to their options. Sometimes businesses need to take control as soon as the customer calls

## Postman Examples:

- |                                       |                                                     |
|---------------------------------------|-----------------------------------------------------|
| UC1 – Payment Past Due Notify 1       | - Set up the late payment                           |
| UC1 – Check Payment Past Due Notify 1 | - Query JDS and look for event type and category    |
| UC1 – Payment Past Due Notify 2       | - 2 <sup>nd</sup> payment reminder                  |
| UC1 – Payment Made                    | - Payment made, close JDS loop so no more inquiries |

See video for an example and demonstration

<https://github.com/CiscoDevNet/webex-contact-center-api-samples/tree/main/customer-journey-samples/UC1-directing-customer-input>

# Use Case 2 – Repeat Caller

Call and hang up, call and hang up

## Postman Examples:

UC2 – Create Profile Template Repeat Caller  
UC2 – Get All Profile View Templates  
UC2 – POST Queued Caller Info  
UC2 – Progressive Profile View Repeat Caller

- Create Progressive Profile
- Get profile view
- Used script example, but this is the base
- Get the values being accumulated

See video for an example and demonstration

<https://github.com/CiscoDevNet/webex-contact-center-api-samples/tree/main/customer-journey-samples/UC2-tracking-the-repeat-caller>

# Use Case 3 - Saving the Customer

Late night caller

## Postman Examples:

- |                                                 |                                    |
|-------------------------------------------------|------------------------------------|
| UC3 - Create Profile Template Closed Caller     | - Create Progressive Profile       |
| UC3 - Progressive Profile View Closed Caller    | - Get profile view                 |
| UC3 - Create Journey Actions For Closed Callers | - Action Rules required to execute |
| UC3 - Get Journey Actions For Closed Callers    | - View the rules                   |
| UC3 - POST Unstaffed Closed Caller Info         | - Post Unstaffed Closed to JDS     |
| UC3 - POST Closed Caller Info                   | - Post Closed to JDS               |

\*\* Individual Event broadcasting coming soon\*\*

See video for an example and demonstration

<https://app.vidcast.io/share/946a6f80-e7ba-4387-adc3-66249cac0d43>

CISCO *Live!*

# Did you know?

You can have a  
one-on-one session with  
a technical expert!

Visit Meet the Expert in The HUB  
to meet, greet, whiteboard & gain  
insights about your unique questions  
with the best of the best.



## Meet the Expert Opening Hours:

|                  |                         |
|------------------|-------------------------|
| <b>Tuesday</b>   | <b>3:00pm – 7:00pm</b>  |
| <b>Wednesday</b> | <b>11:15am – 7:00pm</b> |
| <b>Thursday</b>  | <b>9:30am – 4:00pm</b>  |
| <b>Friday</b>    | <b>10:30am – 1:30pm</b> |

# Session Surveys

We would love to know your feedback on this session!

- Complete a minimum of four session surveys and the overall event surveys to claim a Cisco Live T-Shirt



# Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Expert meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at [www.CiscoLive.com/on-demand](https://www.CiscoLive.com/on-demand)



The bridge to possible

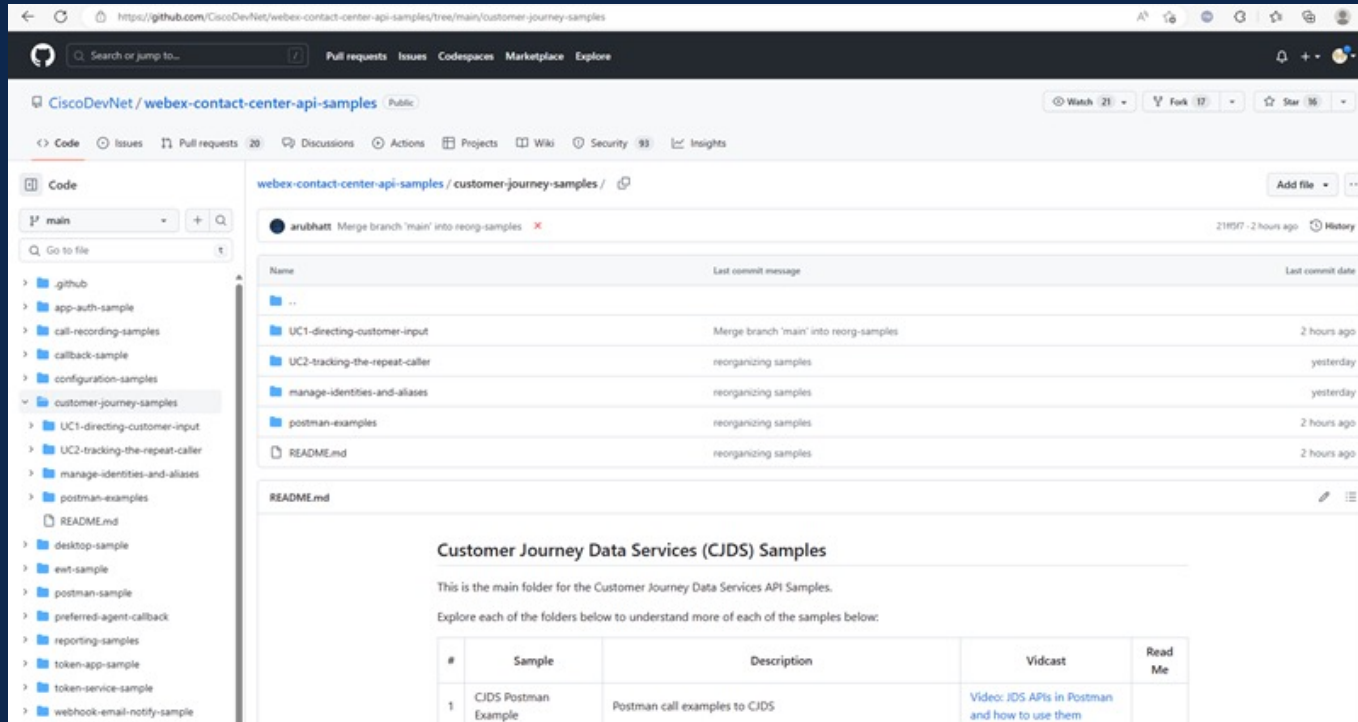
# Thank you

CISCO *Live!*

#CiscoLiveAPJC

# Important Resources

# Important Resources – CiscoDevNet



Customer Journey Data Services (CJDS) Samples

This is the main folder for the Customer Journey Data Services API Samples.

Explore each of the folders below to understand more of each of the samples below:

| # | Sample               | Description                   | Vidcast                                                        | Read Me |
|---|----------------------|-------------------------------|----------------------------------------------------------------|---------|
| 1 | CJDS Postman Example | Postman call examples to CJDS | <a href="#">Video: JDS APIs in Postman and how to use them</a> |         |

<https://github.com/CiscoDevNet/webex-contact-center-api-samples/tree/main/customer-journey-samples>

# Important Resources

JDS APIs - <https://developer.webex-cx.com/documentation/journey>

JDS Overview Vidcast - <https://app.vidcast.io/share/889c2cbf-51b2-4cc9-94f8-9143078dca83>

JDS Use Case and example Vidcast - <https://app.vidcast.io/collections/share/a3d5d3c9-faf8-4773-a16d-1abc27361113>

CloudEvent Spec Details -

<https://github.com/cloudevents/spec/blob/v1.0.2/cloudevents/spec.md>

JDS Widget GitHub Link - <https://github.com/CiscoDevNet/cjaas-widgets>

Cisco Momentum Design (icons) - <https://momentum.design/icons>

# Handy Resources

Javascript Tester- <https://webtoolkitonline.com/javascript-tester.html>

JSON Beautifier- <https://jsonbeautifier.org/>

JSON UnEscape - <https://www.freeformatter.com/json-escape.html#before-output>

JSONtoString Format to 1 line - <https://jsontostring.com/convert-json-to-one-line>

Test Database - <https://mockapi.io/projects>

Webhook Testing - <https://webhook.site/>

GraphQL to JSON - <https://datafetcher.com/graphql-json-body-converter> or

- <https://insomnia.rest/> (free for one cloud project)

CISCO *Live!*

# Did you know?

You can have a  
one-on-one session with  
a technical expert!

Visit Meet the Expert in The HUB  
to meet, greet, whiteboard & gain  
insights about your unique questions  
with the best of the best.



## Meet the Expert Opening Hours:

|                  |                         |
|------------------|-------------------------|
| <b>Tuesday</b>   | <b>3:00pm – 7:00pm</b>  |
| <b>Wednesday</b> | <b>11:15am – 7:00pm</b> |
| <b>Thursday</b>  | <b>9:30am – 4:00pm</b>  |
| <b>Friday</b>    | <b>10:30am – 1:30pm</b> |

# Session Surveys

We would love to know your feedback on this session!

- Complete a minimum of four session surveys and the overall event surveys to claim a Cisco Live T-Shirt



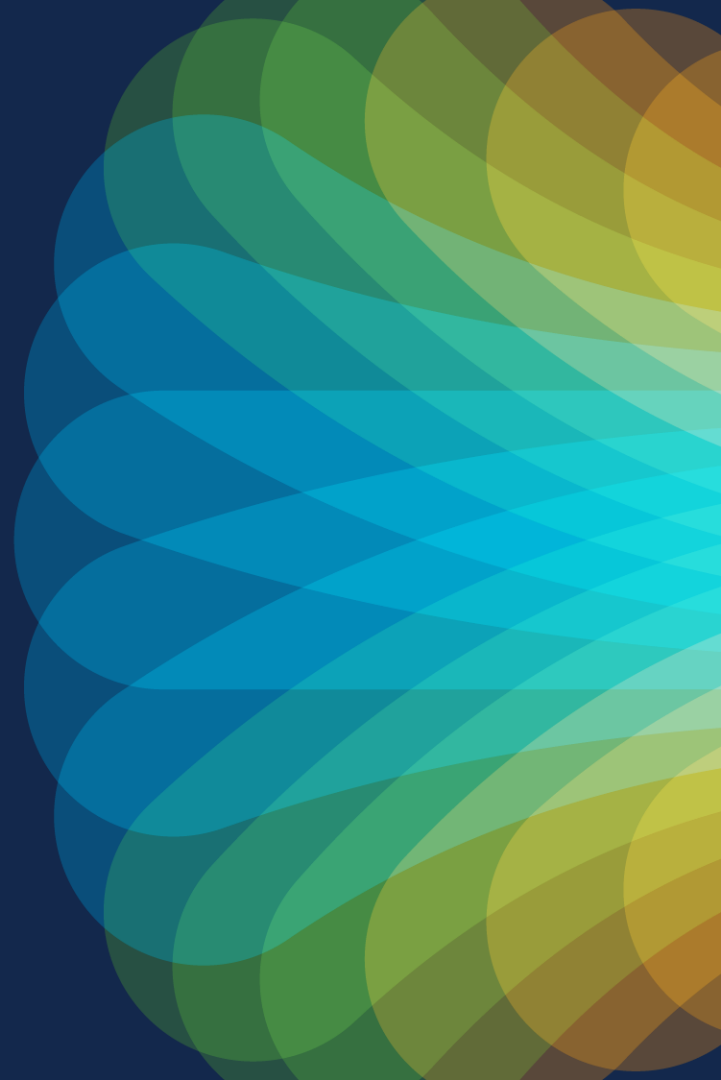
# Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Expert meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at [www.CiscoLive.com/on-demand](https://www.CiscoLive.com/on-demand)

# Appendix

# Key concepts and FAQs



# Key Concepts & FAQs

| Questions                                                      | Details                                                                                                                                                                             |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>What is the Cost of using JDS</i>                           | JDS will be available to all WXCC customers as part of the Standard agent SKU. There are NO additional cost.                                                                        |
| <i>What data format does JDS use for storing Journey data?</i> | JDS is inspired by the CloudEvent Spec to store Data                                                                                                                                |
| <i>What is an event?</i>                                       | Events are the smallest unit of data processed. They describe <b>what occurred</b> – <b>where</b> and <b>by whom</b>                                                                |
| <i>Are there any Day 0/Day 1 Operation before using JDS</i>    | Yes, we recommend customers to upload their known set of end-user details (Name, Phone, Email etc) to ensure we track all the events across all channels with one customer profile. |

# Key Concepts & FAQs

| Questions                                                                                           | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>How do we identify new customers?</i><br><i>How do we create a progressive customer profile?</i> | <p>Data is tracked on tape against a known/unique temporaryId, which can be anything that is unique, validated, and common across the sources.</p> <p>Fresh or Anonymous customers not yet known can also be posted using <u>UUIDv4</u> as placeholder ID, which is held on to but not posted on-to tape until these profiles become known within a 24hrs span, so that the complete journey can be stitched that includes events before they identified themselves, so no interactions falls between the cracks (ex: a fresh customer calling in who later authenticates via CRM Dip, a fresh visitor to a website adding a item to cart later registers to checkout)</p> <p>Two or more PersonIDs can be merged by API where newer events will be logged on the newest ID.</p> |

# Key Concepts & FAQs

| Questions                                      | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>What are different API types within JDS</i> | All JDS APIs are listed on the CC developer portal. JDS APIs can be broadly classified into 4 buckets – Listen, Identify, Analyze & Act.                                                                                                                                                                                                                                                                                                                                                 |
| <i>Is JDS API only service?</i>                | Although JDS is API-first, we do have a UI component (JDS admin portal) for admin to leverage this low code/no-code platform to implement their use cases. As part of our GA release, we will have all the JDS APIs available and JDS admin portal (with limited functionality) available. JDS admin portal will evolve to include more functionalities in the upcoming quarters                                                                                                         |
| <i>Do we have pre-build connectors?</i>        | <p>We currently have pre-build connector within the JDS admin portal for WxCC and will have connectors for other cisco service in our upcoming releases. We are exploring the option to enable Partners to bring their own connectors that meets their specific customer need.</p> <p>Connectors are a low code/no code avenue for JDS to ingest data without leveraging our APIs. However, with our currently available APIs, we can ingest data from ANY application in ANY format</p> |

# Key Concepts & FAQs

| Questions                                                  | Details                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Does JDS have a widget? Can it be customized?</i>       | Yes, we have a widget that will be available out-of-the-box with the WxCC agent desktop before end of Q4 FY23. However, we have also open sourced the code of this widget for Partners/Customers to customize & use this widget as part of their custom desktop layout. |
| <i>Will widget only accept ANI as a search parameter</i>   | Today the widget will accept an ANI as a default parameter, or it can use a user defined CAD variable as the search criteria.                                                                                                                                           |
| <i>Why do I need to use channelType for my custom icon</i> | This allows for you to use filters in the widget.<br>A custom icon name can still contain the channel type, i.e. "Voice – Write Notes", or you can simply make a new field in the data output "Channel": "Voice"                                                        |

# Key Concepts & FAQs

## Questions

## Details

*How do I update First/Last Name fields*

The first and last name fields can be updated using the PATCH command for the admin API

```
.../admin/v1/api/person/workspace-id/{{workSpId}}/person-id/{{personID}}
[
 {
 "op": "replace",
 "path": "/firstName",
 "value": "Rue"
 },
 {
 "op": "replace",
 "path": "/lastName",
 "value": "Green"
 }
]
```

More info can be found at: <https://jsonpatch.com>

*Is there an API call that can update profiles and aliases in one shot*

In previous slides it is talked about using an orchestration tool to do this, however this has been added into the roadmap to perform a create/update/merge Identity and Alias in a single API call.

# Key Concepts & FAQs

| Questions                                                              | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Why do I need to encode ANI's with a '+' sign for a voice call.</i> | URLs are composed of a limited set of characters, and some characters, such as the plus sign (+), have special meanings in URLs. Therefore, when a URL contains a plus sign, it must be properly encoded to avoid any misinterpretation by web servers or browsers. URL encoding replaces special characters with a percentage sign followed by their ASCII code representation, which ensures that the URL is correctly interpreted and processed by web applications. |
| <i>Action Triggers do not pass the event ID that triggered them.</i>   | Originally an Action trigger was developed to execute on a global event. This is an immediate item action on our roadmap to add this feature.                                                                                                                                                                                                                                                                                                                           |
| <i>How can I extract the data to review</i>                            | There currently isn't an OOB method to extract data, however you can use the history API's to pull out journey information for offline viewing.                                                                                                                                                                                                                                                                                                                         |

# Key Concepts & FAQs

| Questions                                         | Details                                                                                                          |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <i>How do I modify or delete existing events.</i> | Events are an append-only, immutable data ledger. You cannot modify or delete events already in the data stream. |
| <i>How long will you store data</i>               | Data will be stored for one year. In the event data needs to be stored longer, there will be a charge for this.  |
| <i>How much data can we store?</i>                | Specifics will come out soon, however for now we will stick with a fair use policy.                              |