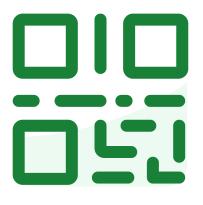# Webex Contact Center APIs

Kevin Simpson, Technical Leader
Jim Wyatt, Technical Leader

How familiar are you with the Contact Center APIs

ⓘ Start presenting to display the poll results on this slide.

API *Fun*damentals

Lightning Round – Acronyms!

Demystifying Terms

REpresentational State Transfer

RESTful

Simple ask and answer, like asking for the blue pen on the table.

Going to a website is a "GET" rest call.

Lightning Round – Acronyms!

Demystifying Terms

Full Duplex HTTPS 1.1 Upgrade

Websockets

Is like either listening to the radio (one way) or talking on the phone (two way), it is a dedicated communication channel that is used to stream data.

Lightning Round – Acronyms!

Demystifying Terms

HTTPS POST Event to your App

Webhooks

Like a doorbell to let you know that someone is here, or something happened, and you need to take an action.

Lightning Round – Acronyms!
Demystifying Terms

HTTP 429 – Too Many Requests

Rate Limiting

Like a circuit breaker, it stops the flow of requests to protect the system.

9

Lightning Round – Acronyms!
Demystifying Terms

JavaScript Object Notation

JSON

Lightning Round – Acronyms!

Demystifying Terms

Graph Query Language

GraphQL

Enables declarative data fetching where a client can specify exactly what data it needs from an API.
Let's you "ask a question" and only receive the details that you want.

Available APIs

APIs Available today

Configuration

Reporting

Agent/Supervisor

Contact Control

Events

APIs Available today

Configuration | **Reporting** | **Agent/Supervisor** | **Contact Control** | **Events**

Desktop Experience:

DESKTOP EXPERIENCE

Multimedia Profiles

Outdial ANI

Desktop Layouts

Dial Plans

Address Books

Desktop Profiles

Idle/Wrap-up Codes

User Management:

USER MANAGEMENT

Sites

Skill Definitions

Skill Profiles

Teams

User Profiles

Contact Center Users

Customer Experience:

CUSTOMER EXPERIENCE

Channels

Queues

Business Hours

Audio Prompts

Flows

Call Recording Schedul...

APIs Available today

| Configuration | Reporting | Agent/Supervisor | Contact Control | Events |

Desktop Experience:

- Multimedia Profile
- Outdial ANI
- Contact Number
- Desktop Layout
- Dial Plan
- Address Book
- Desktop Profile
- Auxiliary Code
- Work Types

User Management:

- Site
- Skill
- Skill Profile
- Team
- User Profile
- Users

Customer Experience:

- Entry Point
- Dial Number
- Contact Service Queue
- Business Hour
- Holiday List
- Overrides
- Audio Files
- Flow
- Global variables

APIs Available today

| Configuration | Reporting | Agent/Supervisor | Contact Control | Events |

Get Queue Statistics:
Retrieve Queue statistics for a given interval of time

Estimated Waiting Time:
Computes the approximate amount of time a task has to wait in a queue before being answered by an agent.

Get Agents statistics:
Retrieve Agent statistics information for specified time duration and interval.

Get Agent Activities:
Retrieve agent activity information for specified time duration and interval.

List Captures:
Retrieve a list of Captures given a set of task IDs

Get Tasks:
Retrieve open and closed tasks for specified time duration and channel type.

APIs Available today

| Configuration | Reporting | Agent/Supervisor | Contact Control | Events |

Task Webhooks:

- Task Conference Done
- Task Conferencing
- Task Connect
- Task Connected
- Task Consult Done
- Task Consulting
- Task Ended
- Task Hold Done
- Task New
- Task On Hold
- Task Parked

Agent Webhooks:

- Agent Login
- Agent Logout
- Agent State Change

Captures Webhooks:

- Capture Available

APIs Available today

Configuration | **Reporting** | Agent/Supervisor | Contact Control | Events

Search API:

GraphQL endpoint to query declarative data fetching.

- Verbosely query data
- Return only the data you need
- Can return
  - value of
  - aggregation
  - a combination of both

APIs Available today

Configuration	Reporting	Agent/Supervisor	Contact Control	Events

Agent Control:

·Buddy Agents List
·Login
·Logout
·Reload
·State Change

Call Monitoring:

- Delete Monitoring Request
- Barge In Request
- Fetch Monitoring Request
- Fetch Monitoring Sessions

APIs Available today

Configuration	Reporting	Agent/Supervisor	Contact Control	Events

Agent Control:

- Buddy Agents List
- Login
- Logout
- Reload
- State Change

Call Monitoring:

- Delete Monitoring Request
- Barge In Request
- Fetch Monitoring Request
- Fetch Monitoring Sessions

Notification:

- Responses to Agent Control
- Responses to Call Monitoring

APIs Available today

| Configuration | Reporting | Agent/Supervisor | Contact Control | Events |

Tasks:

- Create Task
- Update Task
- Accept Task
- Consult Task
- Consult Accept Task
- Consult Conference Task
- Consult End Task
- Consult Transfer Task

- End Task
- Hold Task
- Pause Recording Task
- Resume Recording Task
- Reject Task
- Transfer Task
- Resume Task
- Wrap Up Task

APIs Available today

| Configuration | Reporting | Agent/Supervisor | Contact Control | Events |

Tasks:

- ~~Create Task~~
- Update Task
- Accept Task
- Consult Task
- Consult Accept Task
- Consult Conference Task
- Consult End Task
- Consult Transfer Task

- End Task
- Hold Task
- Pause Recording Task
- Resume Recording Task
- Reject Task
- Transfer Task
- Resume Task
- Wrap Up Task

Notification:

- Response to all task calls except Create Task

Authenticate my app
OAuth 2.0

Webex OAuth2 Mechanism – Overview

1. Create an integration to obtain client id and client secret.

2. Once you obtain an Org's **access_token** and **refresh_token**, you can access their data.

3. Use the access_token (expires after 12 hours) to access the APIs.

4. Use the **refresh_token** (expires after 60 days) to get another access_token.

OAuth2 Access Token Flow

**Webex Common Identity
(Login with Webex)**

- User Profiles and Scopes apply.
- You need a Contact Center Administrator Role to Read and Write to all endpoints.

Your Application

1

Create integration
The User first Reaches Your App
https://your-app.com

Webex Contact Center APIs

OAuth2 Access Token Flow

2 Webex Common Identity
(Login with Webex)

Your Application

1

Your App then redirects the user to Webex
With the Client ID, Scopes needed

config config_read config_write

Webex Contact Center APIs

OAuth2 Access Token Flow

Webex Common Identity
(Login with Webex)

Your Application

3

User is Greeted

with the "Webex Login" Screen

Signs in!

Cisco Webex

Welcome to Webex

Email address

Sign In

Need help signing in?

Webex Contact Center APIs

OAuth2 Access Token Flow

auth_code

**Webex Common Identity
(Login with Webex)**

Your Application

4

Webex Redirects back to the "Redirect URI" of your App with the "Authorization Code"

Webex Contact Center APIs

OAuth2 Access Token Flow

5

access_token

Webex Common Identity
(Login with Webex)

Your Application

Your App reaches out to Webex to Request an Access Token

Webex Contact Center APIs

OAuth2 Access Token Flow

Webex Common Identity (Login with Webex)

Your Application

6

access_token

Webex Contact Center APIs

Your App uses the access_token to access the Webex CC APIs

OAuth2 Access Token Flow

Webex Common Identity
(Login with Webex)

Your Application

6

7

Webex Contact Center APIs

Data is returned to the App,
as long as the **access_token** is valid

Seem like a lot?

Let's see it in action!

The best API??

one

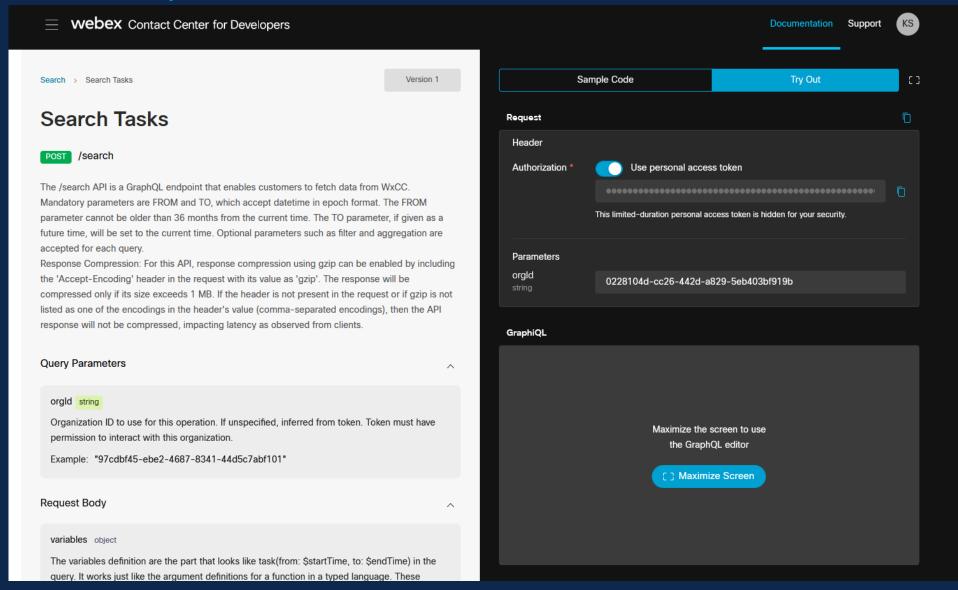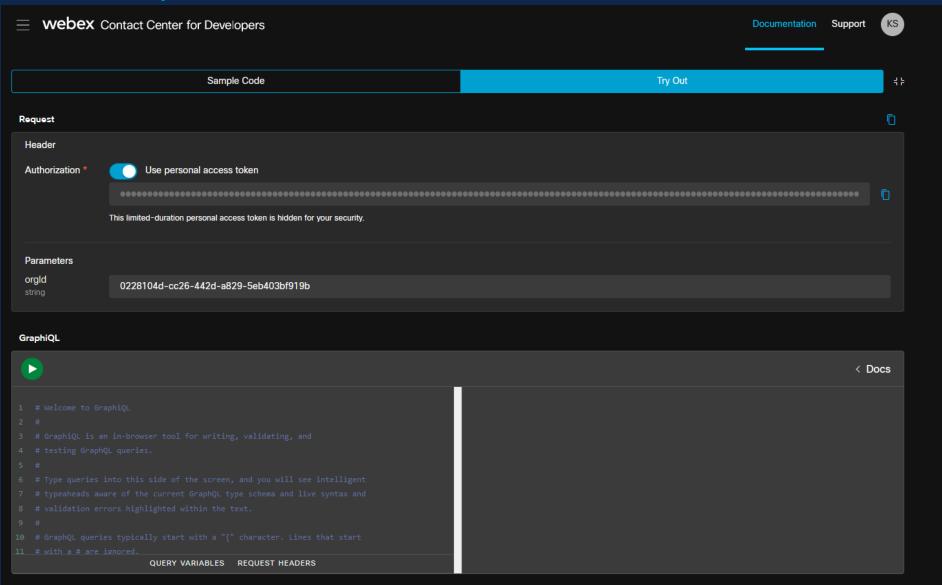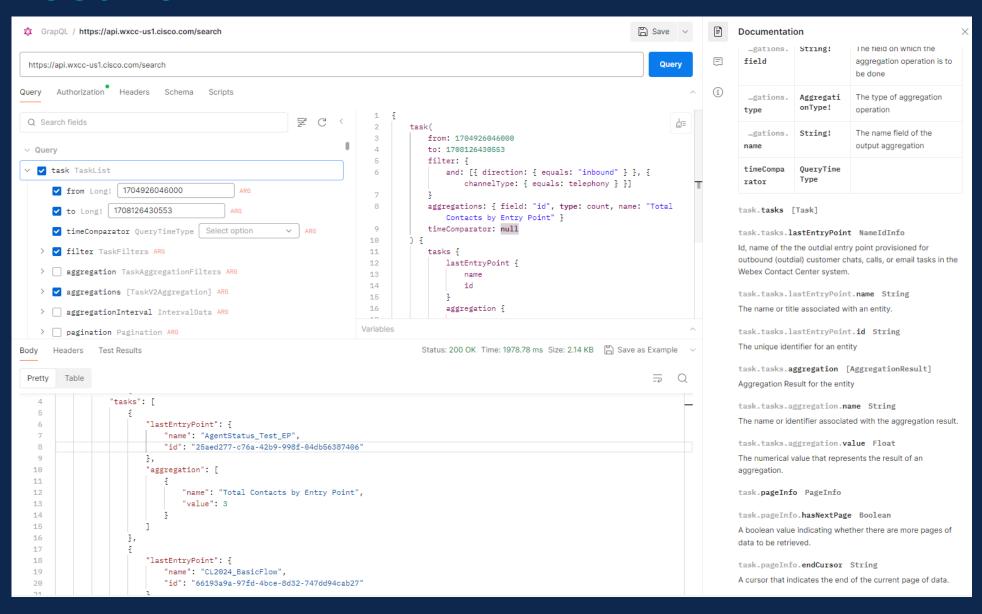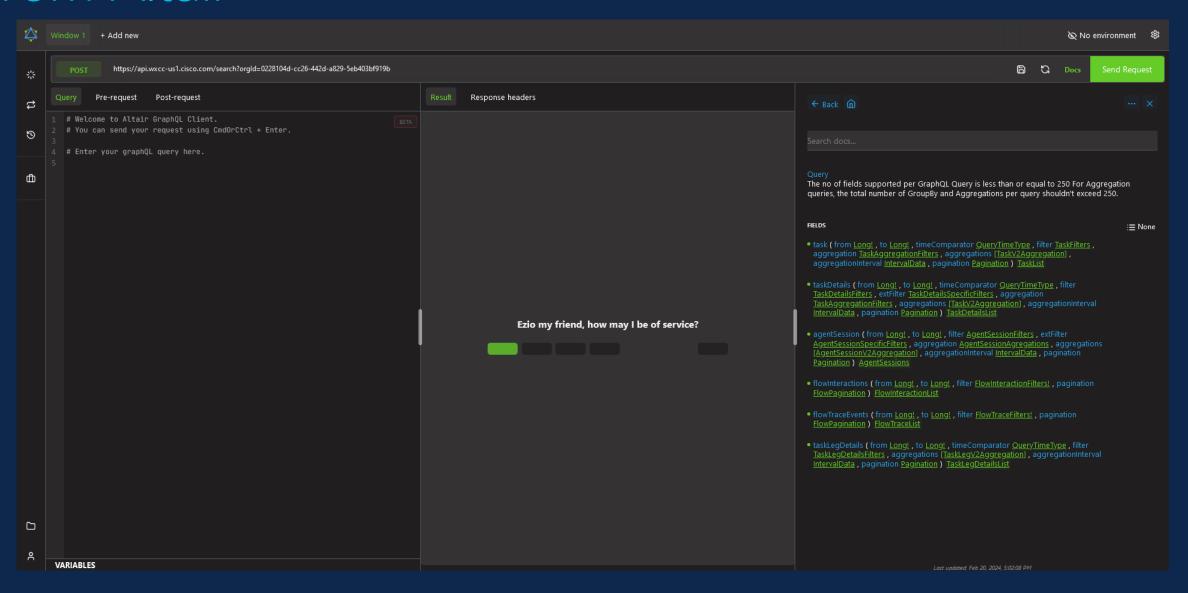# Search API

From Developer Portal

From Developer Portal

From Postman

From Altair

Window 1   + Add new   No environment

POST   https://api.wxcc-us1.cisco.com/search?orgId=0228104d-cc26-442d-a829-5eb403bf919b   Docs   Send Request

Query   Pre-request   Post-request   Result   Response headers

```
1  # Welcome to Altair GraphQL Client.
2  # You can send your request using CmdOrCtrl + Enter.
3
4  # Enter your graphQL query here.
5
```
BETA

None

Ezio my friend, how may I be of service?

← Back 🏠

Search docs...

Query
The no of fields supported per GraphQL Query is less than or equal to 250 For Aggregation queries, the total number of GroupBy and Aggregations per query shouldn't exceed 250.

FIELDS   None

- task (from Long! , to Long! , timeComparator QueryTimeType , filter TaskFilters , aggregation TaskAggregationFilters , aggregations [TaskV2Aggregation] , aggregationInterval IntervalData , pagination Pagination) TaskList

- taskDetails (from Long! , to Long! , timeComparator QueryTimeType , filter TaskDetailsFilters , extFilter TaskDetailsSpecificFilters , aggregation TaskAggregationFilters , aggregations [TaskV2Aggregation] , aggregationInterval IntervalData , pagination Pagination) TaskDetailsList

- agentSession (from Long! , to Long! , filter AgentSessionFilters , extFilter AgentSessionSpecificFilters , aggregation AgentSessionAgregations , aggregations [AgentSessionV2Aggregation] , aggregationInterval IntervalData , pagination Pagination) AgentSessions

- flowInteractions (from Long! , to Long! , filter FlowInteractionFilters! , pagination FlowPagination) FlowInteractionList

- flowTraceEvents (from Long! , to Long! , filter FlowTraceFilters! , pagination FlowPagination) FlowTraceList

- taskLegDetails (from Long! , to Long! , timeComparator QueryTimeType , filter TaskLegDetailsFilters , aggregations [TaskLegV2Aggregation] , aggregationInterval IntervalData , pagination Pagination) TaskLegDetailsList

Last updated: Feb 20, 2024, 5:02:08 PM

VARIABLES

Data Sources Available


```
Query
The no of fields supported per GraphQL Query is less than or equal to 250 For
Aggregation queries, the total number of GroupBy and Aggregations per query
shouldn't exceed 250.

FIELDS                                                          ≣ None

• task ( from Long! , to Long! , timeComparator QueryTimeType , filter
  TaskFilters , aggregation TaskAggregationFilters , aggregations
  [TaskV2Aggregation] , aggregationInterval IntervalData , pagination
  Pagination )  TaskList

• taskDetails ( from Long! , to Long! , timeComparator
  QueryTimeType , filter TaskDetailsFilters , extFilter
  TaskDetailsSpecificFilters , aggregation TaskAggregationFilters ,
  aggregations [TaskV2Aggregation] , aggregationInterval
  IntervalData , pagination Pagination )  TaskDetailsList

• agentSession ( from Long! , to Long! , filter AgentSessionFilters ,
  extFilter AgentSessionSpecificFilters , aggregation
  AgentSessionAgregations , aggregations
  [AgentSessionV2Aggregation] , aggregationInterval IntervalData ,
  pagination Pagination )  AgentSessions

• flowInteractions ( from Long! , to Long! , filter FlowInteractionFilters!
  , pagination FlowPagination )  FlowInteractionList

• flowTraceEvents ( from Long! , to Long! , filter FlowTraceFilters! ,
  pagination FlowPagination )  FlowTraceList

• taskLegDetails ( from Long! , to Long! , timeComparator
  QueryTimeType , filter TaskLegDetailsFilters , aggregations
  [TaskLegV2Aggregation] , aggregationInterval IntervalData ,
  pagination Pagination )  TaskLegDetailsList
```

Relationship between Analyzer repositories and GraphQL queries:

- CSR -> task

- CAR -> taskDetails

- ASR / AAR -> agentSession

- CLR (Queue Records) -> taskLegDetails (coming soon)

Built in Documentation

Data Dictionary provided also for every single available variable in the API

- Available fields

- Definitions of the fields

- Sorting options

- Deprecation warnings with replacement field options

Defining the query

```
task(
  from: "_____"
  to: "_____"
  timeComparator: createdTime
  filter: {}
  aggregation: {}
  aggregations: [{ field: "string", type: count, name: "string" }]
  aggregationInterval: { interval: FIFTEEN_MINUTES }
  pagination: {}
)
```

- Define Data source (task)

- Time window (from/to and which time field)

- Filter Criteria

- Aggregations (Count/Sum/Averages/Min/Max/etc)

Defining the data fields you want returned

```
tasks {
  id
  status
  channelType
  createdTime
  endedTime
  origin
  destination
  contactReason
  direction
  owner
  entryPoint
  terminationType
  channelSubType
  customer
  isActive
  isCampaign
  outdialType
  cpaStatus
  isCallback
  channelMetaData
  callbackData
  recordingLocation
  lastQueue
  lastSite
  lastTeam
  lastEntryPoint
  previousQueue
  preferredAgentSystemId
  terminationReason
  ivrScriptName
  ivrScriptTagName
```

- You pick which fields you want to receive

- Some fields have sub-fields
    - Owner has both a name and ID sub field

- Aggregations

Integrated tooltips

- Tells you what the issue is and provides options to help solve

- Will let you know if a field is being deprecated

- Will provide autocomplete options

Query

```
{
 taskDetails(
   from: "1704926046000"
   to: "1708115861732"
   timeComparator: createdTime
   filter: {
     and: [
       { direction: { equals: "inbound" } }
       { channelType: { equals: telephony } }
       { connectedCount: { gte: 1 } }
     ]
   }
   aggregations: { field: "id", type: count, name: "Total Contacts" }
 ) {
   tasks {
     lastQueue {
       name
     }
     lastWrapupCodeName
     aggregation {
       # name
       value
     }
   }
   pageInfo {
     hasNextPage
     endCursor
   }
 }
}
```

- From: Wed Jan 10 2024 17:34:06 GMT-0500

- To: Fri Feb 16 2024 15:37:41 GMT-0500

- Looking at Created Time

- Filtering for inbound, telephony tasks which were connected

- Creating a count of "id"

Fields to Return

```
{
  taskDetails(
    from: "1704926046000"
    to: "1708115861732"
    timeComparator: createdTime
    filter: {
      and: [
        { direction: { equals: "inbound" } }
        { channelType: { equals: telephony } }
        { connectedCount: { gte: 1 } }
      ]
    }
    aggregations: { field: "id", type: count, name: "Total Contacts" }
  ) {
    tasks {
      lastQueue {
        name
      }
      lastWrapupCodeName
      aggregation {
        # name
        value
      }
    }
    pageInfo {
      hasNextPage
      endCursor
    }
  }
}
```

- Last Queue name

- Last Wrapup Code Name

- Count of Session IDs which meet the criteria

Response

```json
{
  "data": {
    "taskDetails": {
      "tasks": [
        {
          "lastQueue": {
            "name": "kevsimps_queue_1"
          },
          "lastWrapupCodeName": "AFW_SIARCOT",
          "aggregation": [
            {
              "value": 2
            }
          ]
        },
        {
          "lastQueue": {
            "name": "kevsimps_queue_1"
          },
          "lastWrapupCodeName": "Sale",
          "aggregation": [
            {
              "value": 3
            }
          ]
        },
```

- Last Queue name

- Last Wrapup Code name

- Count of Last Wrapup Code Name in the Last Queue

- In the queue "kevsimps_queue_1"
  - Last Wrapup Code Name: "AFW_SIARCOT": 2
  - Last Wrapup Code Name: "Sale": 3

Let's see it in action

Roadmap

Coming soon

- Call Monitoring API (EA) – GA in FY24 Q4

- Dialer API (GA) – Released May 9, 2024

- Support invoking contact center APIs from Flow Designer

- Flow import and export API – Released May 7, 2024

- Bring your Own Virtual Agent – Phase 1 – FY25 Q1

- Agent Burnout API

- Real time voice streaming API

- Real time transcription

- Bulk Data export API

Changelog: New features

- Changes Portal is going through.
- NEW API being released
- CHANGES to existing API to avoid breakage.
- Information on GUIDES and DOC changes.
- GitHub SAMPLES

Changelog

This page lists recent and upcoming changes to the Webex Contact Center APIs.

🔘 Subscribe to RSS

February 15, 2024

`GraphQL` `Update`

- The Search API has moved from Beta to Generally available with updated documentation and guide . There is no functional change to this API

February 13, 2024

`REST` `New`

- Barge In API is introduced to create a successful barge-in request for the supervisor to barge in the call that is being monitored already.
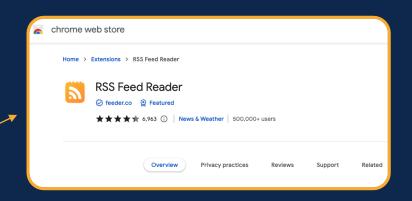
January 2, 2024

`REST` `Update`

- The Captures API response will display specific channel2 value based on callType and number of participants in the call.

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- February
- January

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- June
- May
- April
- March
- January

New	Newly released API resources, endpoints, or properties
Warning	API behavior change, usually related to unintended usage of an endpoint or because of unexpected behavior
Deprecation	API resource, endpoint, or property is still available but is no longer recommended to use and won't be updated further.
Major	Change which may effect specific use cases (like a more specific breaking change)
Breaking	Change which will affect all developers, regardless of API usage

Call to Action!

- Try out the Developer portal

- Attend today's Advanced lab session

- Follow our API dedicated lab

- Check out our GitHub repository with Samples

- Request your Sandbox

- Evangelism

But Wait There's More!!!!

CISCO

The bridge to possible