



The bridge to possible

Automating Migration to Webex Calling

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Cisco Webex App

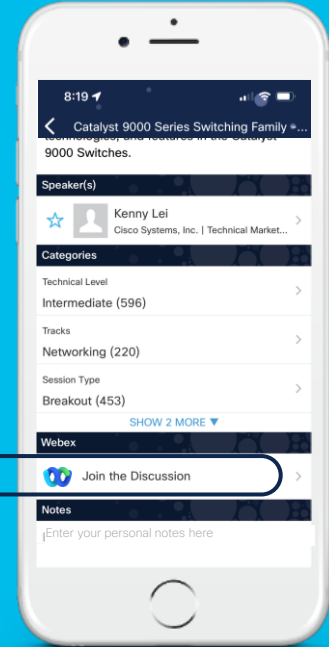
Questions?

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 until February 24, 2023.





Agenda

- Webex Calling API Overview
- CSVs for Webex Calling
- Provisioning and Reporting API demo
- Questions

Introduction

Covering

- Webex Calling APIs & CSVs
- Demos of API usage
- Q&A

Not Covering

- Gathering business requirements
- Exporting relevant data
- Syncing AD & other user data

Webex Calling
APIs are fully
featured and
production ready
today

Who has used
Webex APIs in
the past?



Webex Calling APIs Overview

PROVISIONING

CALL CONTROL

ANALYTICS & REPORTING

Customer Journey

Setup, Onboard, Manage

Call, Meet, Collaborate

Achieve Customer Success

Representative Tasks

- Manage users, phone #s, locations, & services
- Assign licenses
- Create and manage location features

- Place, answer, hang up calls
- Stop / start / pause recording
- Transmit DTMF digits
- List active calls / get history

- Detailed call records
- Onboarding, usage, & quality reporting
- Automated reporting setup

Sample Solutions

- Installation, activation, & onboarding
- Ongoing services management & care
- Self-service via partner portal

- Custom enterprise calling integrations
- Cloud business platform integration
- Custom app development

- User training & adoption services
- Business process design & optimization
- Vertical solutions design & oversight

Provisioning

Webex Calling Provisioning Methods

| | Control Hub | CSV | API |
|---------------|-------------|-----|-----|
| Ease of Use | +++ | ++ | + |
| Speed | + | +++ | +++ |
| Customization | | + | +++ |

The past year in provisioning APIs

Location Schedules Call Behaviour Set Work Number

Numbers (read)

Call Queues

Numbers for LGW Move Numbers to Location

Locations

Call Pickup Call Recording

User Loc Calling Permissions

Hunt Groups Workspaces

Locations Intercept

Location Schedules Groups

Auto Attendant Call Park

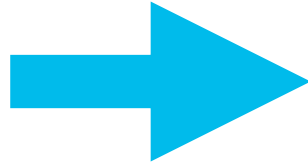
Device Configuration

Call Park Extension User Features

Provisioning CSV

CSV Options

- Users
- Devices
- Workspaces



- Users
- Devices
- Workspaces
- Call Queues
- User Features
- Call Park
- Hunt Groups
- Auto Attendant

Call Control

Calls APIs

v1/telephony/calls API

- Click to **Dial**
- **Answer** a call
- **Divert** a call (voicemail)
- **Reject** or **Hangup**
- **Hold** and **Resume**
- **Transfer** (connected call)
- **Park** connected call and **Retrieve**.
- Group **Park**
- **Recording** (Start, Stop, Pause, Resume) on a call

/calls retrieval

- **Get Call Logs** - missed, placed and received calls (user scope)
- **Get Active Call Details** with a call id

Call Controls

- POST** Dial
- POST** Answer
- POST** Reject
- POST** Hangup
- POST** Hold
- POST** Resume
- POST** Divert
- POST** Transfer
- POST** Park
- POST** Retrieve
- POST** Start Recording
- POST** Stop Recording
- POST** Pause Recording
- POST** Resume Recording
- POST** Transmit DTMF
- POST** Push

Dial

Initiate an outbound call to a specified destination. This is also commonly referred to as Click to Call or Click to Dial. Alerts occur on all the devices belonging to a user. When a user answers on one of these alerting devices, an outbound call is placed from that device to the destination.

POST /v1/telephony/calls/dial

Body Parameters

destination

string Required
The destination to be dialed. The destination can be digits or a URI. Some examples for destination include: 1234, 2223334444, +12223334444, *73, tel:+12223334444, user@company.domain, and sip:user@company.domain.

Response Properties

callId

string
A unique identifier for the call which is used in all subsequent commands for the same call.

callSessionId

string
A unique identifier for the call session the call belongs to. This can be used to correlate multiple calls that are part of the same

Try it Example

POST /v1/telephony/calls/dial

Header

Content-Type *application/json*

Authorization ☒ Use personal access token

Bearer
This limited-duration personal access token is hidden for your security.

Body

destination

Run

/v1/webhooks

Real time event via Webhooks

User Level Events

| | | |
|-----------------|-------------------|------------------|
| originating | originated | received |
| answered | held | resumed |
| disconnected | recordingStarting | recordingStarted |
| recordingPaused | recordingResumed | recordingStopped |
| transferred | bargedIn | Retrieved |
| pickedUp | forwarded | updated |

```
{
  "id": "Y2l2Y29zcGfYazovl3VzL1dF0khPt0svMDSUDDQ4ZmEtNjE5Y00mYzhLTllyZktNjExMDY0ZmYyZ4Y2cy",
  "name": "Y2l2Y29zcGfYazovl3VzL1JT00vODlk0Dc37tAtMGUzNi0xMWVlTk0YTYtMDMNGExY2M5YTU2",
  "targetUrl": "https://a4xtap22j7.execute-api.us-east-1.amazonaws.com/calls/",
  "resource": "telephony_calls",
  "event": "deleted",
  "orgId": "Y2l2Y29zcGfYazovl3VzL09SR0F0SvPBVELPtI9hmQ3mJNlMSi1OWM5LTRlNWQtYjZlOC05NDZhZDliMmU3MGI",
  "createdBy": "Y2l2Y29zcGfYazovl3VzL1BFT1BMR584MWNhZjUzOC1jODQwLTQ0OWItYmQ3ZiIhYTRhNjJmYmY4MmU",
  "appId": "Y2l2Y29zcGfYazovl3VzL0FQUEXJ0QFUSU9OL0NkNjVktNExMDUZYMU0NWViY2VhODk4NTU4YTQzNGFlMzE1YtC0ZWU2ZjZnNGlYOGlSMdNJZTlhYTZjZGNNMWFm",
  "ownedBy": "creator",
  "status": "active",
  "created": "2020-10-14T18:03:25.829Z",
  "actorId": "Y2l2Y29zcGfYazovl3VzL1BFT1BMR584MWNhZjUzOC1jODQwLTQ0OWItYmQ3ZiIhYTRhNjJmYmY4MmU",
  "data": {
    "eventType": "disconnected",
    "actorPersonId": "Y2l2Y29zcGfYazovl3VzL1BFT1BMR584MWNhZjUzOC1jODQwLTQ0OWItYmQ3ZiIhYTRhNjJmYmY4MmU",
    "orgId": "Y2l2Y29zcGfYazovl3VzL09SR0F0SvPBVELPtI9hmQ3mJNlMSi1OWM5LTRlNWQtYjZlOC05NDZhZDliMmU3MGI",
    "eventTimestamp": "2020-10-15T18:06:20.781Z",
    "callId": "Y2l2Y29zcGfYazovl3VzL0NBTEwY7ZFs6ghhbGytNdC5OTow",
    "callSessionId": "0GQ3YzhkNzgtZjIxZi00YjU1LTk0NDk0Y2YlThNDFiNmFlYTM2",
    "personality": "terminator",
    "state": "disconnected",
    "remoteParty": {
      "name": "ado usr8",
      "number": "1012",
      "personId": "Y2l2Y29zcGfYazovl3VzL1BFT1BMR584MWNhZjUzOC1jODQwLTQ0OWItYmQ3ZiIhYTRhNjJmYmY4MmU",
      "privacyEnabled": false,
      "callType": "location"
    }
  },
  "created": "2020-10-15T18:06:10.269Z",
  "answered": "2020-10-15T18:06:17.211Z",
  "disconnected": "2020-10-15T18:06:20.781Z"
}
```

Reporting

Reports API

- Generate reports for all collab products
- 13 months of data available

Create a Report

Create a new report. For each `templateId`, there are a set of validation rules that need to be followed. For example, for templates belonging to Webex, the user needs to provide `siteUrl`. These validation rules can be retrieved via the Report Templates API.

The "templated" parameter is a number. However, it is a limitation of developer.webex.com platform that it is passed as a string when you try to test the API from here.

CSV reports for Teams services are only supported for organizations based in the North American region. Organizations based in a different region will return blank CSV files for any Teams reports.

POST `/v1/reports`

Body Parameters

templateId
number Required
Unique ID representing valid report templates.

startDate
string
Data in the report will be from this date onwards.

endDate
string
Data in the report will be until this date.

siteList
string
Sites belonging to user's organization. This attribute is needed for site-based templates.

Try it Example

POST `/v1/reports`

Header

Authorization

☒ Use personal access token

Bearer `*****`

This limited-duration personal access token is hidden for your security.

Body

templateId `e.g. 5`

startDate `e.g. 2020-05-01`

endDate `e.g. 2020-05-05`

siteList `e.g. cisco.webex.com`

Run

v1/reports

- Run report
- Get Data from report
- List (previously ran reports)
- Delete report

| Reports |
|------------------------|
| Call queue stats |
| Call queue agent stats |
| AA summary |
| AA Business Hours |
| AA After Hours |
| Engagement |
| Media Quality |
| Detailed Call History |

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Detailed Call History API

- Near real time call history API
- 5 minutes -> 48 hours of data available

v1/cdr_feed

- **Get** records

```
1  {
2    "items": [
3      {
4        "Answer time": "2023-02-06T00:21:42.801Z",
5        "Answered": "true",
6        "Direction": "TERMINATING",
7        "Called line ID": "NA",
8        "Call ID": "BW002141793060223-1420647533@10.21.0.214",
9        "Calling line ID": "SAMO_DFW user01",
10       "Start time": "2023-02-06T00:21:41.789Z",
11       "Call type": "SIP_ENTERPRISE",
12       "Client type": "WXC_DEVICE",
13       "Client version": "11",
14       "Correlation ID": "b3ae24ed-4476-4ef5-8dce-56cab66190ce",
15       "International country": "",
16       "Device MAC": "0242BE13160A",
17       "Duration": 29,
18       "Inbound trunk": "",
19       "Org UUID": "a96d9962-8a65-4ee5-9040-fbc3e9efa7ae",
20       "Original reason": "",
21       "OS type": "na",
22       "Outbound trunk": "",
23       "Redirect reason": "",
24       "Related reason": "",
25       "Report ID": "44821cf0-ee8c-3057-bc4e-9c225d72c4c8".
26     }
27   ]
28 }
```

Demo - Docs



Demo - APIs



Demo Scenario

- You are an admin with a group of new users to provision
- You also need to add them to an IT Support Call Queue
- You'd like to create a custom integration with your internal customer support tool, so that agents can automatically call back customer leads from a list of leads.
- You'd like to export detailed call history reports
- You'd like to create an application to automate everything above!

Postman Collections

Get started quickly!

- Python SDK
- Actively maintained
- Supporting all Webex Calling API endpoints

```
"""
Example script
Get all calling users within the org
"""

from dotenv import load_dotenv

from wxc_sdk import WebexSimpleApi

load_dotenv()

api = WebexSimpleApi()

calling_users = [user for user in api.people.list(calling_data=True)
                  if user.location_id]
print(f'{len(calling_users)} users:')
print('\n'.join(user.display_name for user in calling_users))
```

Download – pypi.org/project/wxc-sdk/
Docs – wxc-sdk.readthedocs.io/en/latest/

Webex Calling API References

- Webex API documentation
<https://developer.webex.com/>
- Postman Collection – Provisioning
<https://github.com/webex/postman-webex-calling>
- Postman Collection – Call Control
<https://github.com/webex/postman-webex-calling>
- Webex Calling provisioning SDK
https://github.com/jeokrohn/wxc_sdk
- TME Video Library (Webex Calling playlist)
<https://www.youtube.com/c/CiscoCollaborationTechnicalMarketing>
- Zeep documentation
<https://docs.python-zeep.org/en/master/>
- Zeep examples
<https://github.com/CiscoDevNet/axl-python-zeep-samples>
- csv module
<https://docs.python.org/3/library/csv.html>
- Pandas
<https://pandas.pydata.org/>
- Set up your Webex Calling features
<https://help.webex.com/en-us/article/0r7a2z/Set-up-your-Webex-Calling-features>

Webex Calling
APIs are fully
featured and
production ready
today!

Questions

Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at <https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>



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Thank you

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