

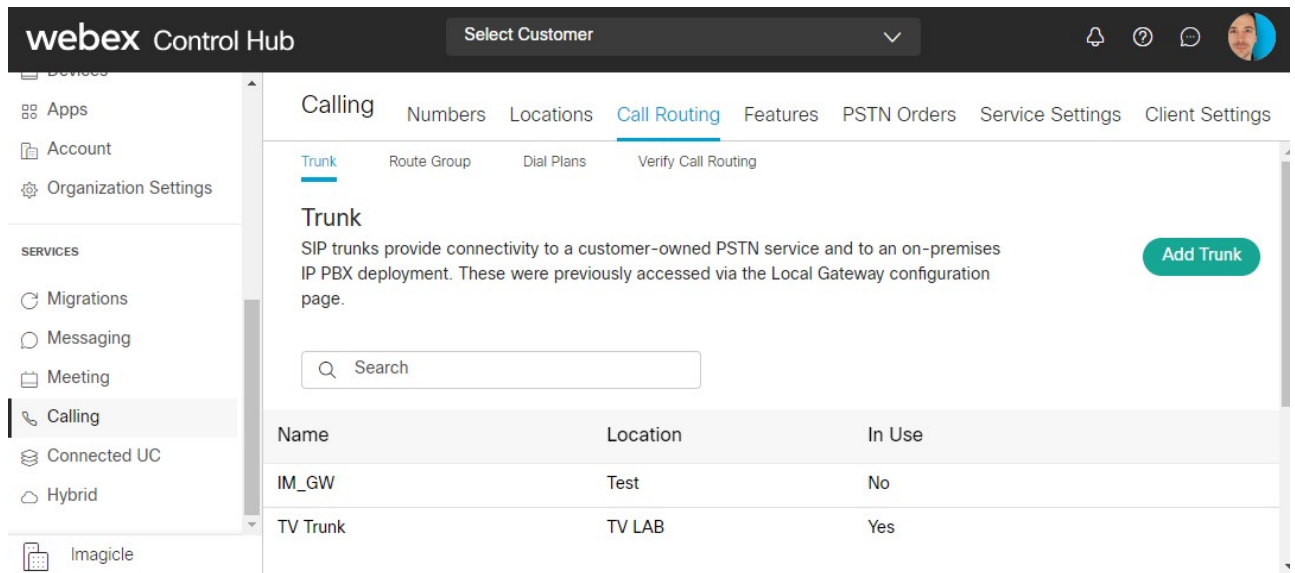
Cisco Webex Calling SIP Routing to Imagicle UC Cloud Suite

Cisco Webex Calling – Configurations from Webex Control Hub

Imagicle UC Cloud Suite leverages dedicated/shared Cisco CUBE (or vCUBE) "Public SBC" deployed in Imagicle Cloud, to allow the Internet "OTT" Peering to Webex Calling cloud.

SIP Trunk Setup

Please access to [Webex Control Hub web portal](#) to define the Secure SIP Trunk which allows to route Advanced Queuing and Auto Attendant calls from Webex Calling to Imagicle Cloud. Please select Calling Service – Call Routing:



Hit "Add Trunk" and populate the following fields:

- **Location:** select the location where incoming calls for Imagicle Queues/AutoAttendant should land from pull-down menu
- **Name:** enter a name to identify the SIP Trunk. Max 12 characters.
- **Trunk Type:** select "Registration based" from pull-down menu
- **Dual Identity Support:** disabled

Add Trunk

Location

This location is where the trunk is physically connected. To create a new location, visit the [Locations](#) page.

Name

Trunk Type

Choose the right trunk type for this local gateway. [Learn more](#) on trunk type

Device Type

Dual Identity Support

The Dual Identity Support setting impacts the handling of the From header and P-Asserted-Identity (PAI) header when sending an initial SIP INVITE to the trunk for an outbound call. When enabled, the From and PAI headers are treated independently and may differ. When disabled, the PAI header is set to the same value as the From header. Please refer to the documentation for more details.

Cancel

Save

Hit Save to display a Trunk recap page:

Add Trunk



Imagicle_trunk Successfully Created.

Visit [Route Group](#) page to add trunk(s) to a route group.
 Visit [Locations](#) page to configure PSTN connection to individual locations.
 Visit [Dial Plans](#) page to use this trunk as the routing choice for a dial plan.

Trunk Info

Status

● offline

Line/Port

Imagicle_trunk3480_LGU@79185619.eu10.bclid.w
ebex.com

Trunk Group OTG/DTG

imagicle_trunk7484_lgu

Authentication Information

Record the username and password below. If you lose this information, you need to retrieve the username and reset the password.

Outbound Proxy Address

fr09.sipconnect-eu.bclid.webex.com

Username: Imagicle_trunk7484_LGU

Registrar Domain

79185619.eu10.bclid.webex.com

Password: +c~1a}4HEn

As you notice in above sample, Trunk Status is "offline". That's because the destination gateway (Imagicle Public SBC) hasn't been configured yet. Please take note of the following info available in above Trunk recap page and send them to wbx.onboarding@imagicle.com:

- **Registrar Domain:** 123456.eu10.bclid.webex.com
- **Trunk Group OTG/DTG:** imagicle_trunk1234_lgu
- **Line/Port:** Imagicle_trunk1234_LGU@12345678.eu10.bclid.webex.com
- **Outbound Proxy Address:** cc11.sipconnect-eu.bclid.webex.com
- **Username:** Imagicle_trunk12345_LGU
- **Password:** +abcdef-

Once above info are correctly configured in Imagicle Cloud Public SBC, the Trunk turns to Active status.

Imagicle Public SBC Configurations

Once accomplished above Trunk configuration, Webex Calling Cloud knows that there is an Imagicle UC Cloud Suite somewhere in Internet and it is expecting to receive at least an "Option Ping" to declare the Trunk online and available.

Public SBC configuration is applied by Imagicle Cloud Services team, based on above Trunk parameters, retrieved in Trunk recap web page.

Once Imagicle CS has applied required SBC configurations, you can go back to Webex Control Hub web portal and check that SIP Trunk is Online. Calling Service [Call Routing](#) [Trunk](#) [Details](#):

Trunk > Details

Status

● online

Registrar Domain

79185619.eu10.bclid.webex.com

Trunk Group OTG/DTG

imagicle_trunk7484_lgu

Line/Port

Imagicle_trunk3480_LGU@79185619.eu10.bclid.webex.com

Outbound Proxy Address

fr09.sipconnect-eu.bclid.webex.com

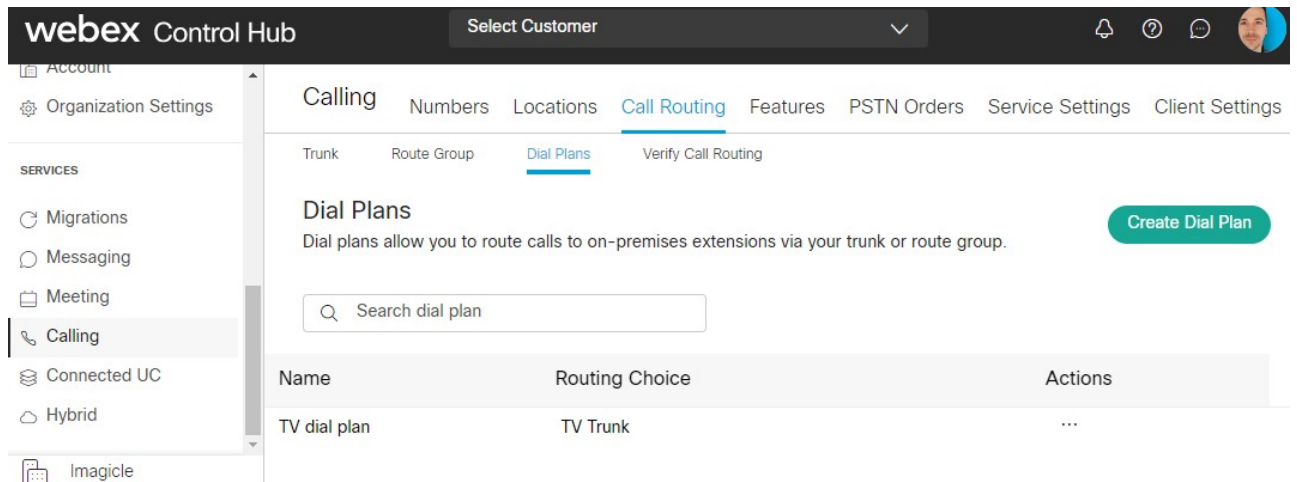
Authentication Information

Retrieve the username and password for **Imagicle_trunk**. Each time authentication information is retrieved, a new password is generated. During the password generation, PSTN is disrupted until the new password is saved.

[Retrieve Username and Reset Password](#)

Dial Plans Setup from Webex Control Hub

Please access again to [Webex Control Hub web portal](#) and select Calling Service â Call Routing â Dial Plans:



The screenshot shows the Webex Control Hub interface. The top navigation bar includes 'webex Control Hub', 'Select Customer', and user profile icons. The left sidebar lists 'Account', 'Organization Settings', and 'SERVICES' with sub-items: 'Migrations', 'Messaging', 'Meeting', 'Calling', 'Connected UC', 'Hybrid', and 'Imagicle'. The main content area is titled 'Calling' and includes sub-tabs for 'Numbers', 'Locations', 'Call Routing', 'Features', 'PSTN Orders', 'Service Settings', and 'Client Settings'. Under 'Call Routing', there are sub-tabs for 'Trunk', 'Route Group', 'Dial Plans', and 'Verify Call Routing'. The 'Dial Plans' section has a 'Create Dial Plan' button and a search box labeled 'Search dial plan'. Below the search box is a table with columns 'Name', 'Routing Choice', and 'Actions'. The table contains one entry: 'TV dial plan' with 'TV Trunk' as the routing choice and a three-dot menu icon for actions.

Name	Routing Choice	Actions
TV dial plan	TV Trunk	...

imagicle

Now click on "Create Dial Plan" and add a name to it. Then select Imagicle Trunk from pull-down menu and finally add a PREFIX pattern to be used to route calls to Imagicle Queues and Auto Attendant Services (+28! in below sample). Please ask Imagicle team about the correct prefix to apply:

x

Create Dial Plan

Create a dial plan to route internal calls to your PBX site. Calls are routed when they contain routing prefixes associated with the specified trunk or route group.

Name

Routing Choice

When internal calls match with a pattern, calls will be routed to the specified trunk or route group.

Dial Patterns

A pattern can be a +E.164 prefix, a location dialing (ESN) prefix, or a SIP URI domain. A pattern needs to be unique. The longest match will be applied. Add up to 200 dial patterns at a time. To add more all at once, use CSV import.

Wildcards:

- "!" represents a sequence of one or more digits; only allowed with +E.164 prefixes. ⓘ
- "X" represents a single number (0-9). ⓘ
- A domain with a leading "*" indicates all sub-domains of that domain. For example, *.example.com.

[↑ Import CSV](#)

+28! xx

Enter dial patterns separated by commas

1 dial pattern 🗑️ Clear All

CancelSave

Hit <TAB> key and then click on "Save" button. Please check that new Dial Plan entry has been properly added to the overall Dial Plan list:

The screenshot shows the Webex Control Hub interface. The top navigation bar includes 'webex Control Hub', 'Select Customer', and user profile. The left sidebar lists navigation options: 'Apps', 'Account', 'Organization Settings', 'SERVICES' (Migrations, Messaging, Meeting, Calling, Connected UC, Hybrid), and 'Imagicle'. The main content area is titled 'Calling' and includes sub-sections: 'Numbers', 'Locations', 'Call Routing' (selected), 'Features', 'PSTN Orders', 'Service Settings', and 'Client Settings'. Under 'Call Routing', there are sub-sections: 'Trunk', 'Route Group', 'Dial Plans' (selected), and 'Verify Call Routing'. The 'Dial Plans' section has a description: 'Dial plans allow you to route calls to on-premises extensions via your trunk or route group.' and a 'Create Dial Plan' button. Below is a search bar and a table:

Name	Routing Choice	Actions
Imagicle_dialplan	Imagicle_trunk	...
TV dial plan	TV Trunk	...

Please be aware that, from now on, all outbound calls performed by Webex Calling users, starting with above prefix, will be routed to Imagicle Public SBC via Secure SIP Trunk, independently from user's own Location or the Service who triggers the call.

Webex Calling Auto-Attendant Service for call routing to Imagicle services

This configuration allows to assign a Public PSTN number to an Imagicle Queue or Auto Attendant Service. Webex Calling Auto-Attendant Service is therefore used only to bridge PSTN numbers to the previously defined internal Dial Plan range (numbers starting with assigned prefix).

If you are leveraging a multi-location Webex Calling environment, you can also create an Auto-Attendant Service for each location, associating local branch numbers to handle local Imagicle queue/IVR services.

Please access again to [Webex Control Hub web portal](#) and select Calling Service â Features â Auto Attendant:

The screenshot shows the Webex Control Hub interface. The left sidebar contains navigation options: Devices, Apps, Account, Organization Settings, SERVICES (Migrations, Messaging, Meeting, Calling, Connected UC, Hybrid), and Imagicle. The main content area is titled 'Calling' and has several tabs: Numbers, Locations, Call Routing, Features (selected), PSTN Orders, Service Settings, and Client Settings. Under the 'Features' tab, there are sub-tabs: Auto Attendant (selected), Call Park Extension, Call Park Group, Call Pickup, Call Queue, Hunt Group, Office Anywhere, and Paging Group. The 'Auto Attendant' sub-tab is active, displaying the following content:

- Auto Attendant**: Auto attendants play customized prompts and provide callers with menu options for routing their calls through your system. [Create Auto Attendant](#)
- Search Auto Attendant:
- Location: All Locations (dropdown menu)
- Buttons: Export, View Reports
- Table:

Auto Attendant Name	Location	Phone Number	Extension	Actions
test2	Treviso	+390239306291	6291	...

Please click on "Create Auto Attendant" and fill the form with Location (from pull-down menu), Auto Attendant name of your choice, PSTN Phone Number (from pull-down menu), Calling ID First Name & Last Name. These last two fields dictate the Caller ID that called number receives once a call is transferred from this Auto Attendant Service:

Create Auto Attendant



Location

Assign your auto attendant to a location

Auto Attendant Name

Enter a name. This name is used to identify the auto attendant later.

Phone Number

Assign the Auto Attendant to a primary phone number and/or extension

 and/or

Language

Select the Auto Attendant language. This field is required by government regulation.

Calling Line ID

Caller ID is used when calls are transferred or forwarded out of this auto attendant.

Calling ID First Name

Calling ID Last Name

Hit Next and create a new Schedule with a name of your choice. Just keep all default values. This schedule config is actually ignored, so no need to worry about it.

Create Auto Attendant



Business Hours Schedule

Set the hours during which your Business Hours Auto Attendant operates. Your After Hours Auto Attendant operates during all the remaining non-business hours.

- Assign an existing schedule
- Create a new schedule

Schedule

The new schedule shows a default entry. You can modify the schedule to fit your organization's needs.

Sunday

Monday to

Tuesday to

Wednesday to

Thursday to

Friday to

Saturday

Lunch Break

Lunch Break to

* Applies to every Business Day.

Hit Next three times to skip unused Holidays, Menu options and greetings (voice prompts) options. Eventually you reach the Auto Attendant recap page:

Create Auto Attendant



Auto Attendant Settings Review

Review the settings for your new Auto Attendant to make sure everything is correct. You can go back and make changes now, or make edits, manage, and enable Advanced Features at any time by clicking the name of your Auto Attendant on the Features page.

General Settings Business Hours After Hours Holidays

Auto Attendant Name: Imagicle_services
 Location: Imagicle
 Phone Number: +390225067784
 Extension: N/A
 Language: English
 Calling ID First Name: Imagicle
 Calling ID Last Name: services

[Back](#) [Create](#)

Hit Create to save and activate the Auto Attendant Service. Now, from Webex Control Hub menu, you can find newly created Auto Attendant Service:

webex Control Hub Select Customer

Calling Numbers Locations Call Routing **Features** PSTN Orders Service Settings Client Settings

[Auto Attendant](#) Call Park Extension Call Park Group Call Pickup Call Queue Hunt Group Office Anywhere Paging Group

Receptionist Client Virtual Extension

Auto Attendant
 Auto attendants play customized prompts and provide callers with menu options for routing their calls through your system. [Create Auto Attendant](#)

Search Auto Attendant Imagicle Export View Reports

Auto Attendant Name	Location	Phone Number	Extension	Actions
Imagicle_services	Imagicle	+390225067784	7784	...

Associate additional PSTN numbers to the same Auto Attendant Service

If your Imagicle Advanced Queuing/Auto Attendant configuration just include a single PSTN number mapped to a single Imagicle service, then you can skip this paragraph and go straight to "Call Forwarding Setup" paragraph.

Otherwise, you can add up to 10 additional PSTN phone numbers to the same Webex Calling Auto Attendant Service, to grant the access to additional Imagicle queues and IVR services.

Please click on newly created Auto Attendant service to display the Service Overview:

webex Control Hub Select Customer ▼
🔔 ⓘ 🗨️

🏠 Overview

MONITORING

📊 Organization Health

📈 Analytics

🔧 Troubleshooting

📄 Reports

MANAGEMENT

👤 Users

📍 Workspaces

📱 Devices

🗄️ Apps

📁 Account

⚙️ Organization Settings

SERVICES

🔄 Migrations

💬 Messaging

📅 Meeting

📞 Calling

👤 Connected UC

🔄 Hybrid

📄 Imagicle

Calling
Numbers
L
✕

Auto Attendant
Call Park Extens

Paging Group
Receptionist Clie

Auto Attendant

Auto attendants play customize with menu options for routing th

Auto Attendant Name

Imagicle_services

Overview

Enable Auto Attendant

General Settings Manage >

Phone Numbers 7784 or +390225067784 >

Call Forwarding Disabled >

Dialing Options Organization >

Business Hours Auto Attendant

Schedule Imagicle_schedule >

Menu Manage >

Greeting Default Greeting >

After Hours Auto Attendant

Menu Manage >

Greeting Default Greeting >

Holiday Auto Attendant

The menu and greetings that have been set for After Hours apply to the Holiday Schedule.

Schedule None >

Now click on "Phone Numbers" to display the phone numbers currently associated to this Auto Attendant. Other than the Primary Phone Number, you can add up to 10 "Alternate Numbers". Once done, just hit Save:

Imagicle_services ✕

[Overview](#) > [Phone Numbers](#)

Primary Phone Number and/or Extension

Alternate Numbers (Max 10 numbers)
Add alternate numbers using the lookup field below.

Phone Number	
+390225067785	
+390225067786	
+390225067787	
+390225067788	
+390225067789	

Call Forwarding Setup

Please go back to Auto Attendant Service Overview and click on "Call Forwarding" (Disabled by default):

Imagicle_services ^

Overview

Enable Auto Attendant

General Settings Manage >

Phone Numbers 7784 or +390225067784 >

Call Forwarding Disabled >

Dialing Options Organization >

Call Forwarding window appears. First of all, please enable Call Forwarding by clicking on relevant soft-switch. Then select "Selectively Forward Calls" and enter a number of your choice, prepending previously defined Dial Plan prefix (+28 in below sample):

Call Forwarding

Call Forwarding is a feature that allows the user to redirect the incoming call to another number based on schedules or preference.



- Always Forward Calls
- Selectively Forward Calls

An incoming call is forwarded or not forwarded to this number, based on the defined criteria.

 Send to voicemail

Enable Rule	Rule Name	Rule Type	Incoming Calls From	Incoming Calls To	Actions
-------------	-----------	-----------	---------------------	-------------------	---------

Please add a rule below to view the rule list.

[+ Add When to Forward](#)

[+ Add When Not to Forward](#)

Now click on "Add When to Forward" to add forwarding rules:

Add When to Forward

Call Forwarding Selective Details

Rule Name

When To Forward

Calls will be forwarded according to the schedule set here.

Business Hours Schedule

Holiday Schedule

Forward To

Enter the number that your calls will be forwarded to.

Default Phone Number

Different Phone Number

Calls From

Calls from the number(s) defined here will be forwarded.

Any Number

Selected Phone Numbers

Calls To

Calls to the number(s) defined here will be forwarded.

Please enter the following data:

- **Rule Name:** name of your choice
- **When To Forward:** leave the default "Every Day All Day" time table.
- **Forward To:** pre-compiled with previous PREFIX+Phone Number. Just leave the Default
- **Call From:** Select "Any number", unless you want to prevent the access to the specific service to some extensions
- **Calls To:** Select the actual Primary PSTN Phone Number where Call Forwarding rule is applied

Hit Save. Rule appears in the Call Forwarding list:

Call Forwarding

Call Forwarding is a feature that allows the user to redirect the incoming call to another number based on schedules or preference.



- Always Forward Calls
- Selectively Forward Calls

An incoming call is forwarded or not forwarded to this number, based on the defined criteria.

Q +28390225067784 ✕

Send to voicemail

Enable Rule	Rule Name	Rule Type	Incoming Calls From	Incoming Calls To	Actions
<input checked="" type="checkbox"/>	Service1	Forward	All calls	Primary	Edit

Add When to Forward

Add When Not to Forward

From now on, you can keep on click "Add When to Forward" and add additional call forwarding rules for the previously added Alternate Numbers (if any). Please mind the following differences against first forwarding rule:

- **Forward To:** select "Different Phone Number" and add one of the Alternate Numbers.
- **Calls To:** This is the actual Alternate PSTN Phone Number where Call Forwarding rule is applied

After having applied a forward rule to all your PSTN numbers, you end up with a list such as below sample:

Overview > Call Forwarding

Call Forwarding

Call Forwarding is a feature that allows the user to redirect the incoming call to another number based on schedules or preference.



Always Forward Calls

Selectively Forward Calls

An incoming call is forwarded or not forwarded to this number, based on the defined criteria.

Send to voicemail

Ena... Rule	Rule Name	Rule Type	Incoming Calls From	Incoming Calls To	Actions
<input checked="" type="checkbox"/>	Service1	Forward	All calls	Primary	Edit 🗑️

+ Add When to Forward

+ Add When Not to Forward

If you now go back to Auto Attendant Service Overview, you can see that Call Forwarding is Enabled:

Overview

Enable Auto Attendant



General Settings

Manage >

Phone Numbers

7784 or +390225067784 >

Call Forwarding

Enabled >

Dialing Options

Organization >

From now on, every time Webex Calling receives a call on one of the PSTN numbers associated to the Auto Attendant Service, the call is automatically forwarded to Imagicle Public SBC through Secure SIP Trunk (including Dial Plan prefix). Imagicle SBC in turns forward the call to Imagicle UC Cloud Suite.

Additional setting

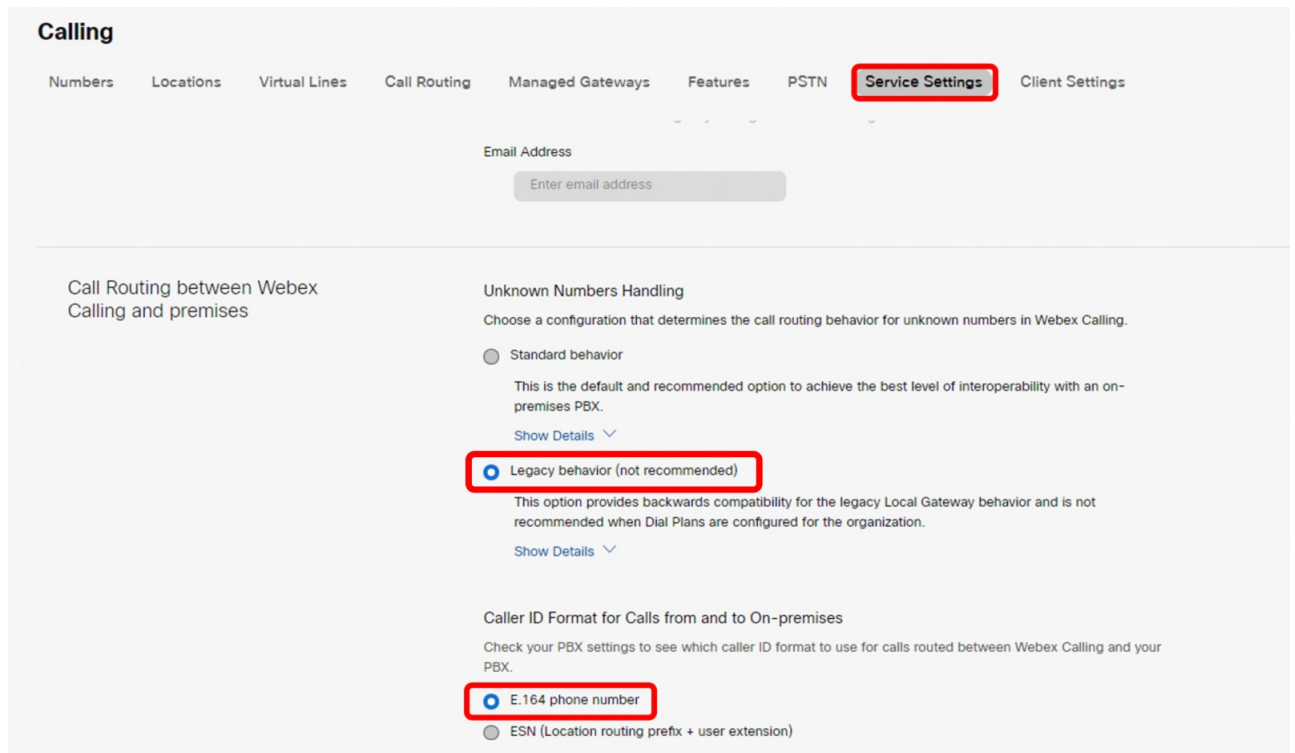
Service Settings

"Unknown Numbers Handling" section dictates how to route calls to unknown numbers, meaning those numbers not associated to a Webex device. By leaving this parameter to its default "Standard behavior", call routing is strictly tight to the dial plan, causing Imagicle Cloud to be kept in the loop once the call is transferred to the operator. As a consequence, additional latency and quality loss is added to call flow, becoming more and more annoying upon subsequent call transfers to other users.

That's why this parameter should be set to **Legacy behavior**.

Moreover, to properly display queue name in Imagicle Attendant Console, please make sure the Caller ID Format is set to **E.164 phone number**.

Both parameters are available in Calling > Service Setting, as per below screenshot:



Call Park Settings

To leverage Imagicle Attendant Console call park feature, all operators must be configured as a member of a same Call Park Group. Call Park at extension level is not supported. More details available [here](#).

Please note that parked calls are shared among all operators, thus visible in Attendant Console's "CALL PARKED" panel.

User's Settings

All Cisco Webex Calling registered users who actually need to leverage Imagicle Advanced Queuing application (as operators or calling/called parties) should have a specific license enablement and an extension number associated to relevant "Imagicle" Location.

From Cisco Webex Control Hub, please go to Users Management and click on one specific user to display a License summary:

The screenshot shows the 'webex Control Hub' interface. On the left is a navigation menu with sections for 'MONITORING' (Organization Health, Analytics, Troubleshooting, Reports) and 'MANAGEMENT' (Users, Workspaces, Devices, Apps). The main area is titled 'Users' and contains a search bar with 'andrea' entered, showing 4 results. A table lists users with columns for First Name, Last Name, and Display Name. The user 'Andrea Rivaben' is highlighted. To the right, a user profile pane for 'Andrea Rivaben' is open, showing a list of services: Messaging, Meeting, Calling, and Hybrid Services. The 'Edit Licenses' button is located at the top right of this pane.

To display and/or amend a user's license, please click on "Edit Licenses":

The screenshot shows the 'Services enabled for Andrea Rivaben' configuration screen. At the top, there is a 'Subscription IDs' dropdown menu showing 'Subscription: Sub682375 - 10/13/2020'. Below this is a table of services:

Messaging	Meeting	Calling
Free Public Collaboration Services		
Basic Messaging	Basic Space Meetings	Call on Webex (1:1 call, non-PSTN)
Licensed Collaboration Services		
Messaging <input type="checkbox"/> Advanced Messaging		Calling <input checked="" type="checkbox"/> Webex Calling <input checked="" type="checkbox"/> Professional

At the bottom right, there are 'Back' and 'Next' buttons.

Make sure that both "Webex Calling" and "Professional" flags are checked, then hit Next:

The screenshot shows the 'Assign Numbers' configuration screen. It features a table with the following data:

User	Location	Phone Number	Extension
Andrea Rivaben andrea.rivaben@imagicle.com	Imagicle	+390225067791	7791

At the bottom right, there are 'Back' and 'Finish' buttons.

Please make sure that User is properly associated to own Location, with an extension number and +E.164 DID phone number.

Finally, please make sure that User's Auto Attendant Privacy is disabled, as per below screenshot sample:



Nicola Boscolo
nicola.boscolo@imagicle.com



Cancel

Save

Privacy

Enable the user's line to be monitored by others and determine if they can be reached by Auto Attendant services.

Auto Attendant Privacy

- Allow this user to be dialed by extension
- Allow this user to be dialed by first or last name

Selective Line Status Sharing

Enable Privacy

Currently everyone can monitor this users's phone status.

Select Enable Privacy to only allow specific users to monitor their phone status.

Troubleshooting

Call Routing Verification

If Call Routing is not behaving properly or simply if you wish to double check applied Dial Plans, you can access to [Webex Control Hub web portal](#) and select Calling Service > Call Routing > Verify Call Routing:

The screenshot shows the Webex Control Hub interface. The top navigation bar includes 'webex Control Hub', 'Select Customer', and user profile information. The left sidebar lists various settings categories like 'Apps', 'Account', 'Organization Settings', and 'SERVICES'. The main content area is titled 'Calling' and has sub-tabs for 'Numbers', 'Locations', 'Call Routing', 'Features', 'PSTN Orders', 'Service Settings', and 'Client Settings'. Under 'Call Routing', there is a sub-tab 'Verify Call Routing'. The page content includes a heading 'Verify How Calls Are Routed', a descriptive paragraph, and a form with two dropdown menus ('Select a user' and 'Select a trunk'), a text input field ('Enter a number or URI'), and two buttons ('See Routing Result' and 'Clear All').

Please fill above form with a selected user (from pull-down menu) and a Phone Number to test, including the Dial Plan prefix (+88

in below sample). Click "See Routing Result":

The screenshot shows the 'webex Control Hub' interface. The top navigation bar includes 'Select Customer' and several utility icons. The left sidebar lists various management options under 'SERVICES', with 'Calling' selected. The main content area is titled 'Calling' and has sub-tabs for 'Numbers', 'Locations', 'Call Routing', 'Features', 'PSTN Orders', 'Service Settings', and 'Client Settings'. The 'Verify Call Routing' sub-tab is active, displaying a form to verify routing. The form includes a dropdown for the user 'Nicola Boscolo (+390416468465)', a radio button 'OR', and a dropdown for 'Select a trunk'. Below these is an input field for the number '+88390225067784' and two buttons: 'See Routing Result' and 'Clear All'. The routing result text states: 'The call to +88390225067784 routes to the dial pattern "+88!" in Imagicle_dialplan. From Nicola Boscolo (+390416468465) Treviso To (Initial routing destination) Imagicle_trunk Imagicle'.

Above screenshot sample shows a routing correctly applied, where the call is forwarded to Imagicle UC Cloud Suite, via Imagicle SIP Trunk.