Omnichannel Messaging Guide

Yeastar P-Series Cloud Edition

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Contents

Omnichannel Messaging Overview

Yeastar P-Series Cloud Edition provides an omnicahnnel messaging feature, enabling business to integrate multiple digital channels into the system. This allows business agents to interact seamlessly with customers across multiple channels, including text messages, social media, and more, on a unified platform. ensuring agent productivity while enhancing the customer experience.

Highlights

Yeastar omnichannel messaging feature provides the following highlights:

All-in-one Message Inbox

Agents are able to receive and respond to customers' queries from different messaging channels directly on their Linkus UC Clients, greatly saving their time by eliminating the need of switching between apps or services to check for messages. The messages are stored on the PBX server, providing a central record of all the messaging sessions.

Customer Contact using Business Number

Agents can contact customers using a business number, while keeping their own personal mobile number private. If necessary, the messaging session can be easily elevated to a call to reach the customer, so that the agent can resolve issues faster via voice call.

Seamless Collaboration across Agents

Agents can hand off customers' issue to another agent by transferring the conversation, the new agent can quickly review the whole chat history and take over the conversation without hassle.

Automatic Chat Assignment

Route your business messages from different messaging channels to agents, who can share the workload across teams to reduce customer service response time. The system automatically assigns chats to the first agent that picks up the session from the queue.

Roles in omnichannel messaging

Users can access the omnichannel messaging feature and perform different functions based on their rols and responsibilities, as the following table lists.

Role	Description
Administrator	System administrators that are responsible for configuring and maintaining the omnichannel messaging features, including setting up communication channels, setting routing rules, assigning agents, and managing conversation histories. For more information, see [Omnichannel Messaging Administrator Guide]().
Agent	Agents that are responsible for interacting with customers from various messaging channels, handling inquiries, resolving issues, and providing support and services. For more information, see [Omnichannel Messaging Agent Guide]().

Administrator Guide

Omnichannel Messaging Administrator Guide

This guide provides detailed instructions for system administrators to set up and manage the PBX omnichannel messaging feature, implementing smooth communication on the PBX system across various channels.

Audience

This guide is intended for system administrators responsible for configuring and maintaining the omnichannel messaging feature.

Steps to set up omnichannel messaging

1. Set up messaging channels

To enable your contact center to handle digital channels interactions, you need to add the communication channels in the PBX system, and configure settings for each channel, such as message sending rate, inbound messaging routing rule, etc., for smooth operation.

Refer to the individual channel setup articles for the requirements and detailed instructions.

Channel	Instruction
SMS	To reach customers directly on their mobile phones using SMS, you can set up SMS channels on Yeastar PBX with the following supported SMS service providers: • Set up an SMS Channel for Bandwidth • Set up an SMS Channel for Flowroute • Set up an SMS Channel for Telnyx • Set up an SMS Channel for Twilio • Set up an SMS Channel for SIPTRUNK • Set up an SMS Channel for VoiceMeUp • Set up an SMS Channel for VoIP.ms For SMS Service Providers that are not listed above, they can add their SMS service to Yeastar P-Series Cloud Edition using SMS API. After the integration is complete, you can create an SMS channel for the Service Provider on your PBX.

Channel	Instruction
	For more information about the SMS service integration and the SMS channel setup after the integration, see Integrate SMS Service with Yeastar P-Series Cloud Edition using SMS API.
Social media	To interact with customers through popular social media platforms, you can set up social media channels on Yeastar PBX with the following supported social media. • Set up a WhatsApp Channel

2. Set up messaging queue

Define a group of agents to receive the inbound messages. When an agent of the queue picks up a session, he or she is able to respond to the messages in the session, and the session is automatically assigned to the agent.

For more information, see Create a Message Queue and Manage Message Queues.

3. Manage messaging history

Get access to the detailed records of customer message interactions from various channels, allowing you to have a complete overview of each conversation journey.

For more information, see Check and Manage External Chat Logs and Download External Chat Logs.

Message Channel Setup

SMS Channel

Set up an SMS Channel for Bandwidth

This topic describes how to set up a Bandwidth SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

The Yeastar PBX should meet the following requirements:

- **Firmware**: Version 84.12.0.23 or later
- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
- **Domain Certificate**: A valid domain certificate is installed.

> 📝 **Note:**
> If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

Supported message types and limits

Supported message types

The Bandwidth SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by Bandwidth. For more information, see [Bandwidth supported MMS file types](#).

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set [Allowed Country/Region IP Access Protection](#) rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Prerequisites

- [You have created a sub-account and associated with your location in Bandwidth](#).
- [You have purchased phone number(s) in Bandwidth](#).

Procedure

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on Bandwidth.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **Bandwidth**.
   A Webhook URL for Bandwidth is generated and displayed in the **Webhook URL** field.

> ⚠ **Important:**
> The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.

4. Note down the Webhook URL.

Step 2. Configure a number for SMS on Bandwidth

> ⚠ **Important:**
> According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be registered, otherwise SMS messages sent to US numbers from unregistered 10DLC numbers will be blocked.

⚠️ If your business needs to communicates with US-based customers, you should confirm the registration requirements with the SMS service provider and complete the phone number registration to avoid disruption in message delivery.

Log in to Bandwidth portal, and complete the followings:

1. Create an application using a sub-account and configure the callback with PBX's Webhook URL.

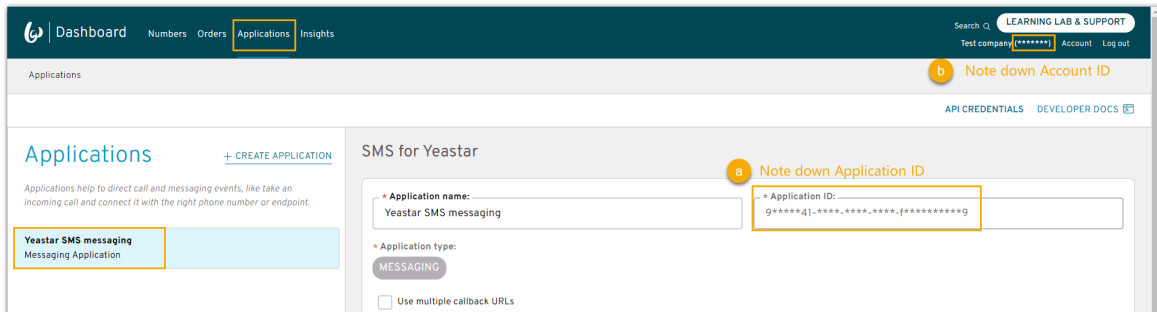2. On the details page of the new application, associate the application with your location.

3. Enable HTTP SMS and MMS messaging for your location and the associated application.
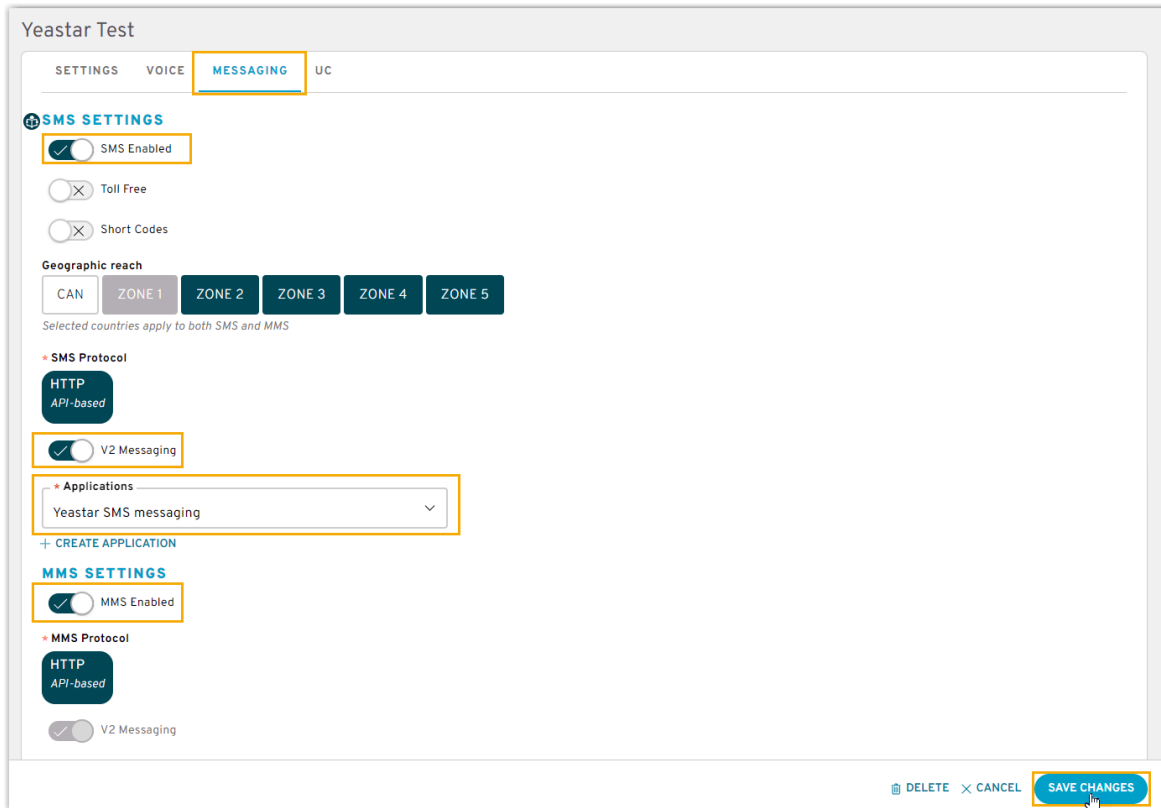
4. Search the number that you want to use for SMS and associate it with your sub-account.
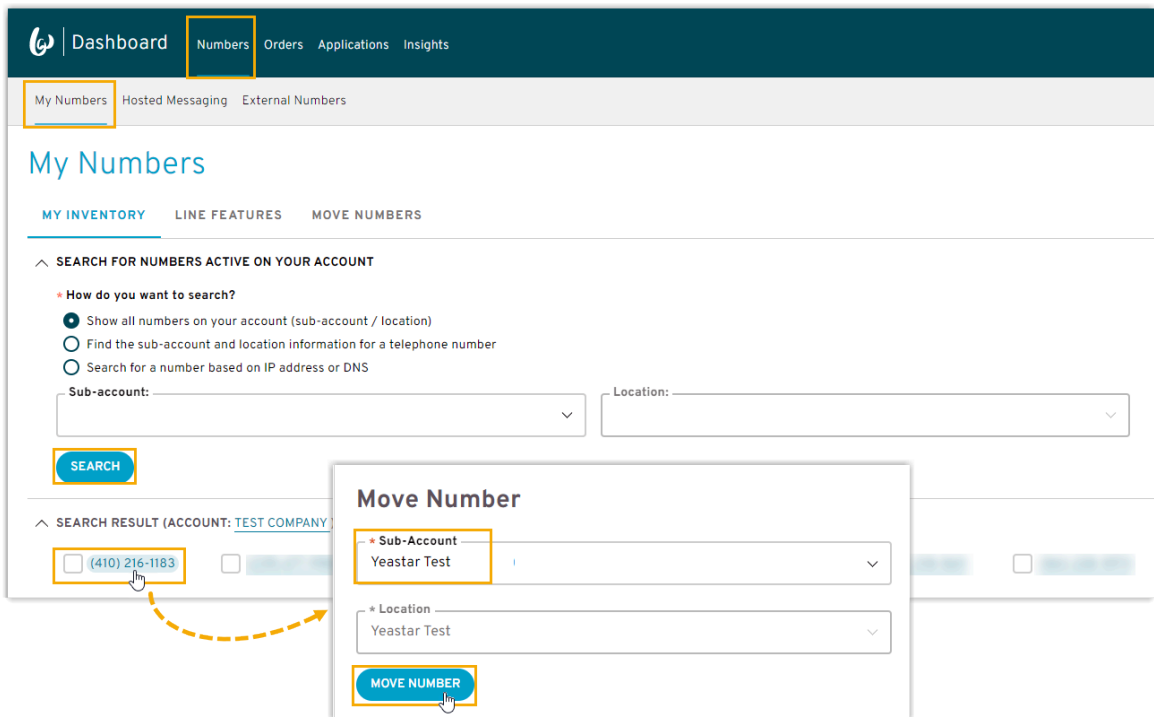
5. Note down the **Application ID** and **Account ID** for the integration with PBX.

Step 3. Create and configure an SMS channel on PBX

Create an SMS channel on PBX, and configure the channel with the authentication information and number obtained from Bandwidth.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of Bandwidth.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **Bandwidth**.
- **Application ID**: Paste the Application ID obtained from Bandwidth.
- **Account ID**: Enter the Account ID of your Bandwidth account.
- **Username**: Enter the user name of your Bandwidth account.
- **Password**: Enter the password associated with your Bandwidth account.
4. In the **Messaging Settings** tab, configure the channel.

a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

> ✏️ **Note:**
> - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
> - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

☑ Close Session Automatically

* Session Timeout (Days)

1

c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.

- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

   d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	Bandwidth SMS channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> **Note:**
> ◦ For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-as-

sembled when they are received, increasing the number of sent messages.

◦ You can filter the statistics by a time period using the time filter.

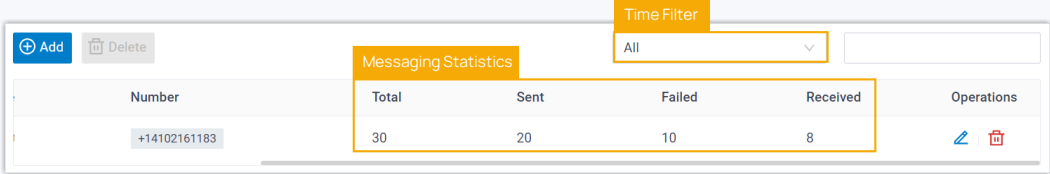## What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Set up an SMS Channel for Flowroute

This topic describes how to set up a Flowroute SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

Platform	Requirement
Yeastar PBX	• **Firmware**: Version 84.12.0.23 or later • **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP) • **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages. • **Domain Certificate**: A valid domain certificate is installed. **Note:** If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate

Platform	Requirement
	📝 for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
Flowroute	**API Version**: v2.1 📝 **Note:** You can check or update the API version on [Flowroute](#) (Path: **PREFERENCE > API Control > SMS Webhook Version**).

Supported message types and limits

Supported message types

The Flowroute SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by Flowroute. For more information, see [Flowroute supported MMS file types](#).

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set [Allowed Country/Region IP Access Protection](#) rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Procedure

- [Step 1. Obtain a Webhook URL on PBX](#)
- [Step 2. Configure a number for SMS on Flowroute](#)
- [Step 3. Create and configure an SMS channel on PBX](#)

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on Flowroute.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **Flowroute**.

   A Webhook URL for Flowroute is generated and displayed in the **Webhook URL** field.

   > ⚠ **Important:**
   > The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.

4. Note down the Webhook URL.

Step 2. Configure a number for SMS on Flowroute

> ⚠ **Important:**
> According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be registered, otherwise SMS messages sent to US numbers from the unregistered 10DLC numbers will be blocked.
>
> If your business communicates with US-based customers, you should confirm the registration requirements with the SMS service provider and complete the phone number registration to avoid disruption in message delivery.

Log in to Flowroute portal, and complete the following settings:

1. Enable the messaging feature for the desired DID number.
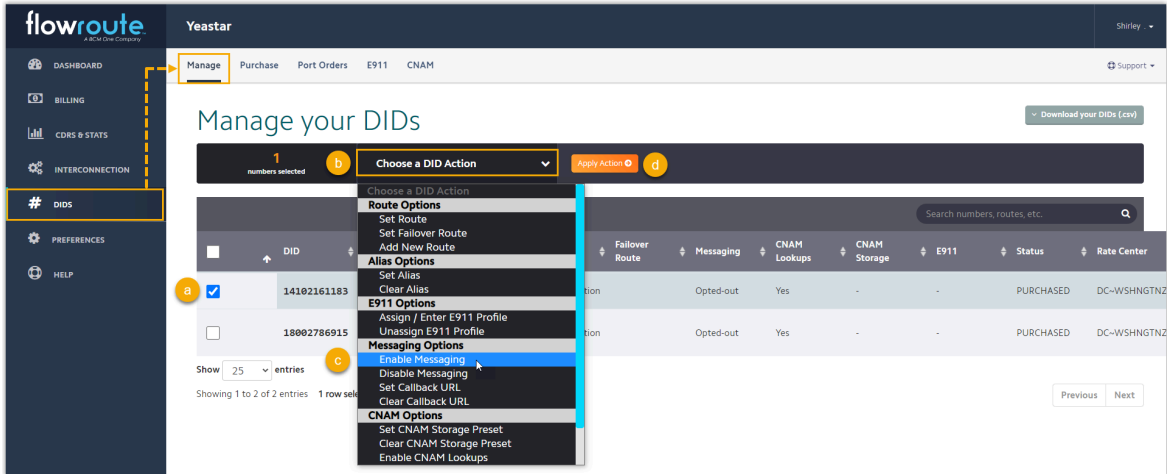
2. Configure messaging webhook according to your needs.

   • If you only need to receive callback notification for inbound messages sent from a specific number, configure messaging webhook with PBX's Webhook URL for the number individually.
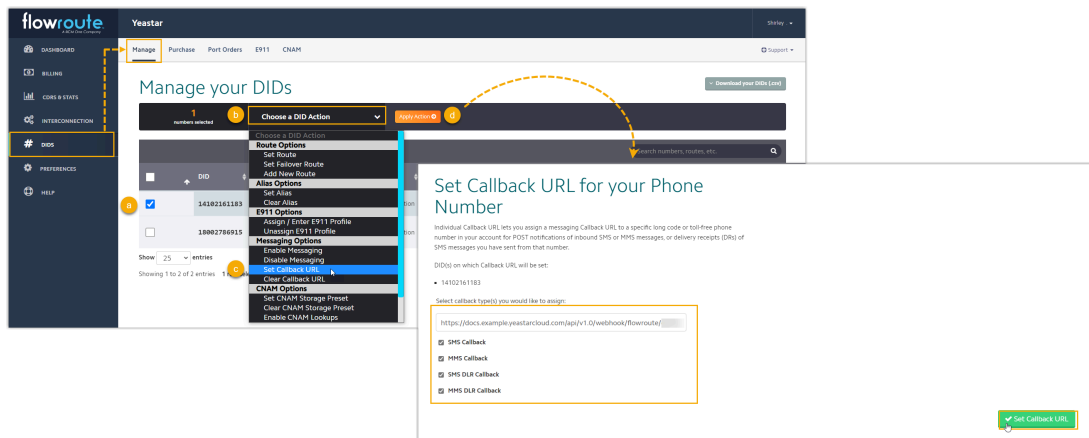
   • If you need to receive callback notification for inbound messages sent from all the numbers in your account, configure global messaging webhook with PBX's Webhook URL as shown below.
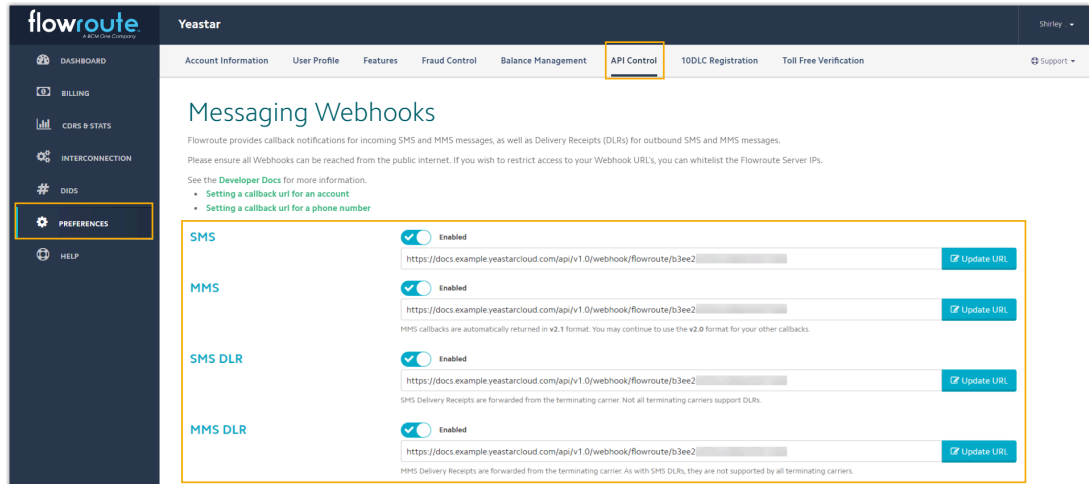
3. Create an API key for the integration with PBX.

> ⚠ **Important:**
> You MUST note down the generated key in the pop-up window, as it is only displayed ONCE.

4. Note down the **Access Key** of the API key.

Step 3. Create and configure an SMS channel on PBX

Create an SMS channel on PBX, and configure the channel with the authentication information and number obtained from Flowroute.
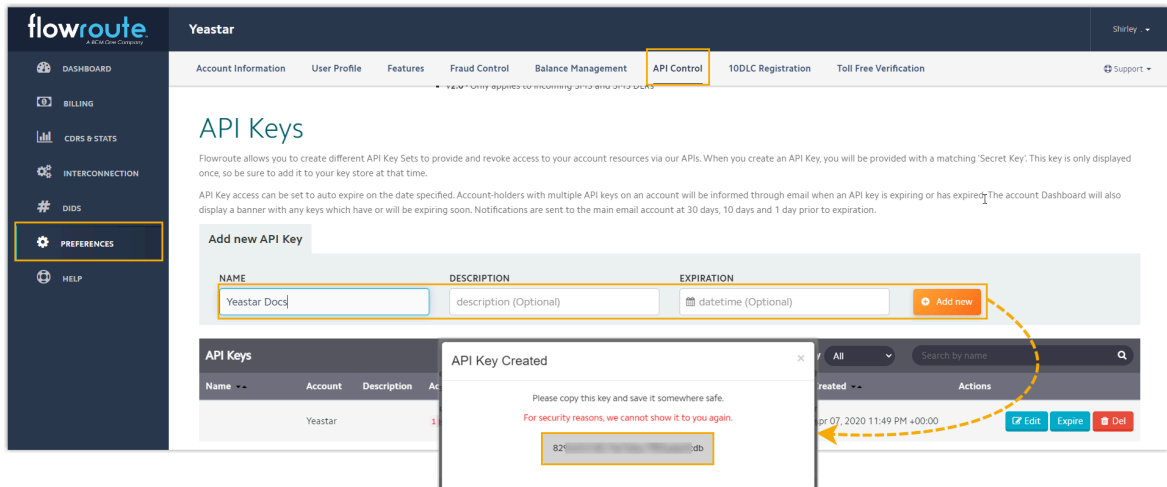
1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of Flowroute.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **Flowroute**.
- **Access Key**: Paste the access key obtained from Flowroute.
- **Secret Key**: Paste the API key obtained from Flowroute.
4. In the **Messaging Settings** tab, configure the channel.
   a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

> ✏️ **Note:**
> - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
> - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

  d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	Flowroute SMS channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> 📝 **Note:**
> - For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
> - You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Set up an SMS Channel for Telnyx

This topic describes how to set up a Telnyx SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

The Yeastar PBX should meet the following requirements:

- **Firmware**: Version 84.12.0.23 or later
- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
- **Domain Certificate**: A valid domain certificate is installed.

> **Note:**
> If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

Supported message types and limits

Supported message types

The Telnyx SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by Telnyx. For more information, see Telnyx supported MMS file types.

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set Allowed Country/Region IP Access Protection rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Procedure

- Step 1. Obtain a Webhook URL on PBX
- Step 2. Configure a number for SMS on Telnyx
- Step 3. Create and configure an SMS channel on PBX

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on Telnyx.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **Telnyx**.

   A Webhook URL for Telnyx is generated and displayed in the **Webhook URL** field.

   > ⚠️ **Important:**

> ⚠️ The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.
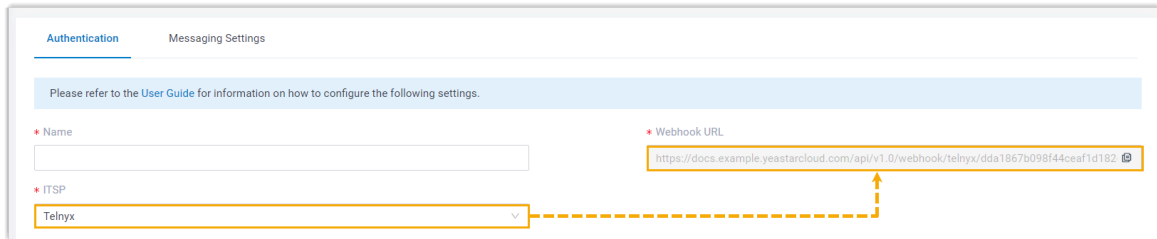
4. Note down the Webhook URL.

Step 2. Configure a number for SMS on Telnyx

> ⚠️ **Important:**
>
> According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be registered, otherwise SMS messages sent to US numbers from the unregistered 10DLC numbers will be blocked.
>
> If your business communicates with US-based customers, you should confirm the registration requirements with the SMS service provider and complete the phone number registration to avoid disruption in message delivery.

Log in to Telnyx portal, and complete the following settings:

1. Search and purchase a DID number with SMS feature.
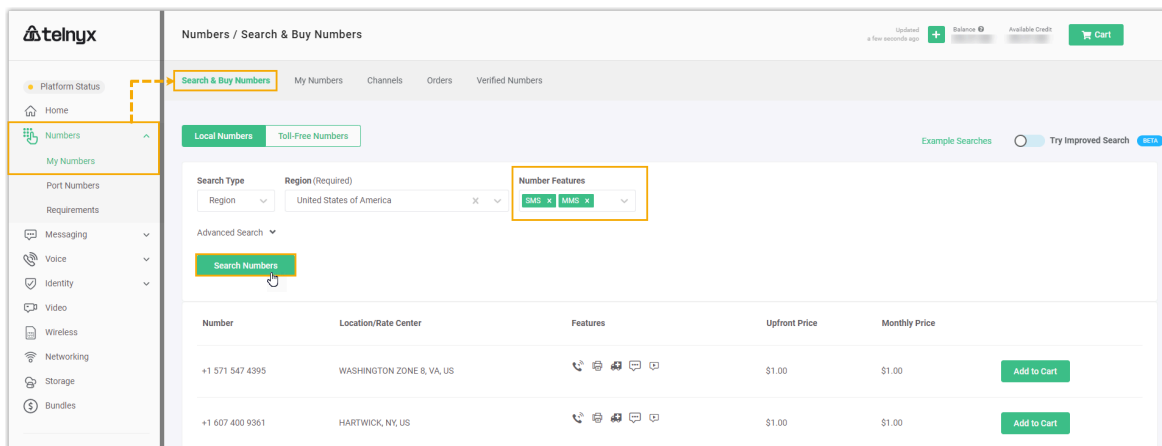
2. Create a message profile and configure messaging webhook with [PBX's Webhook URL](#).
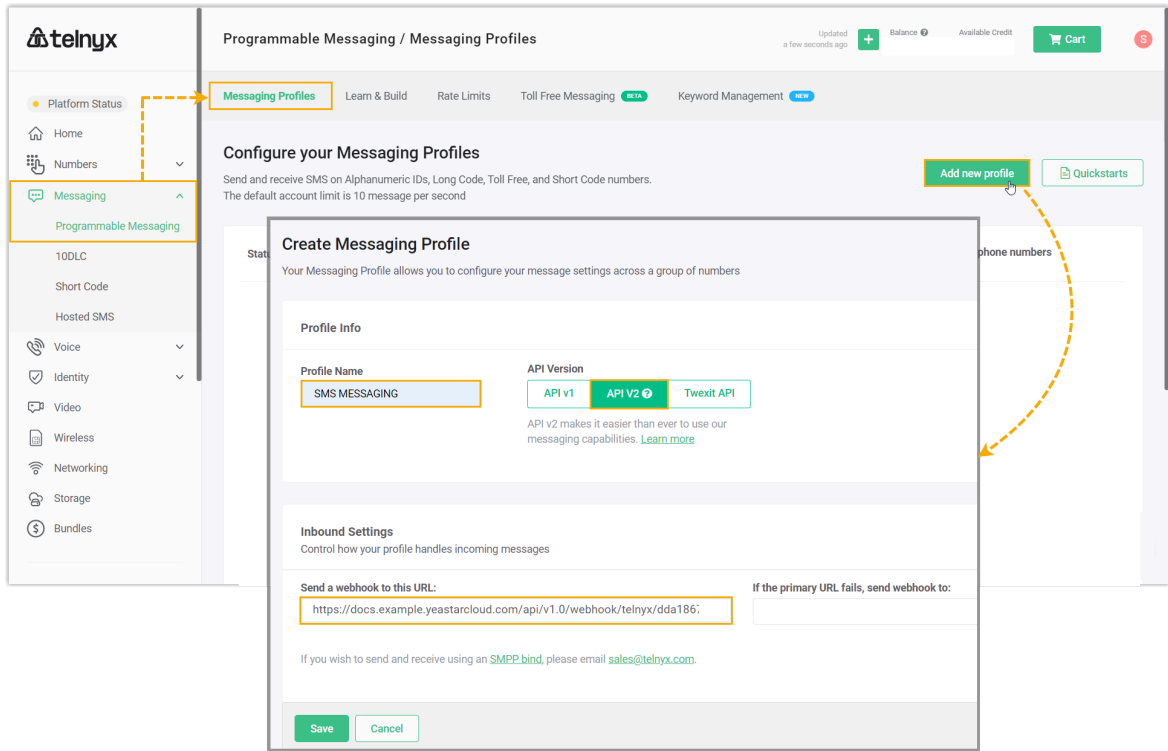
3. Assign the message profile to the purchased DID number.
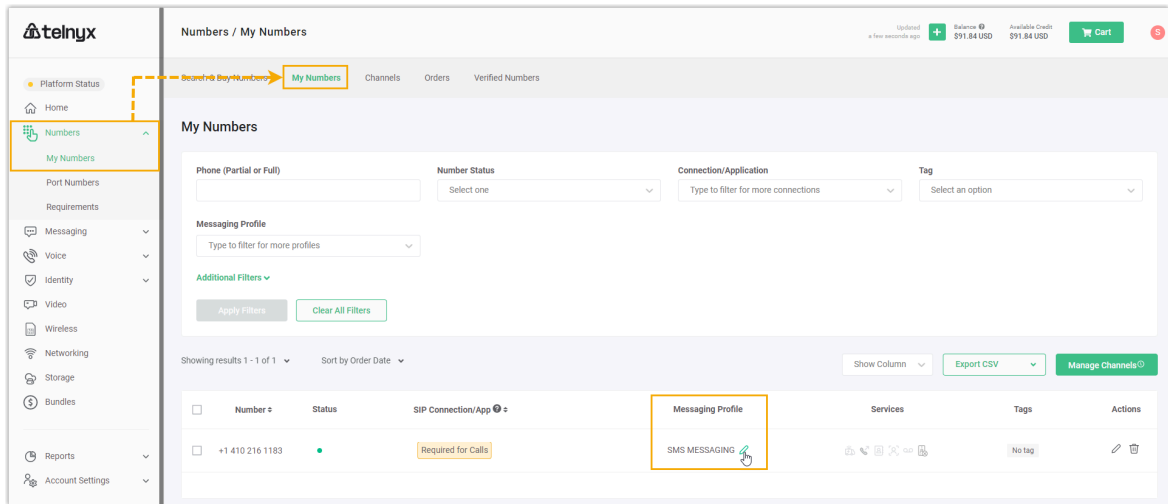
4. Create an API key for the integration with PBX.
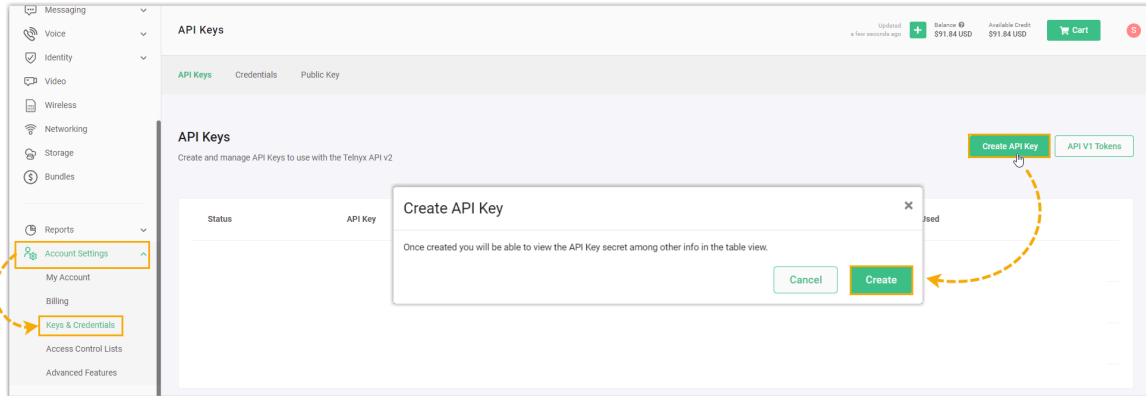
5. Note down the API key in **API Key** tab, and the Public key in **Public Key** tab.
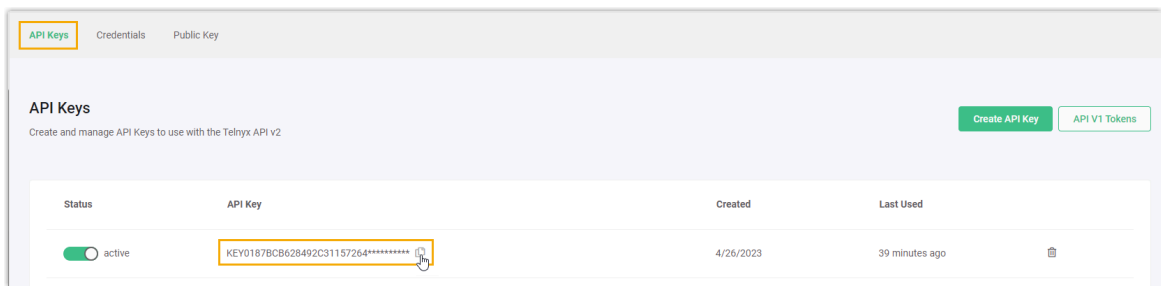
Step 3. Create and configure an SMS channel on PBX

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of Telnyx.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **Telnyx**.
- **API Key**: Paste the API Key obtained from Telnyx.
- **Public Key**: Paste the Public Key obtained from Telnyx.

4. In the **Messaging Settings** tab, configure the channel.

a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

> ✏ **Note:**
> - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
> - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

    d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	Telnyx SMS channel	SMS	+14102161183	0	0	✏ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> **✎ Note:**
> - For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
> - You can filter the statistics by a time period using the time filter.
>
> | | | Time Filter | | | |
> |---|---|---|---|---|---|
> | ⊕ Add   🗑 Delete | Messaging Statistics | All ⌄ | | | |
> | **Number** | Total | Sent | Failed | Received | Operations |
> | +14102161183 | 30 | 20 | 10 | 8 | ✏ 🗑 |

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

Check and Manage External Chat Logs
User Guide - Manage customer queries from SMS channel on Linkus Web Client
User Guide - Manage customer queries from SMS channel on Linkus Desktop Client
User Guide - Manage customer queries from SMS channel on Linkus Mobile Client

Set up an SMS Channel for Twilio

This topic describes how to set up a Twilio SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

The Yeastar PBX should meet the following requirements:

- **Firmware**: Version 84.12.0.23 or later
- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
- **Domain Certificate**: A valid domain certificate is installed.

> ✏️ **Note:**
> If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

Supported message types and limits

Supported message types

The Twilio SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by Twilio. For more information, see Twilio supported MMS file types.

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set Allowed Country/Region IP Access Protection rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Procedure

- Step 1. Obtain a Webhook URL on PBX
- Step 2. Configure a number for SMS on Twilio
- Step 3. Create and configure an SMS channel on PBX

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on Twilio.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **Twilio**.

   A Webhook URL for Twilio is generated and displayed in the **Webhook URL** field.

> ⚠️ **Important:**
> The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.

4. Note down the Webhook URL.

Step 2. Configure a number for SMS on Twilio

> ⚠️ **Important:**
> According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be regis-

> ⚠️ tered, otherwise SMS messages sent to US numbers from the unregistered 10DLC numbers will be blocked.
>
> If your business communicates with US-based customers, you should confirm the registration requirements with the SMS service provider and complete the phone number registration to avoid disruption in message delivery.

Log in to Twilio portal, and complete the followings:

1. Search and purchase a number with SMS feature.

   > ℹ️ **Tip:**
   > You can check the SMS service pricing here.
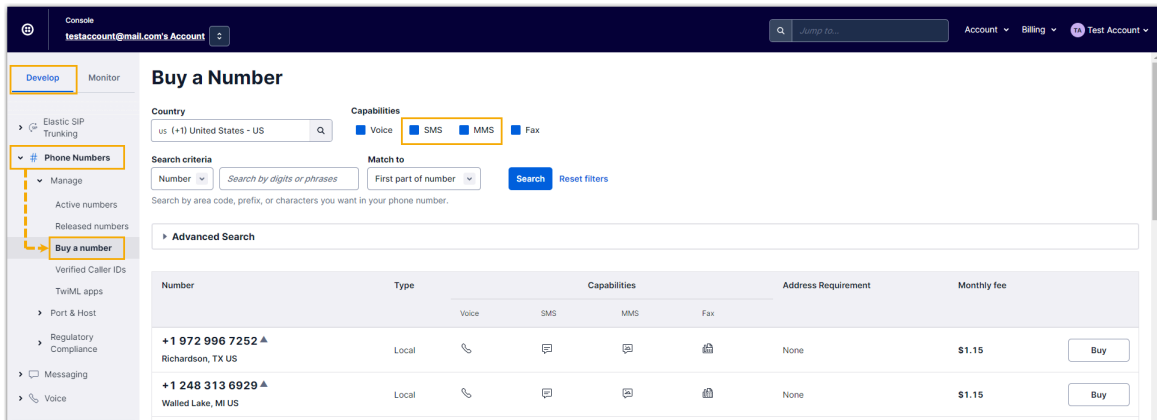
2. Edit the purchased number to configure the messaging webhook with PBX's Webhook URL.
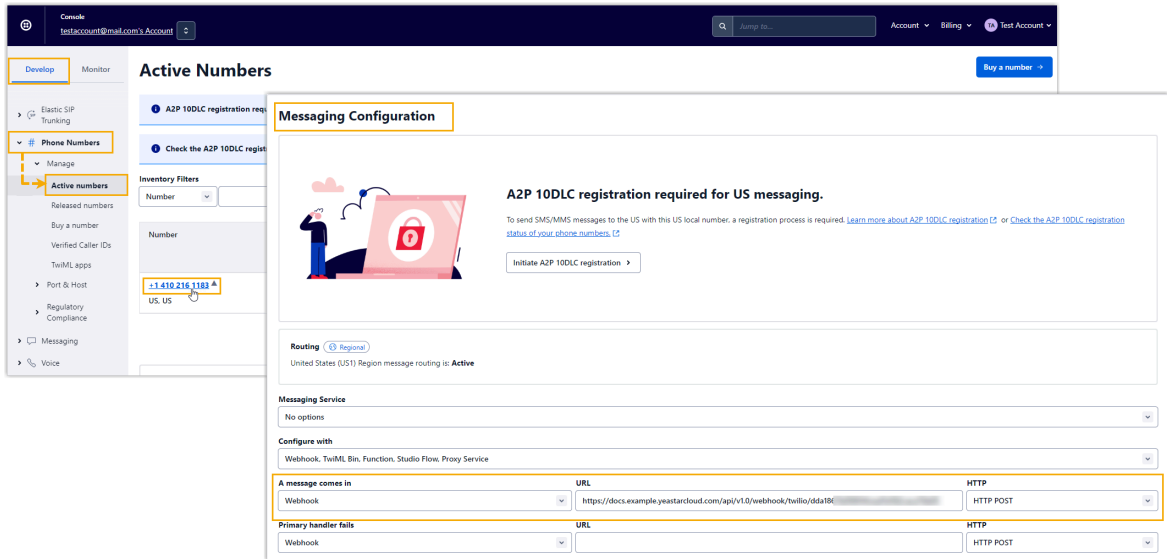
3. Enable the geographic permission for the desired region(s) where you want to send SMS messages, so that messages can be successfully sent to the phone numbers within the region(s).

> **Note:**
> This setting should be completed in the parent account.
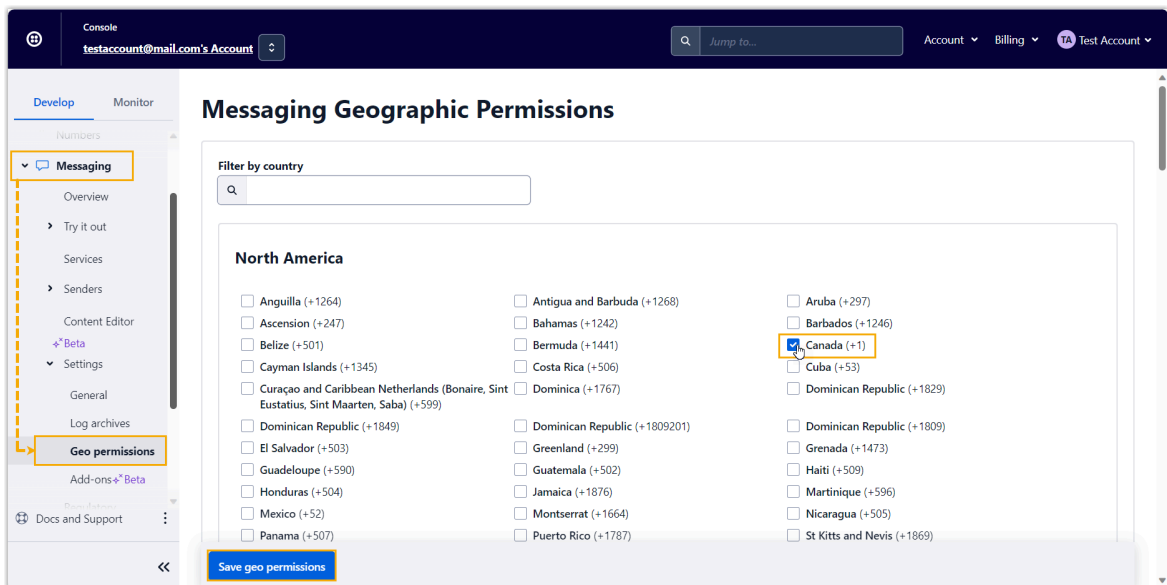
4. Go to your account's dashboard, note down the **Account SID** and **Auth Token**, as you will need to use it on PBX later.

> **Note:**

> The account MUST be the one used for purchasing the number. That is, if the number is purchased using a sub-account, you need to access the sub-account's dashboard to obtain the information.

Step 3. Create and configure an SMS channel on PBX

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of Twilio.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **Twilio**.

- **Account SID**: Paste the [Account SID obtained from Twilio](#).
- **Auth Token**: Paste the [Auth Token obtained from Twilio](#).

4. In the **Messaging Settings** tab, configure the channel.

   a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

   > 📝 **Note:**
   > - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
   > - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

   b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

   > ☑ Close Session Automatically
   >
   > * Session Timeout (Days)
   >
   > 1

   c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

    d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel for Twilio is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	Twilio SMS channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> 📝 **Note:**
> ○ For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
> ○ You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

Check and Manage External Chat Logs
User Guide - Manage customer queries from SMS channel on Linkus Web Client
User Guide - Manage customer queries from SMS channel on Linkus Desktop Client
User Guide - Manage customer queries from SMS channel on Linkus Mobile Client

Set up an SMS Channel for SIPTRUNK

This topic describes how to set up a SIPTRUNK SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

Platform	Requirement
Yeastar PBX	• **Firmware**: Version 84.14.0.24 or later • **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP) • **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages. • **Domain Certificate**: A valid domain certificate is installed. **Note:** If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
SIPTRUNK	• **Telephone number**: The DID number(s) should be SMS/MMS compatible and registered with 10DLC. **Important:** According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be registered, otherwise SMS messages sent to US numbers from the unregistered 10DLC numbers will be blocked. If your business communicates with US-based customers, you should complete the 10DLC registration for your phone numbers to avoid disruption in message delivery. **Tip:** Submit a request to your service provider for the required number(s). For more information, see [SMS Process & Expectations]().

Supported message types and limits

Supported message types

The SIPTRUNK SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by SIP-TRUNK.

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set [Allowed Country/Region IP Access Protection](#) rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Procedure

- [Step 1. Obtain a Webhook URL on PBX](#)
- [Step 2. Configure messaging feature on SIPTRUNK](#)
- [Step 3. Create and configure an SMS channel on PBX](#)

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on SIPTRUNK.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **SIPTRUNK**.

   A Webhook URL for SIPTRUNK is generated and displayed in the **Webhook URL** field.

   > ⚠️ **Important:**

> ⚠️ The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.
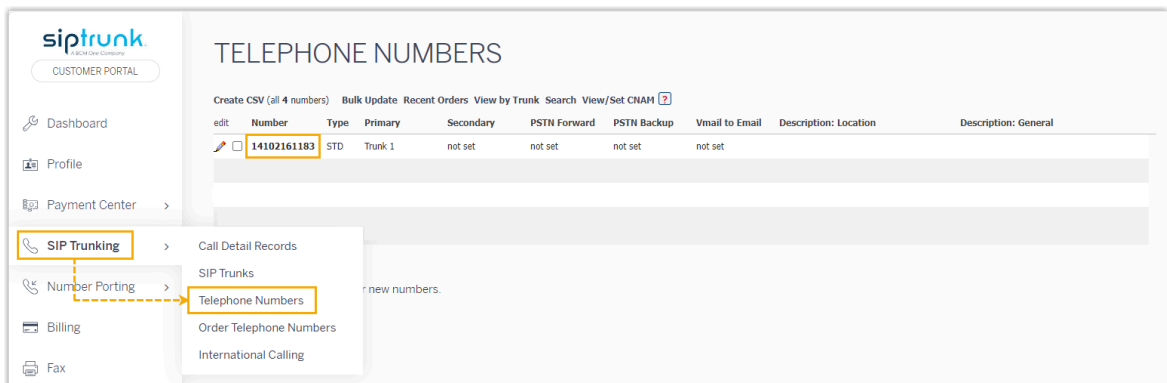
4. Note down the Webhook URL.

Step 2. Configure messaging feature on SIPTRUNK

Log in to SIPTRUNK customer portal, and complete the following settings:

1. Note down the desired DID number to be added to the SMS channel.

2. Configure messaging webhook for the DID number.
   a. Create a Webhook using the PBX's Webhook URL.
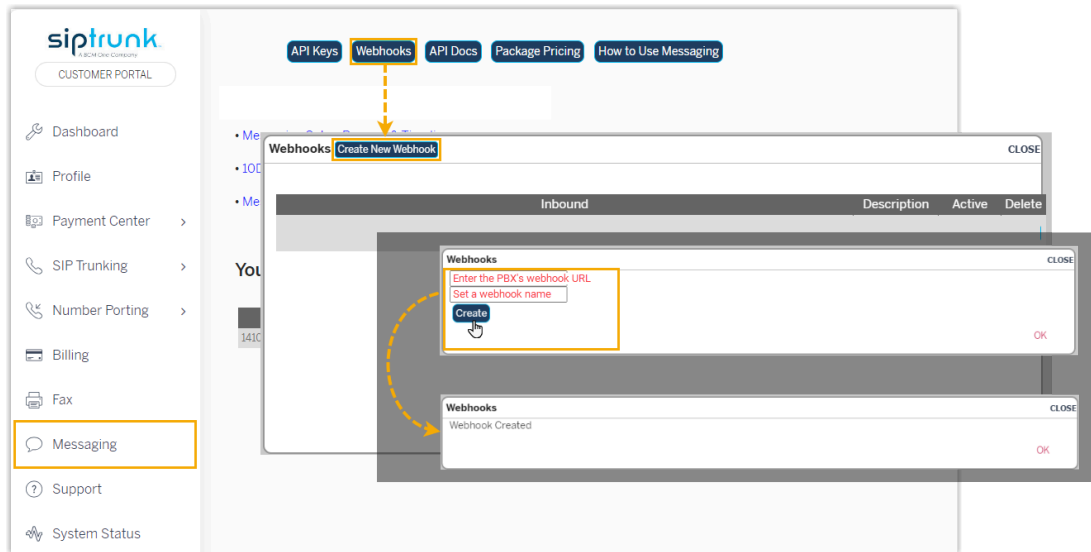
b. Assign the Webhook to the DID number.
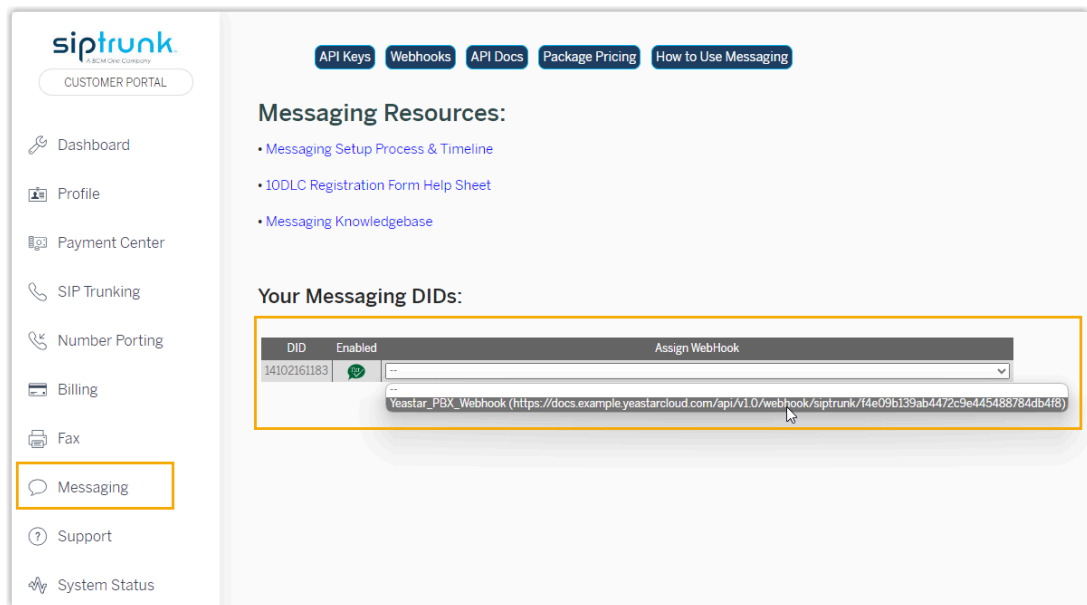
3. Create an API key for the integration with PBX, and note down the **Access Key** and **Secret Key**.

> 🛈 **Important:**
> Make sure that you have copied and properly saved the **Secret Key** before closing the pop-up window, as it is only displayed ONCE.
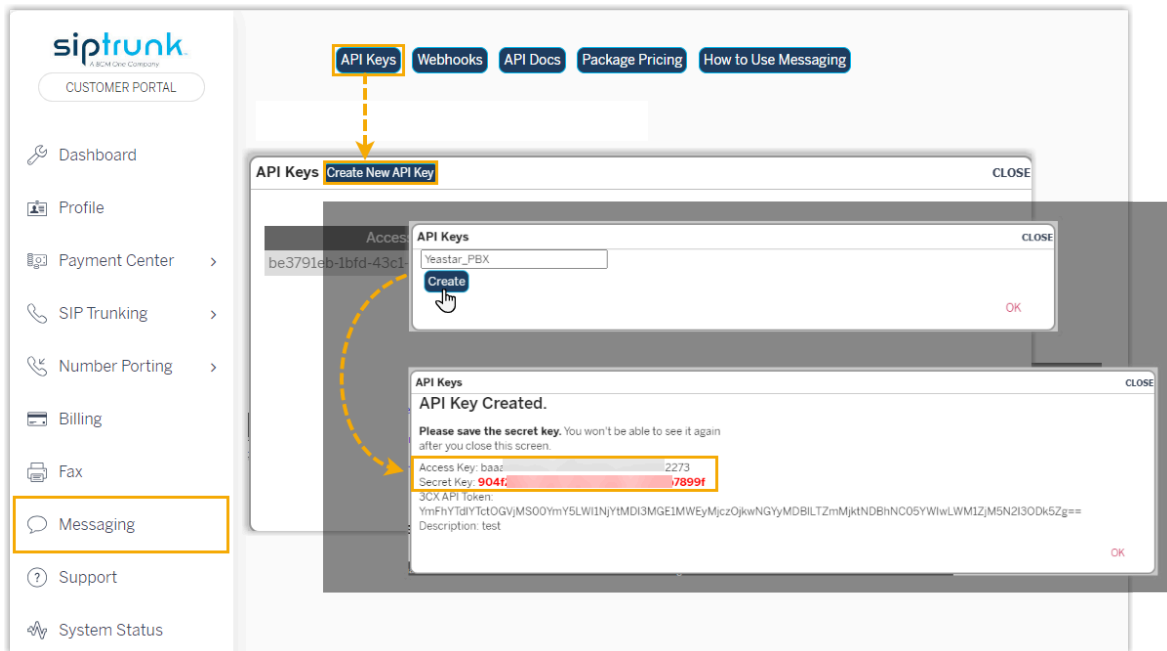
Step 3. Create and configure an SMS channel on PBX

Create an SMS channel on PBX, and configure the channel with the authentication information and number obtained from SIPTRUNK.
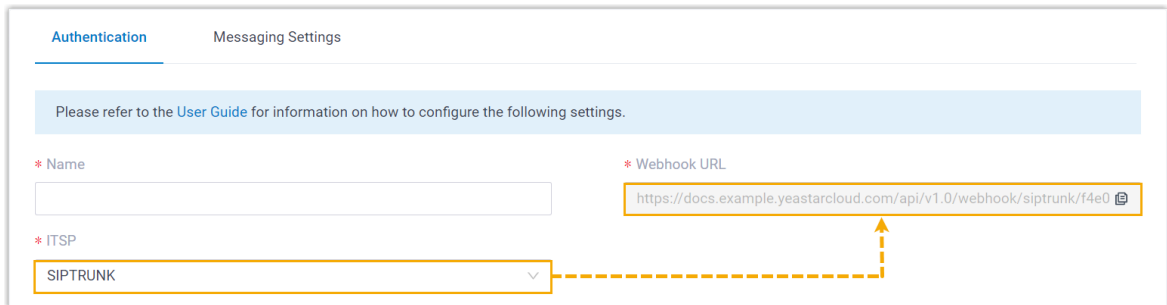
1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of SIPTRUNK.
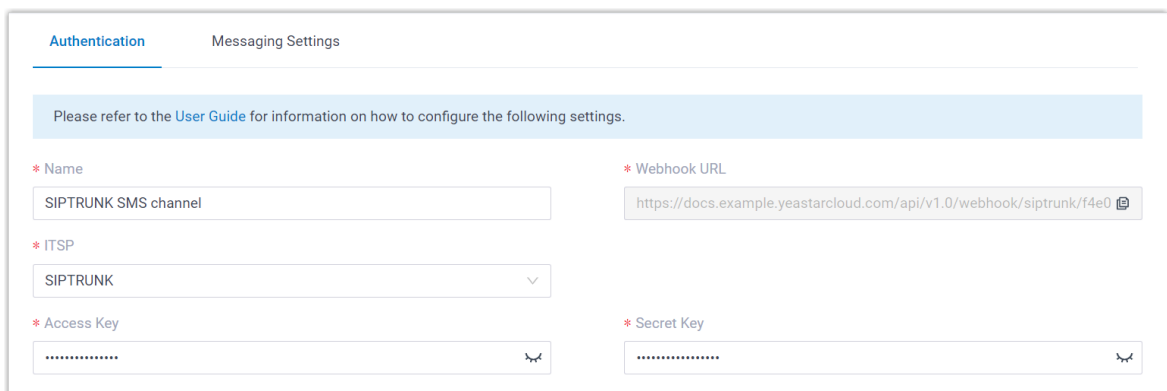
- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **SIPTRUNK**.
- **Access Key**: Paste the access key obtained from SIPTRUNK.

- **Secret Key**: Paste the [secret key obtained from SIPTRUNK](#).

4. In the **Messaging Settings** tab, configure the channel.

   a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

   > ✏️ **Note:**
   > - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
   > - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

   b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

   c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.
    d. Click **Save**.
5. Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	SIPTRUNK SMS Channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> **Note:**
> ◦ For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise

number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.

◦ You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)

[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)

[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)

[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Set up an SMS Channel for VoiceMeUp

This topic describes how to set up a VoiceMeUp SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

The Yeastar PBX should meet the following requirements:

- **Firmware**: Version 84.14.0.24 or later
- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
- **Domain Certificate**: A valid domain certificate is installed.

> **Note:**

> ✏️ If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

Supported message types and limits

Supported message types

The VoiceMeUp SMS channel supports text messages and multimedia messages (MMS), where the supported MMS file types are determined by VoiceMeUp.

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set Allowed Country/Region IP Access Protection rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Procedure

- Step 1. Obtain a Webhook URL on PBX
- Step 2. Configure messaging feature on VoiceMeUp
- Step 3. Create and configure an SMS channel on PBX

Step 1. Obtain a Webhook URL on PBX

Obtain a Webhook URL from PBX web portal first, which is required when you configure a number for SMS on VoiceMeUp.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **ITSP** drop-down list, select **VoiceMeUp**.

A Webhook URL for VoiceMeUp is generated and displayed in the **Webhook URL** field.

> ⚠ **Important:**
> The URL will change once you leave the current page, please make sure you use the latest Webhook URL for the configuration on the service provider's customer portal.

4. Note down the Webhook URL.

Step 2. Configure messaging feature on VoiceMeUp

Log in to [VoiceMeUp customer portal](#), and complete the following settings:

1. Purchase a DID number with SMS feature.

> ⚠ **Important:**
> According to US legislation (A2P 10DLC SMS), 10DLC (10-digit Long Code) phone numbers that are used for A2P (Application-to-Person) messaging MUST be registered, otherwise SMS messages sent to US numbers from the unregistered 10DLC numbers will be blocked.
>
> If your business communicates with US-based customers, you should contact the SMS service provider to complete 10DLC registration for your DID number to avoid disruption in message delivery.
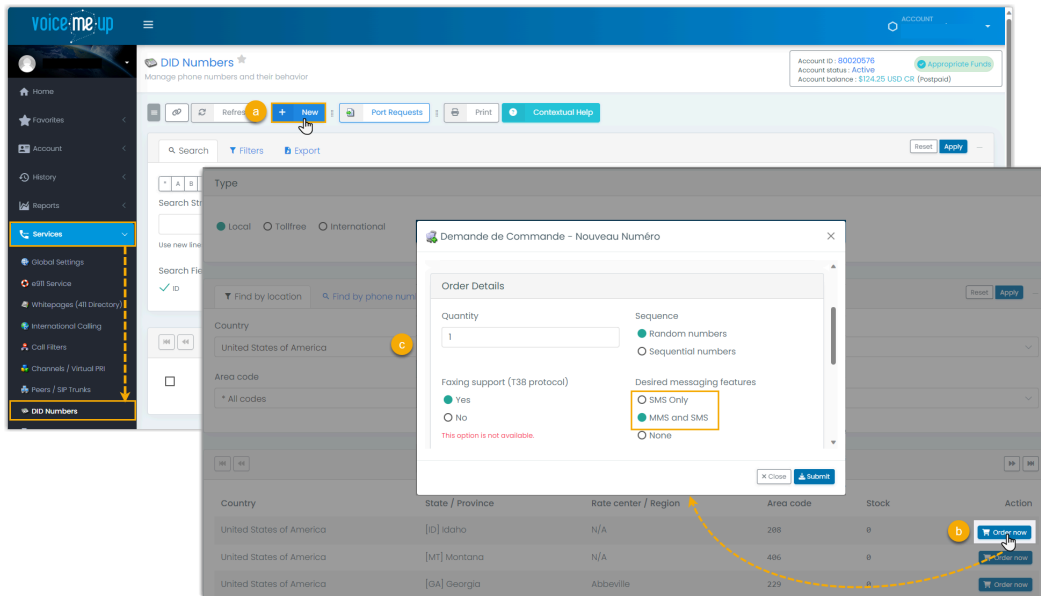
2. Configure messaging webhook for the DID number.

    a. Go to the edition page of the desired DID number.
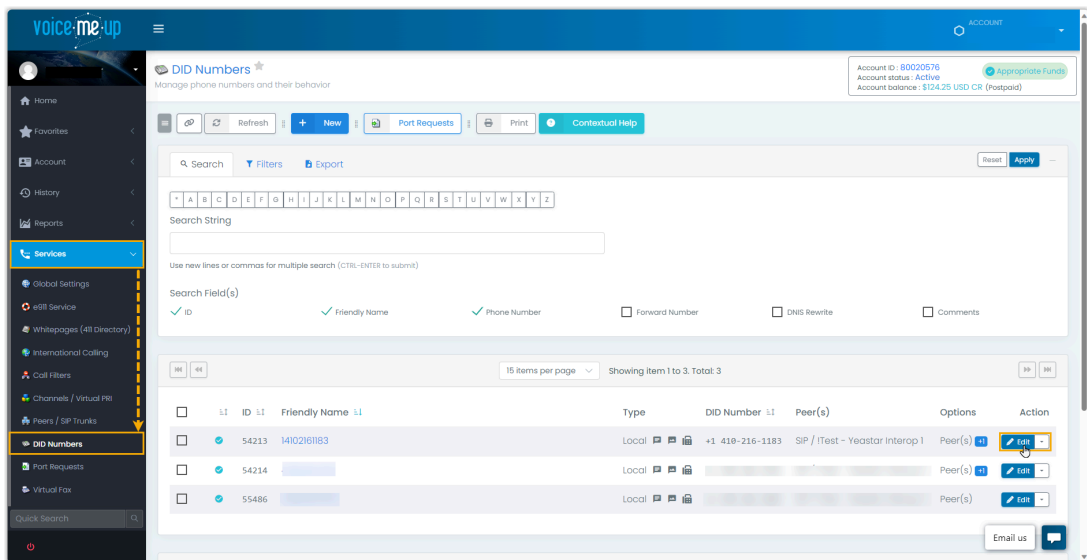
    b. Enable SMS/MMS for the DID number, and configure the Callback URL using the [PBX's Webhook URL](#).

3. Configure a user account used for the integration with PBX.

   a. Create a user account.

b. Configure the account information, and enable API access for the account.

> **Note:**
> Note down the username you set, as you will need it later on PBX.

An account is created successfully; You are redirected the user account list.

c. Go to the account's details page, and obtain the **Auth Token** for the integration.
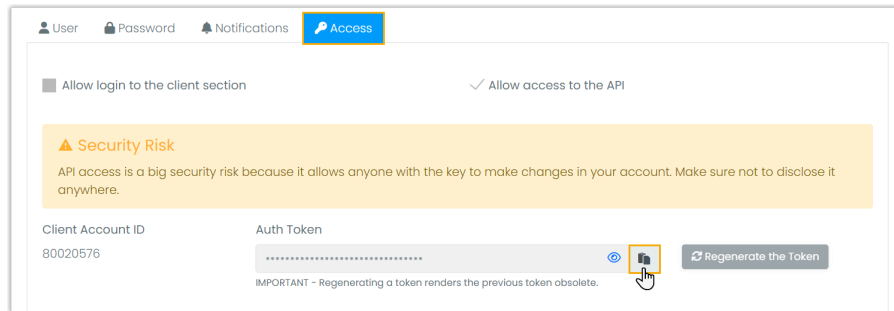
Step 3. Create and configure an SMS channel on PBX

Create an SMS channel on PBX, and configure the channel with the authentication information and number obtained from VoiceMeUp.

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, enter the authentication information of VoiceMeUp.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **VoiceMeUp**.
- **Username**: Paste the username of the VoiceMeUp account.
- **Auth Token**: Paste the auth token of the VoiceMeUp account.
4. In the **Messaging Settings** tab, configure the channel.
   a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

> **Note:**
> - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.

> ✏️ • If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list.

Option	Description
	Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list.
	All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

    d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	VoiceMeUp SMS channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> **✎ Note:**
> - For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
> - You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Set up an SMS Channel for VoIP.ms

This topic describes how to set up a VoIP.ms SMS channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to SMS messages from customers on their Linkus UC Clients.

Requirements

The Yeastar PBX should meet the following requirements:

- **Firmware**: Version 84.14.0.24 or later
- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
- **Domain Certificate**: A valid domain certificate is installed.

> **Note:**
> If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

Supported message types and limits

Supported message types

The supported message types are determined by VoIP.ms.

> ⚠️ **Important:**
> When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set [Allowed Country/Region IP Access Protection](#) rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.

Limits

- **File size**: Max. 100 MB
- **File retention period**: 24 hours

Prerequisites

Obtain the following information from VoIP.ms:

- API address for verifying authentication
- API address for sending messages
- Message sending rate limit
- API key and Secret for the messaging channel integration
- Phone number used for message sending and receiving

> ✏️ **Note:**
> If business needs to communicate with US-based customers, make sure that the phone number has been completed with 10DLC registration to avoid disruption in message delivery.

Procedure

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, complete the following settings.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **VoIP.ms**.
- **API Key**: Enter the API key provided by VoIP.ms.
- **Secret**: Enter the Secret provided by VoIP.ms.
- **API Address for Sending Messages**: Enter the corresponding API address provided by VoIP.ms. For example, `https://voip.ms/sendmessage`.
- **API Address for Verifying Authentication**: Enter the corresponding API address provided by VoIP.ms. For example, `https://voip.ms/verify`.
- **Webhook URL**: Copy the webhook URL and paste it in the customer portal of VoIP.ms.

> **Note:**
> For the detailed introduction of webhook settings on VoIP.ms, contact the service provider.

- In the **Messaging Settings** tab, configure the channel.
    a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

    > **Note:**
    > ◦ If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
    > ◦ If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

    b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of time, select the checkbox

of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

c. In the **Number** section, click **Add** to add a message routing rule.

- **Number**: Enter the purchased number in E.164 format (`[+][coun-try code][phone number]`). For example, `+14102161183`.
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a

Option	Description
	session will be able to receive and respond to the follow-up inbound messages in the session.

- ◦ **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

- d. Click **Save**.

- Click **Save**.

Result

- A messaging channel is created successfully. You can see the channel displayed in the Messaging Channel list with **Status** showing ⊘.

	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	VoIP.ms SMS Channel	SMS	+14102161183	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

> **Note:**
> - ◦ For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
> - ◦ You can filter the statistics by a time period using the time filter.

	Number	Total	Sent	Failed	Received	Operations
	+14102161183	30	20	10	8	✎ 🗑

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

Check and Manage External Chat Logs
User Guide - Manage customer queries from SMS channel on Linkus Web Client
User Guide - Manage customer queries from SMS channel on Linkus Desktop Client
User Guide - Manage customer queries from SMS channel on Linkus Mobile Client

Integrate SMS Service with Yeastar P-Series Cloud Edition using SMS API

Yeastar P-Series Cloud Edition allows Service Providers to integrate their SMS service with the PBX system using SMS API. This topic describes how Service Provider can achieve the interaction of SMS service with Yeastar PBX using API, and introduces how PBX administrators can set up an SMS channel for the Service Provider on PBX system.

Requirements

To implement the SMS service integration with Yeastar P-Series Cloud Edition, Yeastar PBX and Service Provider must meet the following requirements.

Platform	Requirement
Yeastar PBX	• **Firmware**: Version 84.14.0.24 or later • **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP) • **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages. • **Domain Certificate**: A valid domain certificate is installed. **Note:** If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
Service Provider	• **API**: Service Provider should provide the following API interfaces. ◦ HTTPS REST API for verifying authentication

Platform	Requirement

	◦ HTTPS REST API for sending messages
	• **Customer Portal Feature**: Service Provider should offer the following features on its customer portal.
	    ◦ Provide an **API key** to authenticate API requests sent from PBX system.
	    ◦ Provide a **Secret** for PBX system to verify webhook requests sent by the Service Provider.
	    ◦ Support for configuring **Webhook** through the customer portal.
	• **Number Format**: Phone numbers should follow the E.164 format.

Authenticate requests

As the SMS service integration is implemented via API interactions between Service Provider and PBX, the Service Provider should provide an **API key** and a **Secret** for the request authentication of APIs and webhooks in the integration.

- **API key**

  The API key is used to authenticate the API requests sent from PBX to Service Provider.

  The PBX will pass the API key in the header of each API request under an `Authorization` field, as shown below:

  ```
  Authorization: Bearer {api_key}
  ```

  Upon receiving an API request, Service Provider verifies the API key extracted from the request header. If the API key is valid, the Service Provider should execute the corresponding actions as specified in the request. Otherwise, the API request fails.
  For more information about the API request, see the followings:
  - [Verify SMS channel connectivity](#)
  - [Send messages through Service Provider](#)
- **Secret**

  The Secret is used to authenticate the webhook requests sent from Service Provider to PBX.

  When sending a message to PBX via webhook, the Service Provider needs to utilize the **Secret** along with the SHA256 algorithm to generate a signature based on the webhook request body, and pass the signature in the header of each webhook request under an `X-Signature-256` field, as shown below:

  > ⚠️ **Important:**

> ⚠ The signature included in the request header must be in all lowercase letters.

```
X-Signature-256: sha256={signature}
```

Upon receiving a webhook request, PBX calculates a signature using the **Secret** along with SHA256 algorithm based on the received webhook request body, then compares the result with the signature extracted from the request header. If the signatures match, it indicates that the webhook request is valid and PBX will deliver the message retrieved from the request body to the message recipient. Otherwise, the webhook request will be rejected.

For more information about the webhook request, see [Receive messages from Service Provider](#).

Verify SMS channel connectivity

Once an SMS channel has been established on PBX web portal, the system will periodically send API requests to Service Provider using the **API address for verifying authentication** and **API key** to verify the connectivity of the channel.

Interaction flow

The process of channel connectivity verification is shown below:
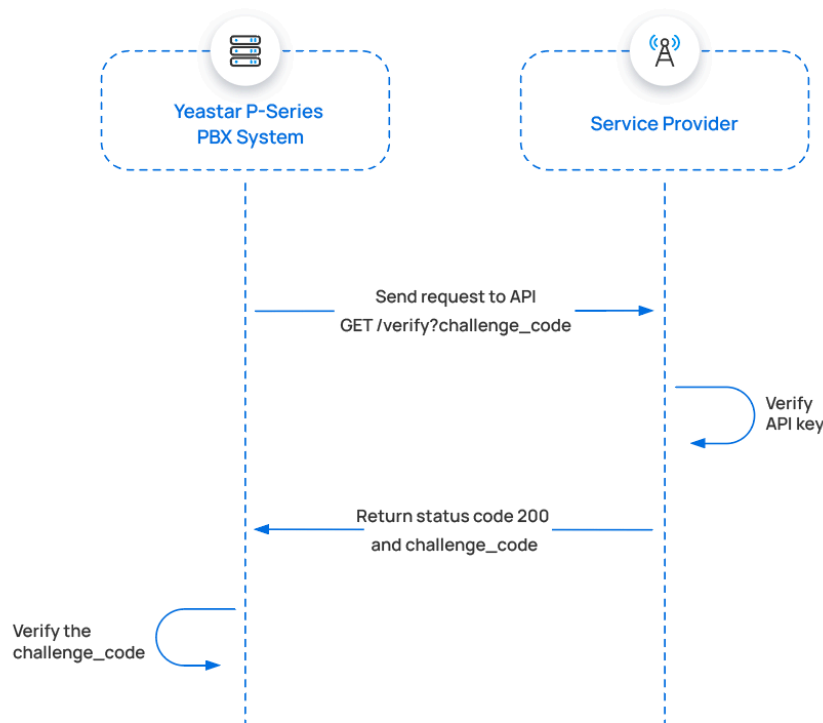
1. PBX initiates an API request, containing a randomly generated challenge code.
2. Upon receiving the API request, Service Provider validates the API key.
3. If the API key is valid, Service Provider should return a status code `200`, and include the challenge code in the response body.
4. Upon receiving the response, PBX checks if the returned challenge code matches the one it sent.

   If the challenge code matches, it indicates that the channel connection is successful.

API request sent by PBX

Below is the structure and explanation of the API request sent by PBX for channel connectivity verification.

Request method

GET

Request URL

```
{api_address_for_verifying_authentication}
```

For example:

```
https://service-provider.example.com/verify
```

Headers

Parameter	Type	Description
Authorization	String	Pass the API key in the header. **Format**: Bearer *{api_key}*

Query parameter

Parameter	Type	Description
challenge	String	Challenge code. A random string that is generated by PBX.

Request example

```
GET /
verify?challenge=mAWpGnyeTZgguOPYlWitGPlRJYIhoLMy
 HTTP/1.1
Host: service-provider.example.com
Authorization: Bearer {api_key}
```

API response returned by Service Provider

Service Provider should return the API response in JSON format.

Success response

If the request is successful, Service Provider should return the following information in the response:

- HTTP status code `200`
- The challenge code that was sent by PBX in the request

For example:

```
HTTP/1.1 200 OK
Body: mAWpGnyeTZgguOPYlWitGPlRJYIhoLMy
```

If the challenge code in the response body matches the one sent by PBX, it indicates that the channel has successfully connected. In this case, the channel status on PBX web portal is displayed as ⊘ (Connected).

Error response

If the request fails, Service Provider should return the error information in the response according to the following format.

Parameter	Type	Description
code	String	Error code.
title	String	Error type (Customizable).
detail	String	Detailed information of the error (Customizable).

The following example shows a response of a failed channel connectivity verification.

```
HTTP/1.1 401 Unauthorized
```

```
{
    "errors": [
        {
            "code": "10004",
            "title": "Authentication failed",
            "detail": "No key found matching the ID
 with the provided secret."
        }
    ]
}
```

Exceptions and troubleshooting

If channel connectivity verification fails, the channel on PBX web portal will display an abnormal status. Service Provider can troubleshoot the cause of the anomaly by checking the error code and response body.

- **Error code**

The table below lists the error codes defined in the PBX.

Error Code	Error Message	Description
10001	channel.ErrInvalidPhoneNumber	Invalid phone number.
10002	channel.ErrInvalidParam	Invalid parameter in the request.
10003	channel.ErrUnsupportMedia	Resource type not supported (MMS).
10004	channel.ErrAuthFail	Authentication failed.
10005	channel.ErrAuthFail	No permission.
10006	channel.ErrTooManyRequest	Too many requests.
10007	channel.ErrServiceUnavailable	Service unavailable on recipient's platform.
10008	channel.ErrExceedsSizeLimit	File size exceeds the limit.

- **Exceptions**

The table below lists the possible abnormal channel statuses and their trigger conditions.

Channel Status	Trigger Condition
Unauthorized	◦ Authentication failed, Service Provider returns HTTP status code `401`/`403`/`404`. ◦ The returned challenge code does not match the one sent by the PBX.
Services of the recipient platform are unavailable	Service Provider returns HTTP status code `500`.
Unknown	Service Provider returns HTTP status code except for `401`/`403`/`404`/`500`, and returns error information in the response body according to [the format defined by the PBX](#).
Request Failed	◦ Service Provider does not return an HTTP status code, possibly due to TCP connection issues or non-existent domain. ◦ Service Provider returns HTTP status code except for `401`/`403`/`404`/`500`, and does not return a response body or the returned response body is not in JSON format.

Send messages through Service Provider

When a PBX user sends a message, PBX will send an API request to the Service Provider using the **API interface for sending messages** and **API key,** so as to deliver the message to external message recipient through Service Provider.

Interaction flow

The process of sending a message through Service Provider is shown below:
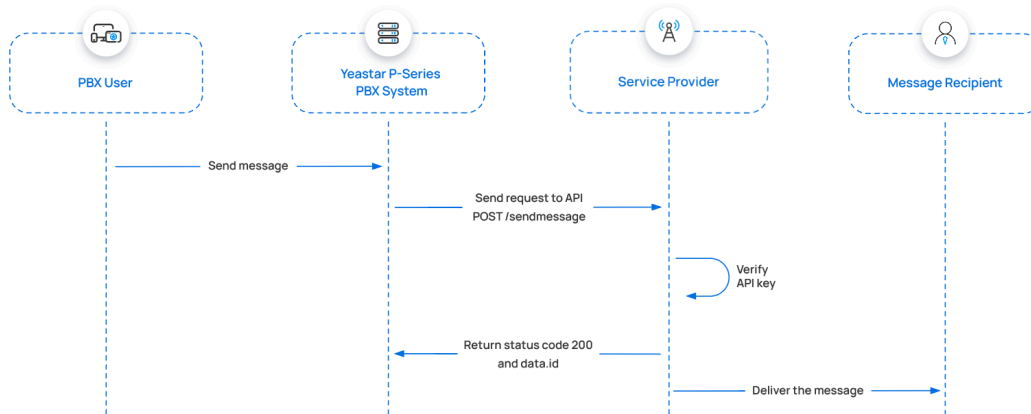
1. A PBX user sends a message.
2. PBX initiates an API request to send a message through the Service Provider.
3. Upon receiving the API request, the Service Provider validates the API key.
4. If the API key is valid, the Service Provider should return a status code `200` and a `data.id` to pass the unique ID of the message.
5. Service Provider delivers the message to the message recipient.

API request sent by PBX

Below is the structure and explanation of the API request sent by PBX for sending a message through Service Provider.

Request method

POST

Request URL

```
{api_address_for_sending_message}
```

For example:

```
https://service-provider.example.com/sendmessage
```

Headers

Parameter	Type	Description
Content-Type	String	Define the content type of the request payload.

Parameter	Type	Description
		Valid value: application/json
Authorization	String	Pass the API key in the header. **Format**: Bearer *{api_key}*

Request body

PBX will pass the outbound message in the request body.

Parameter	Type	Description
from	String	Phone number of the message sender. **Note:** This parameter should be in E.164 format. For example, +8618012121222.
to	String	Phone number of the message recipient. **Note:** This parameter should be in E.164 format. For example, +8618012121222.
text	String	The textual content of the message.
media_urls	Array<String>	The URL(s) pointing to the media content of the message.

Request example

Here are examples of sending SMS/MMS messages to a phone number through Service Provider.

- Send an SMS message

```
POST /sendmessage HTTP/1.1
Host: service-provider.example.com
Content-Type: application/json
Authorization: Bearer {api_key}

{
    "from": "+8618012121222",
    "text": "Hello, World!",
    "to": "+8618012121223"
```

```
        }
```

• Send an MMS message

```
POST /sendmessage HTTP/1.1
Host: service-provider.example.com
Content-Type: application/json
Authorization: Bearer {api_key}

{
    "from":"+8618012121222",
    "to":"+8618012121223",

  "media_urls":["docs.example.yeastarcloud.com/
api/chat/70dee7e2f95041ca890f222ace06c2dc"]
}
```

API response returned by Service Provider

Service Provider should return the API response in JSON format.

Success response

If the request is successful, Service Provider should return the following information in the response:

- HTTP status code `200`
- A parameter `data.id` to pass the unique ID of the message

For example:

```
HTTP/1.1 200 OK
{
    "data": {
        "id":"b301ed3f-1490-491f-995f-6e64e69674d4",
    // Message ID (Required)
        "from": {
    // Message sender's information
            "carrier": "PBX",
            "line_type": "VoIP",
            "phone_number": "+8618012121222"
        },
        "text": "Hello world!",
    // Textual content of the message
```

```
        "media": [
  // Media content of the message
            {
                "content_type": null,
  // Media type
                "sha256": null,
  // SHA256 value of the media content
                "size": null,
  // Media file size
                "url":
 "https://docs.example.yeastarcloud.com/
profile_images/1142168442042118144/AW3F4fFD_400x400.
png"  // URL pointing to the media content
            }
        ],
        "to": [
  // Message recipient's information
            {
                "carrier": "T-MOBILE USA, INC.",

                "line_type": "Wireless",
                "phone_number": "+8618012121223",

                "status": "queued"
            }
         ],
        ...
        }
}
```

Error response

If the API request fails, Service Provider should return the error information in the response according to the following format.

Parameter	Type	Description
code	String	Error code.
title	String	Error type (Customizable).
detail	String	Detailed information of the error (Customizable).

The following example shows a response of a failed message sending request.

```
HTTP/1.1 400 Bad Request
{
    "errors": [
        {
            "code": "10001",
            "title": "Invalid 'to' address",
            "detail": "The 'to' address should be a
 single valid number."
        }
    ]
}
```

Exceptions and troubleshooting

If message delivery fails, an error prompt will be displayed on the PBX user's Linkus client. Service Provider can troubleshoot the cause of the anomaly by checking the error code and response body.

- **Error code**

  The table below lists the error codes defined in the PBX.

Error Code	Error Message	Description
10001	channel.ErrInvalidPhoneNumber	Invalid phone number.
10002	channel.ErrInvalidParam	Invalid parameter in the request.
10003	channel.ErrUnsupportMedia	Resource type not supported (MMS).
10004	channel.ErrAuthFail	Authentication failed.
10005	channel.ErrAuthFail	No permission.
10006	channel.ErrTooManyRequest	Too many requests.
10007	channel.ErrServiceUnavailable	Service unavailable on recipient's platform.
10008	channel.ErrExceedsSizeLimit	File size exceeds the limit.

- **Exceptions**

The table below lists the possible error prompts and their trigger conditions.

| Error Prompt	Trigger Condition
Failed to send	◦ Service Provider does not return a `data.id`. ◦ Service Provider returns HTTP status code `404`, prompting service not found. ◦ Message delivery fails, and Service Provider returns error information according to [the format defined by the PBX](), which will be displayed in the error prompt. ◦ Message delivery fails, and Service Provider does not return error information or the returned response body is not in JSON format.
Authentication Failed	◦ Service Provider returns HTTP status code `401`. ◦ Service Provider returns error code `10004` or `10005`.
Recipient Platform Service Unavailable	◦ Service Provider returns HTTP status code `403`. ◦ Service Provider returns error code `10007`.
Invalid Phone Number	Service Provider returns error code `10001`.
Invalid Parameter	Service Provider returns error code `10002`.
This type of message is not supported due to the restriction of the recipient platform.	Service Provider returns error code `10003`.
Too frequent operations. Please try again later.	Service Provider returns error code `10006`.
The file size exceeds the	Service Provider returns error code `10008`.

Error Prompt	Trigger Condition
limit of the recipient's platform.	

Receive messages from Service Provider

PBX can receive messages from external message sender via a phone number provided by the Service Provider. When an external message sender sends a message to the phone number, Service Provider can send a request to PBX's webhook URL, so as to deliver this message to PBX.

Interaction flow

The process of receiving a message from Service Provider is shown below:
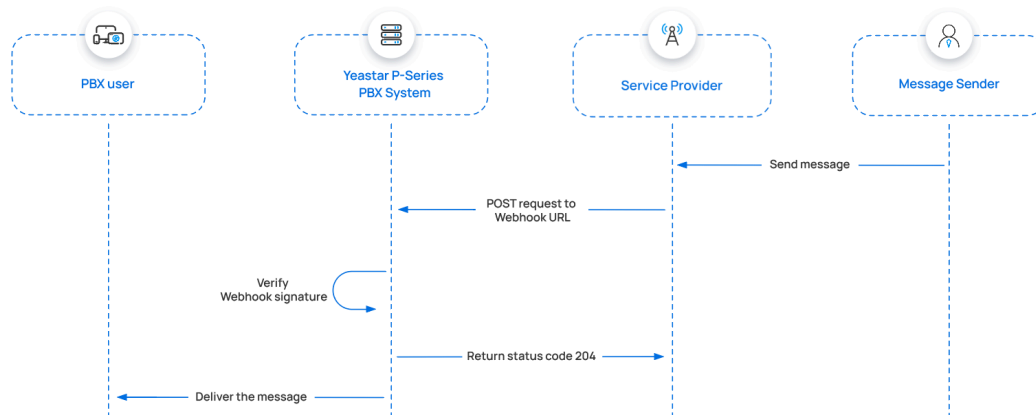
1. An external message sender sends a message.
2. The Service Provider should initiate a request to the PBX's webhook URL, with the inbound message attached in the request body and a SHA256 signature included in the request header.
3. Upon receiving the webhook request, PBX verifies the signature by using the secret provided by Service Provider to calculate a SHA256 signature based on the received webhook request body, then compares the result with the signature extracted from the request header.

   If the signatures match, it indicates that the webhook request is valid, and PBX will return a status code `204` to the Service Provider.
4. PBX delivers the message to the PBX user.

Webhook request sent by Service Provider

Below is the structure and explanation of the webhook request that Service Provider should send for message delivery.

Request method

POST

Request URL

```
{webhook_url_provided_by_pbx}
```

For example:

```
https://docs.example.yeastarcloud.com/
api/v1.0/webhook/general/429ced149ff9437695be795aff3
8407b
```

Headers

Parameter	Type	Description
Content-Type	String	Define the content type of the request payload. **Valid value**: application/json
X-Signature-256	String	Pass the signature for webhook authentication, where *{signature}* is the lowercase result generated by encrypting the body content with the **Secret** using the SHA256 algorithm. **Format**: sha256=*{signature}*

Request body

The Service Provider should pass the inbound messages in the request body.

> 📝 **Note:**
> Here only lists the mandatory parameters. Service Provider may extend this message with other data if needed.

Parameter	Required	Type	Description
data.event_type	Yes	String	Event type. **Valid value**: `message.received`.
data.payload.id	Yes	String	Message ID. 📝 **Note:** The maximum character length is 255.
data.payload.from.phone_number	Yes	String	Phone number of the message sender. 📝 **Note:** This parameter should be in E.164 format. For example, `+8618012121222`.
data.payload.to.phone_number	Yes	String	Phone number of the message recipient. 📝 **Note:** This parameter should be in E.164 format. For example, `+8618012121222`.
data.payload.text	Yes	String	Textual content of the message. ⚠️ **Important:** Either `data.payload.text` or `data.payload.media` must be provided.
data.payload.media	Yes	Array <media>	The information and URL pointing to the media content of the message. ⚠️ **Important:** Either `data.payload.text` or `data.payload.media` must be provided.
data.payload.received_at	Yes	String	The time when the message was received (ISO 8601 format).

Parameter	Required	Type	Description
			Format: `YYYY-MM-DDTHH:MM:SS.mmm+/-HH:MM`. **Example**: 2019-12-09T20:16:07.588+08:00.
data.payload.record_type	Yes	String	Record type. **Valid value**: `message`.

media

Parameter	Required	Type	Description
content_type	No	String	The type of the media file. **Tip:** Refer to the [Media Types](#) for the corresponding value.
sha256	No	String	The SHA256 value of the media file.
size	No	Integer	File size.
url	Yes	String	The URL that points to the media file.

Request example

The following example shows a webhook request for Service Provider to send a message to the PBX.

```
POST /
api/v1.0/webhook/general/429ced149ff9437695be795aff3
8407b HTTP/1.1
Host: docs.example.yeastarcloud.com
Content-Type: application/json
X-Signature-256: sha256={signature}

{
    "data": {
        "event_type": "message.received",
```

```
        "id":
"b301ed3f-1490-491f-995f-6e64e69674d4",
 //Event ID
        "occurred_at":
"2019-12-09T20:16:07.588+00:00",
        "payload": {
            "completed_at": null,
            "cost": null,
            "direction": "inbound",
            "encoding": "GSM-7",
            "errors": [],
            "from": {
              //Sender information
                "carrier": "T-Mobile USA",
                "line_type": "long_code",
                "phone_number": "+8618012121222",
                "status": "webhook_delivered"
            },
            "id":
"84cca175-9755-4859-b67f-4730d7f58aa3",
 //Message ID
            "media": [{
              //Media content of the message
                    "content_type": null,
                    "sha256": null,
                    "size": null,
                    "url":
"https://pbs.twimg.com/profile_images/1142168442042
118144/AW3F4fFD_400x400.png"
                }],
            "messaging_profile_id":
"740572b6-099c-44a1-89b9-6c92163bc68d",
            "organization_id":
"47a530f8-4362-4526-829b-bcee17fd9f7a",
            "parts": 1,
            "received_at":
"2019-12-09T20:16:07.503+00:00",         //The time
 when the message is received
            "record_type": "message",
                //Record type
            "sent_at": null,
            "tags": [],
            "text": "Hello from PBX!",
                //Textual content of the message
```

```
            "to": [
                //Recipient information
                {
                    "carrier": "PBX",
                    "line_type": "Wireless",
                    "phone_number":
"+8618012121223",
                    "status": "webhook_delivered"
                }
            ],
            "type": "SMS/MMS",
            "valid_until": null,
            "webhook_failover_url": null,
            "webhook_url":
"http://webhook.site/04bbd2e3-09b5-4c9e-95de-a1debe
b9e675"
        },
        "record_type": "event"
    },
    "meta": {
        "attempt": 1,
        "delivered_to":
"http://webhook.site/04bbd2e3-09b5-4c9e-95de-a1debe
b9e675"
    }
}
```

Webhook response returned by PBX

The PBX system will return an HTTP status code in the response.

Status Code	Description
204	Success.
400	Bad request, returned when the signature is incorrect.

Set up an SMS channel for Service Provider

After Service Provider implements the SMS service integration with Yeastar PBX, PBX administrator can set up an SMS channel on PBX web portal for the Service Provider.

Limitations

Item	Limitation
Supported message types	The supported message types are determined by the Service Provider.

Item	Limitation
	⚠️ **Important:** When sending multimedia messages (such as images), the SMS service provider downloads the files from a link provided by the PBX. Therefore, if you have set [Allowed Country/Region IP Access Protection](#) rule, make sure that you have allowed the IP access from the country where the SMS service provider is located, otherwise the file transmission would fail.
File size	Max. 100 MB
File retention period	24 hours

Prerequisites

- Obtain the following information from the Service Provider:
  - API address for verifying authentication
  - API address for sending messages
  - Message sending rate limit
- Obtain the following information from the Service Provider's customer portal:
  - API key
  - Secret
  - Phone number used for message sending and receiving

> 📝 **Note:**
> If business needs to communicate with US-based customers, make sure that the phone number has been completed with 10DLC registration to avoid disruption in message delivery.

Procedure

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **SMS**.
3. In the **Authentication** tab, complete the following settings.

- **Name**: Enter a name to help you identify the channel.
- **ITSP**: Select **General**.
- **API Key**: Enter the API key obtained from the Service Provider's customer portal.
- **Secret**: Enter the Secret obtained from the Service Provider's customer portal.
- **API Address for Sending Messages**: Enter the corresponding API address provided by the Service Provider. For example, `https://service-provider.example.com/sendmessage`.
- **API Address for Verifying Authentication**: Enter the corresponding API address provided by the Service Provider. For example, `https://service-provider.example.com/verify`.
- **Webhook URL**: Copy the webhook URL and paste it in the Service Provider's customer portal.

4. - In the **Messaging Settings** tab, configure the channel.

   a. In the **Message Sending Rate** drop-down list, specify the number of messages that PBX can send per second.

   > 📝 **Note:**
   > - If the number of messages to send exceeds the set value, PBX will arrange the messages in queue and send them at the sending rate.
   > - If the sending rate set in PBX exceeds the limit set by the SMS service provider, it may result in message delivery failures. Contact your SMS service provider to confirm the sending rate limit of your account and increase the limit as needed.

   b. **Optional:** If you want the system to automatically close the sessions that have been inactive for a specific period of

time, select the checkbox of **Close Session Automatically**, then set the timeout in the **Session Timeout (Days)** field.

c. In the **Number** section, click **Add** to add a message routing rule.

- ◦ **Number**: Enter the purchased number in E.164 format (`[+][country code][phone number]`). For example, `+14102161183`.
- ◦ **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s)

Option	Description
	of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

- ◦ **Extensions allowed to create messaging sessions**: Select the extensions that are allowed to initiate a messaging session with customers.

        d. Click **Save**.

5. Click **Save**.

Result

- A messaging channel for the Service Provider is created successfully.

  The channel is displayed in the Messaging list with **Status** showing ⊘.

☐	Status	Name	Type	Number	Total	Sent	Operations
☐	⊘	General SMS Channel	SMS	+12 07	0	0	✎ 🗑

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column indicates the total number of sent messages, including both successfully sent messages and failed ones.

  > 📝 **Note:**
  > - ◦ For sent messages, PBX only tracks the number of the messages sent from agents' Linkus UC Clients. If you want to calculate the actual cost of sent messages, consult with the SMS service provider for the precise number of messages transmitted, as long text messages (longer than 160 characters) are automatically split into segments and then re-assembled when they are received, increasing the number of sent messages.
  > - ◦ You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number added in the channel, and see if the specified PBX user can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Social Media Channel

Set up a WhatsApp Channel

This topic describes how to set up a WhatsApp channel on Yeastar P-Series Cloud Edition, so that agents in your business can receive and reply to WhatsApp messages from customers on their Linkus UC Clients.

Requirements

Platform	Requirement

Yeastar PBX	• **Firmware**: Version 84.12.0.23 or later
	• **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
	• **Domain Name**: Due to the limitation of the third-party platform, the domain name must NOT contain underscore character(s), otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.
	• **Domain Certificate**: A valid domain certificate is installed.
	
	    📝 **Note:**
	    If the root domain of your Cloud PBX is NOT the standard Yeastar-provided domains (**ycmcloud.com**, **yeastarcloud.com**, or **yeastarycm.co.za**), you NEED to install a valid domain certificate

Platform	Requirement
	✏️ for the PBX first, otherwise the messaging channel will encounter authentication failure, or will fail to receive messages.

WhatsApp	• **Product**: WhatsApp Business Platform
	
	• **Account**:
	  ◦ A Meta Developer account
	
	  ✏️ **Note:**
	  You only need one Meta Developer account to create multiple Meta apps for the WhatsApp channel integration. There is no limit to the number of WhatsApp channels on PBX.
	
	  ◦ A Business Manager account
	
	  ✏️ **Note:**
	  After you set up a Business Manager account, verify your business.

Limitations

Learn about the limitations of WhatsApp messaging channel.

Item	Description
Message type	Supports text messages and multimedia messages, where the multimedia message types are determined by WhatsApp. For more information, see WhatsApp supported media types. ⚠️ **Important:** When sending multimedia messages (such as images), WhatsApp downloads the file from a link provided by the PBX. Therefore, if you have set Allowed Country/Region IP Access Protection rule, make sure that you have allowed the IP access from the country where the WhatsApp server is located, otherwise the file transmission would fail.
Messaging mechanism	Supports to receive and reply to **Inbound** messages, but agents can NOT initiate a messaging session with a WhatsApp user.
Message sending rate	Supports to send up to **80** messages per second.
File size	Supports to send a file with a maximum size of **100 MB**.
File retention period	Files can be retained for **24 hours**.

Item	Description
Session auto closure	A session that has been inactive for more than **24 hours** will be closed automatically.

Procedure

- [Step 1. Create a Meta app on 'Meta for Developers' portal](#)
- [Step 2. Create an admin system user on 'Meta Business Suite' portal](#)
- [Step 3. Create and configure a WhatsApp channel on PBX](#)
- [Step 4. Configure webhook in the Meta app](#)

Step 1. Create a Meta app on 'Meta for Developers' portal

1. Log in to ['Meta for Developers' portal](#), then go to **My Apps** from the top menu.
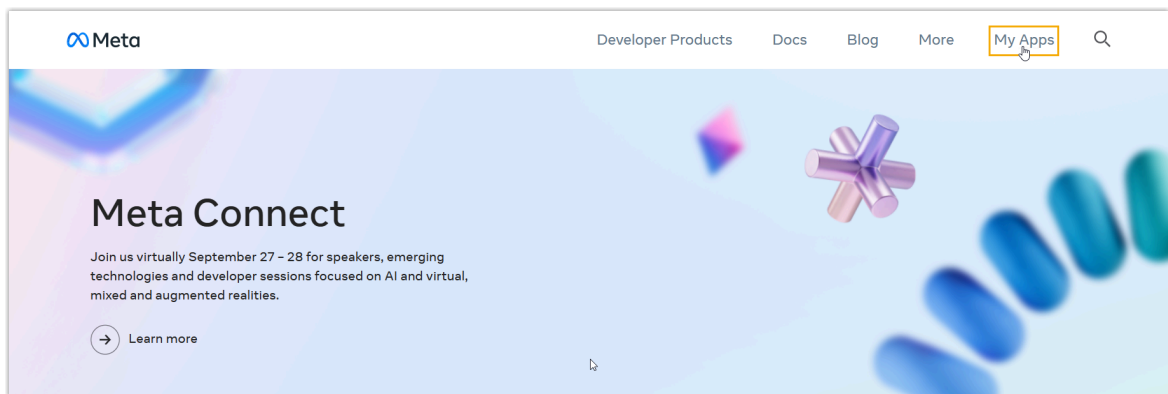
2. Create an app of the **Business** type.

> 📝 **Note:**
>
> In the **Business Account** field, select your Business Account to connect the app with your business, as apps that need [advanced access for permissions](#) must be connected to a verified business entity.
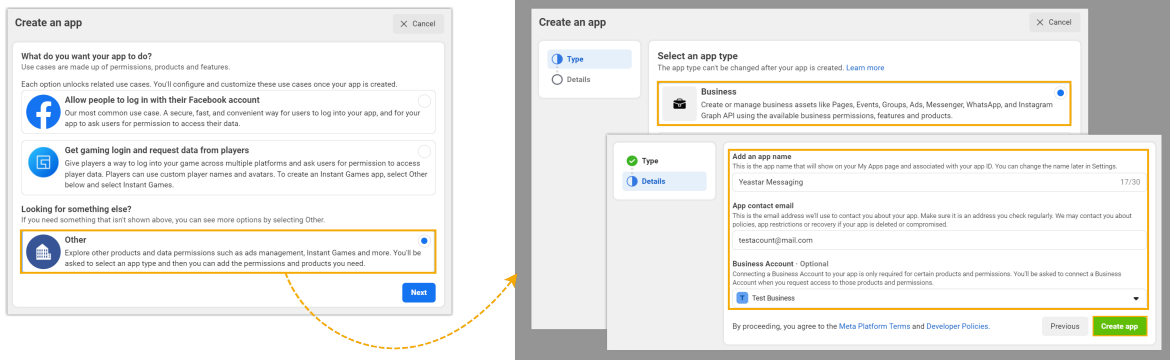
3. In the **Add products to your app** page, scroll down to find **WhatsApp** and click **Set up**.
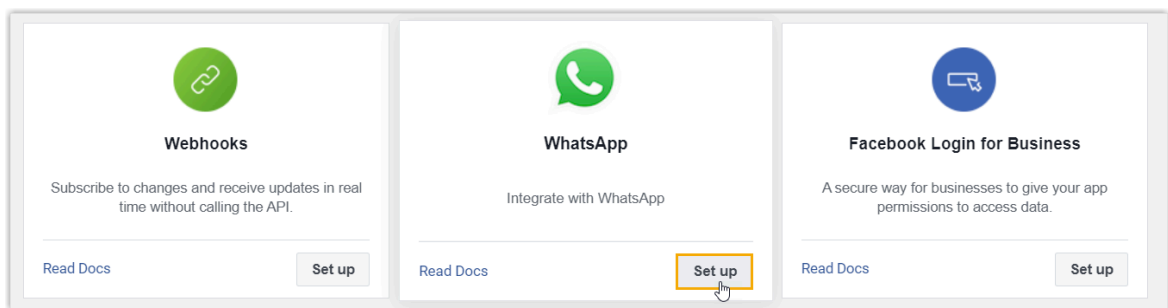
You are redirected to the **Quickstart** page of the WhatsApp product.

4. On the left navigation bar, go to **API Setup** page of the WhatsApp product, and complete the followings:

   a. To use your own WhatsApp phone number for messaging, click the **From** dropdown list in the **Select phone numbers** section, and click **Add phone number** to add your phone number for messaging.
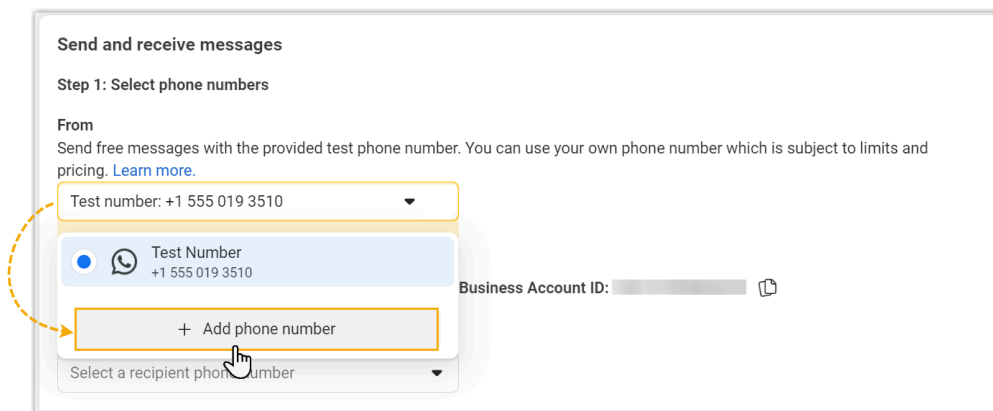
b. In the **From** drop-down list, select the desired phone number, then note down the number and the corresponding **Phone number ID** as you will need to add them on the PBX later.

In this example, select the default test number provided by WhatsApp.

c. If you use the test number provided by WhatsApp, you need to specify the recipients' phone number in the **To** drop-down list, otherwise message sending may fail.

5. On the left navigation bar, go to **App settings > Basic**, note down the **App secret** of the app, as you will need it later on PBX.

Step 2. Create an admin system user on 'Meta Business Suite' portal

1. At the top-left corner of the ['Meta for Developers' portal](), go to **App Dashboard > Business settings**.
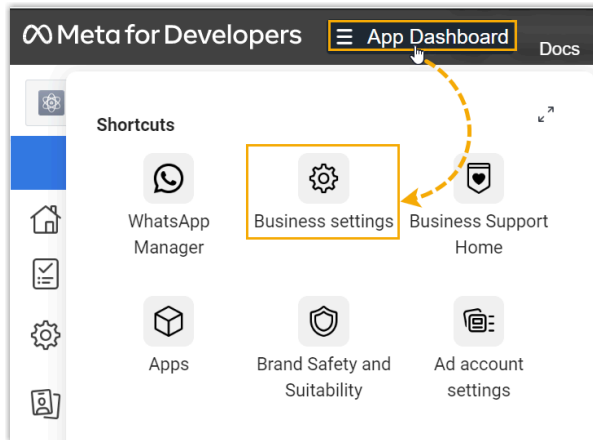
You are redirected to the **Business settings** page of 'Meta Business Suite' portal.

2. Go to **Users > System users**, create a system user and grant app permission to the user.

    a. Click **Add** to create a system user with **Admin** role.
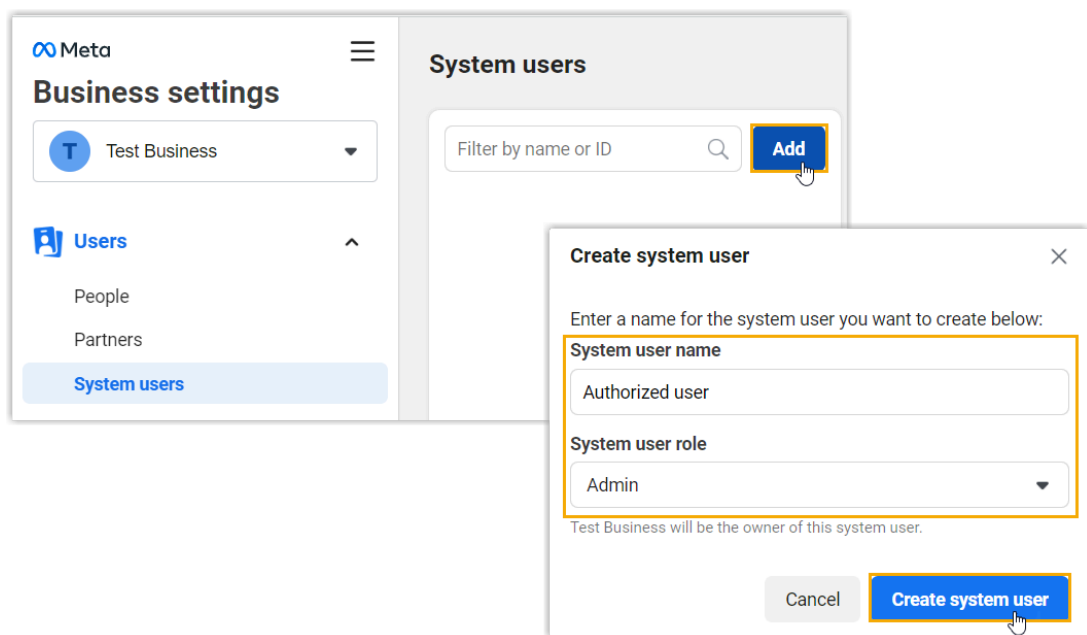
    b. Select the created user, click **Add assets** and grant the full control permission of the app to the created user.
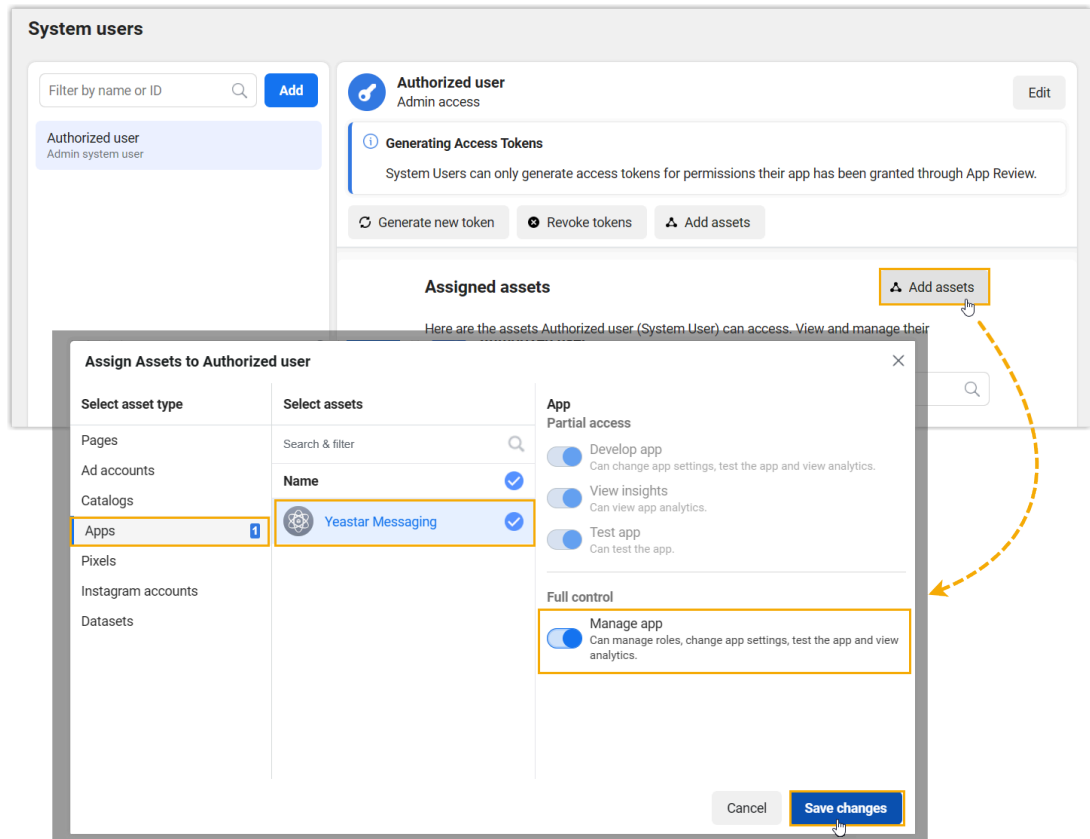
3. Go to **Accounts > WhatsApp Accounts**, add the created user to your WhatsApp Business account and grant the user full control permission.
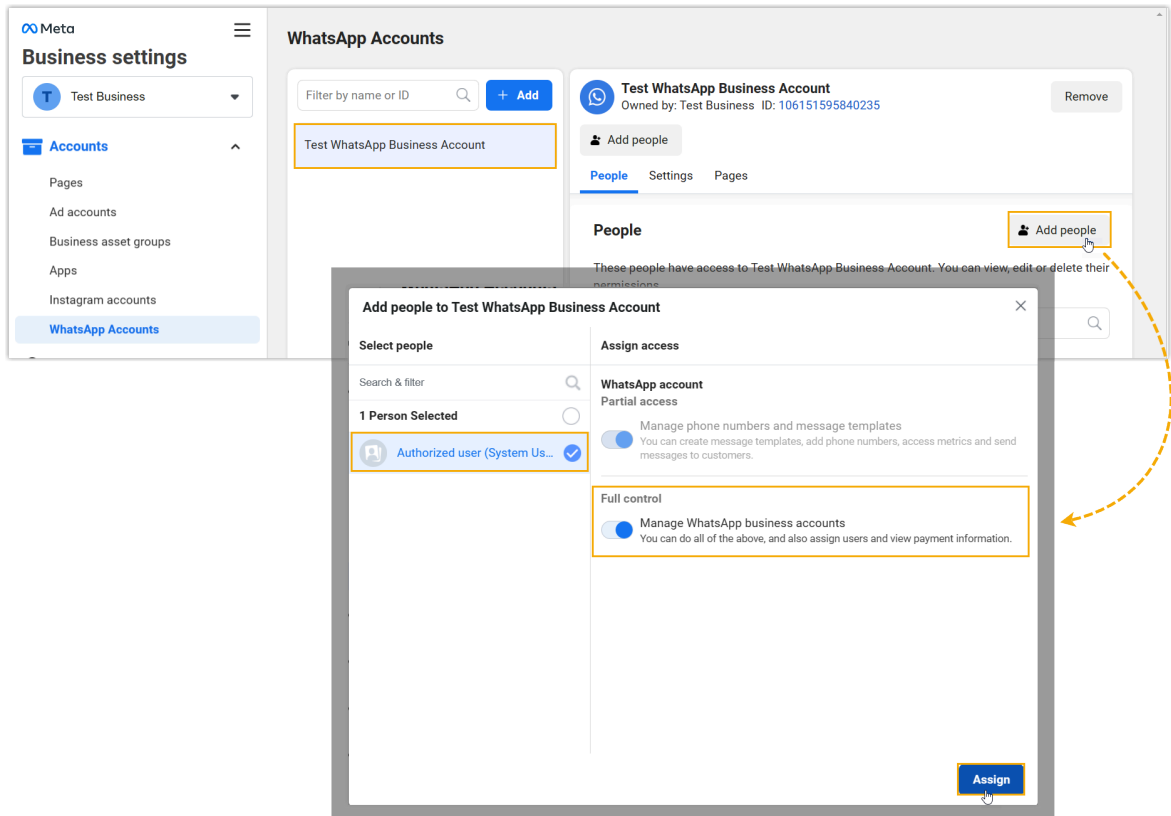
4. Go back to **Users > System users**, generate an access token with the `whatsapp_-business_messaging` and `whatsapp_business_management` permissions enabled.

> ✏️ **Note:**
> By default, the token expires after 60 days. You can set it to **Never** if you don't want the token to expire.
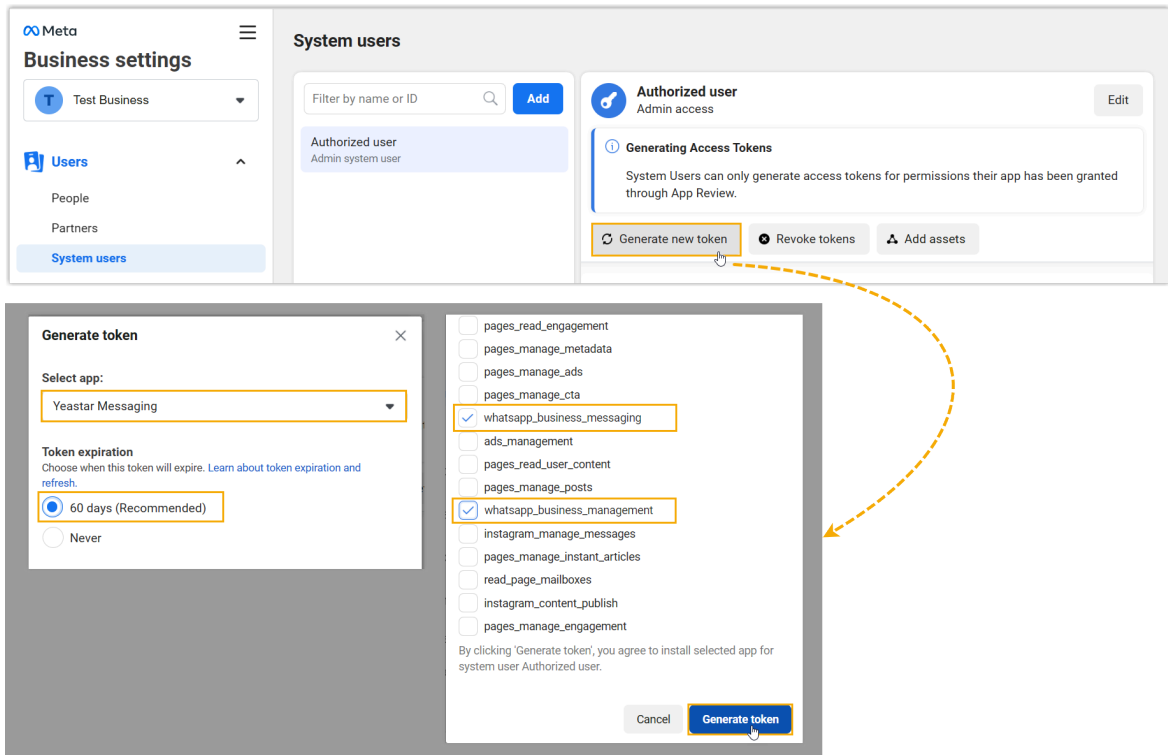
A window pops up to show the generated access token.

> ⚠ **Important:**
> Make sure that you have copied and properly saved the access token before closing the pop-up window, as it is only displayed ONCE.
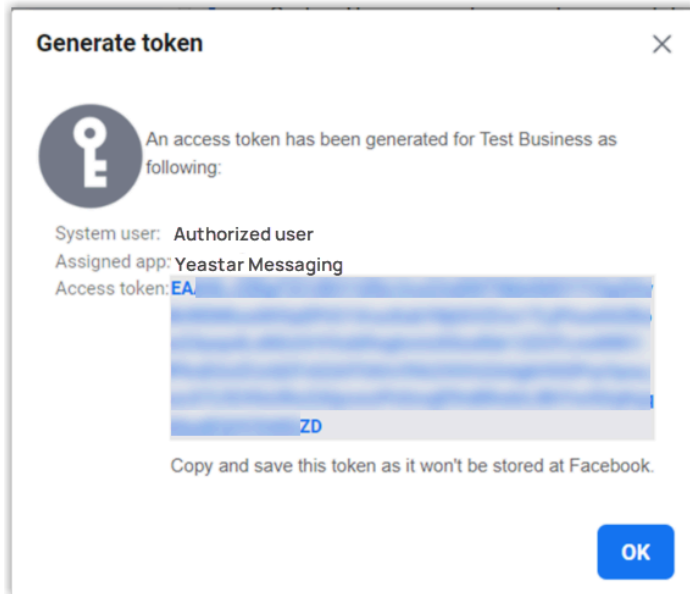
Step 3. Create and configure a WhatsApp channel on PBX

1. Log in to PBX web portal, go to **Messaging > Messaging Channel**.
2. Click **Add**, and select **WhatsApp**.
3. In the **Authentication** tab, enter the authentication information of WhatsApp.

- **Name**: Enter a name to help you identify the channel.
- **Webhook URL**: Note down the Webhook URL, as you will need it later on WhatsApp.
- **Verify Token**: Note down the verify token, as you will need it later on WhatsApp.
- **Access Token**: Paste the [Access Token obtained from 'Meta Business Suite' portal](#).

- **App Secret**: Paste the [App Secret obtained from 'Meta for Developers' portal](#).

4. In the **Messaging Settings** tab, configure the channel.

Authentication	**Messaging Settings**
* Phone Number	* Phone Number ID
+15550193510	1⬛⬛⬛⬛⬛9
* Destination for Inbound Messaging	* Extension
Extension ⌄	3000-Leo Ball ⌄

- **Phone Number**: Enter the [WhatsApp phone number](#) in E.164 format (`[+] [country code][phone number]`). For example, `+15550193510`.
- **Phone Number ID**: Paste the [phone number ID](#).
- **Destination for Inbound Messaging**: Specify the destination of inbound messages from the number.

Option	Description
Extension	If selected, choose an extension from the **Extension** drop-down list. Only the extension user can receive inbound messages from the number.
Message Queue	If selected, choose a queue from the **Message Queue** drop-down list. All the agents in the selected message queue can receive inbound message(s) of new sessions in the queue. However, only the user who picks up a session will be able to receive and respond to the follow-up inbound messages in the session.

5. Click **Save**.

Step 4. Configure webhook in the Meta app

1. Log in to ['Meta for Developers' portal](#), then go to **My Apps** from the top menu.
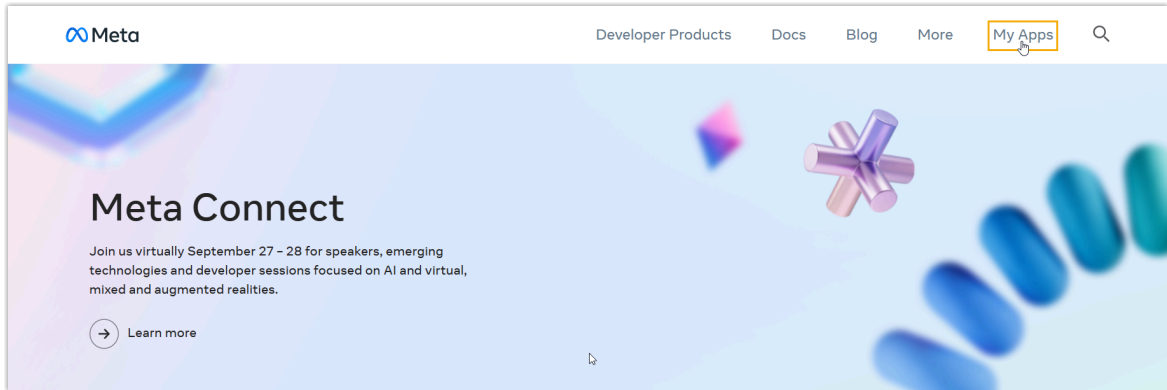
2. Click the created app to enter the details page.
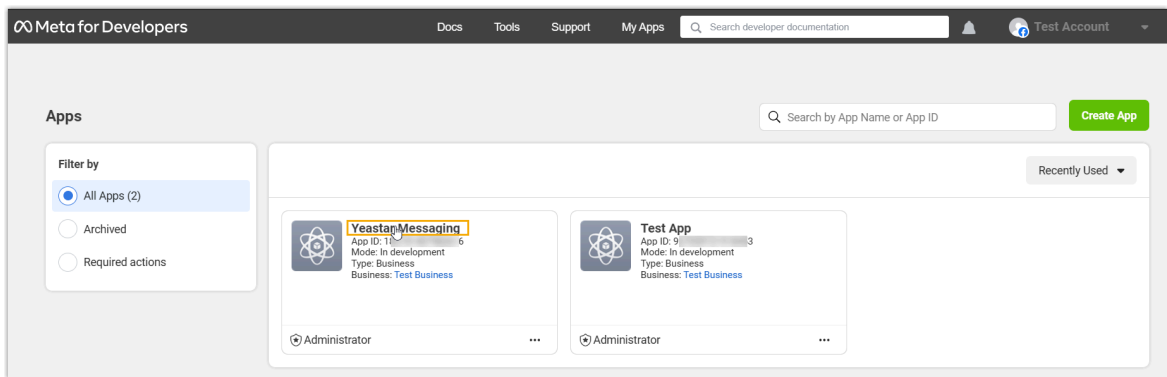
3. Go to **WhatsApp > Configuration** to configure the messaging webhook and subscribe to webhook field, so that PBX can get notified upon receiving WhatsApp messages.

    a. Paste the Webhook URL and verify token obtained from the PBX.
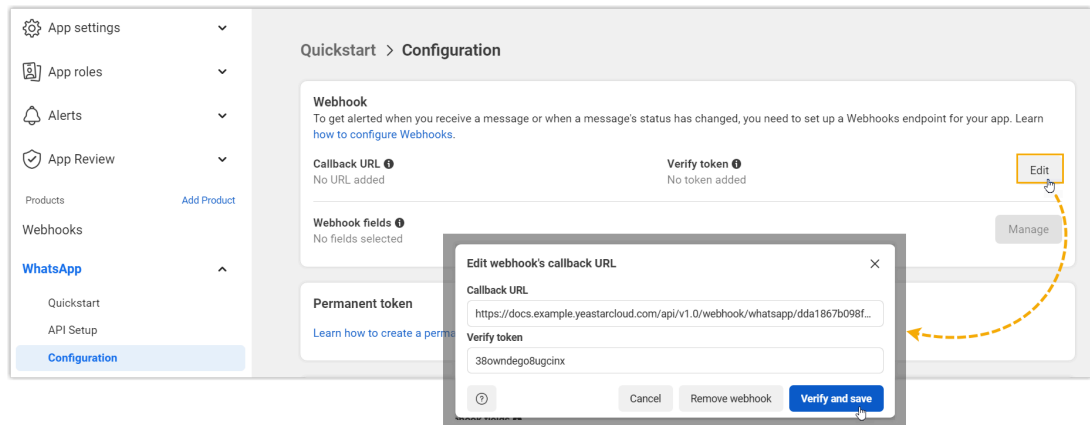
    b. Subscribe to **messages** webhook field.
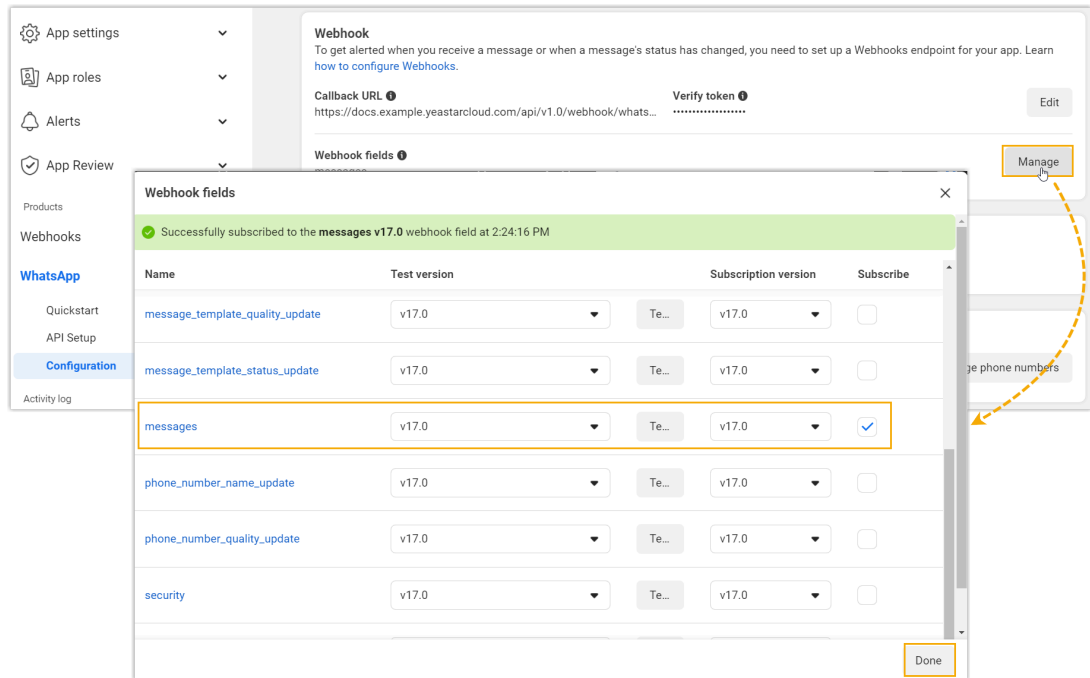
Result

- The **Status** of the WhatsApp channel shows ✅, which indicates that you have successfully created a WhatsApp channel.

- PBX automatically tracks and records the number of messages sent and received on the channel, where the **Total** column displays the total amount of the sent messages, including both successfully sent messages and failed ones.

> ℹ️ **Tip:**
> You can filter the statistics by a time period using the time filter.

What to do next

Send text messages to the phone number and see if the specified agent can receive messages on his or her Linkus UC Client.

Related information

[Check and Manage External Chat Logs](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Message Queue Setup

Create a Message Queue

Yeastar P-Series Cloud Edition allows to route messages from different message channels to message queues, so as to share workload between agents and reduce customer service response time. This topic describes how to create a message queue.

Limitation

Maximum Number of Extensions (N)	N ≤50	$50 < N \leq 200$	$N > 200$
Message Queue	16	32	64
Agents per Message Queue	25	60	120

Requirements

- **Plan**: Enterprise Plan (EP) or Ultimate Plan (UP)
- **Firmware**: 84.13.0.25 or later

Procedure

1. Log in to PBX web portal, go to **Messaging > Message Queue**.
2. Click **Add**.
3. In the **Name** field, specify a name to help you identify it.

4. In the **Agents** section, select the desired extension users from the **Available** box to the **Selected** box.
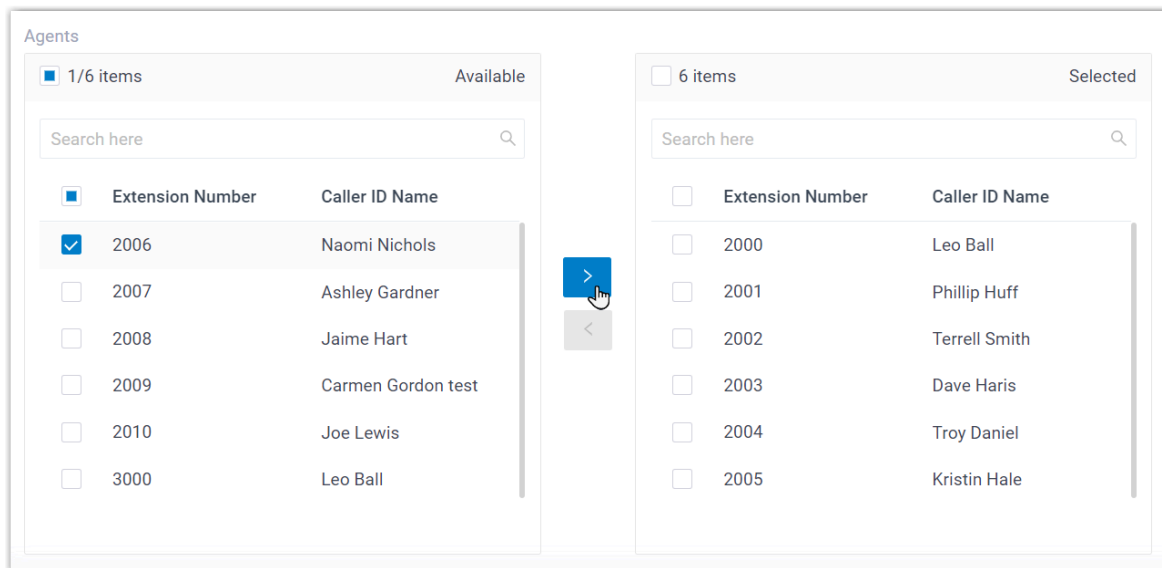
5. Click **Save**.

Result

All the selected extension users are assigned as agents of the message queue.

What to do next

Set the message queue as the inbound message destination of a channel number (Path: **Messaging > Message Channel >** ✎ **> Messaging Settings**).

Related information

[Manage Message Queues](#)
[User Guide - Manage customer queries from SMS channel on Linkus Web Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Desktop Client](#)
[User Guide - Manage customer queries from SMS channel on Linkus Mobile Client](#)

Manage Message Queues

This topic describes how to edit a message queue, and delete message queue(s).

Edit a message queue

1. Log in to PBX web portal, go to **Messaging > Message Queue**.
2. Click ✎ beside the queue that you want to edit.
3. Change the settings according to your needs.
4. Click **Save**.

Delete message queues

> ⚠ **Important:**
> Before you delete a message queue, make sure that the queue is not set as the inbound messaging destination of a message channel.

1. Log in to PBX web portal, go to **Messaging > Message Queue**.
2. To delete a queue, do as follows:

    a. Click 🗑 beside the queue that you want to delete.

    b. In the pop-up window, click **OK**.
3. To delete queues in bulk, do as follows:

    a. Select the checkboxes of the queues that you want to delete.

    b. At the top of the list, click **Delete**.

    c. In the pop-up window, click **OK**.

External Chat Log Management

Check and Manage External Chat Logs

External chat logs are comprehensive records of sessions and messages coming from various messaging channels. This topic describes how to check the external chat logs (including session information, session operation records, and detailed chat histories) and how to delete the session or chat histories on Yeastar P-Series Cloud Edition.

Requirements

The firmware version of Yeastar P-Series Cloud Edition is 84.13.0.25 or later.

Procedure

1. Log in to PBX web portal, go to **Reports and Recordings > External Chat Logs**.
2. **Optional:** Set criteria (time, channel type, or other objects) to filter the desired records.
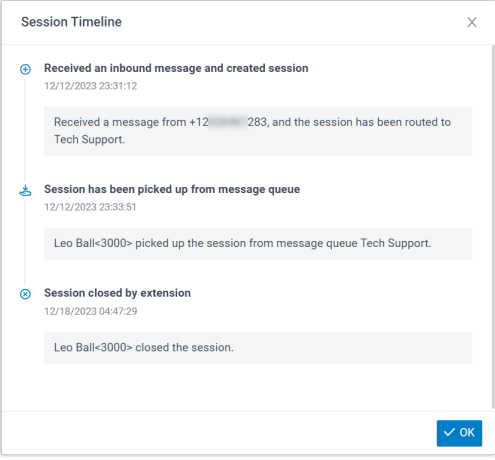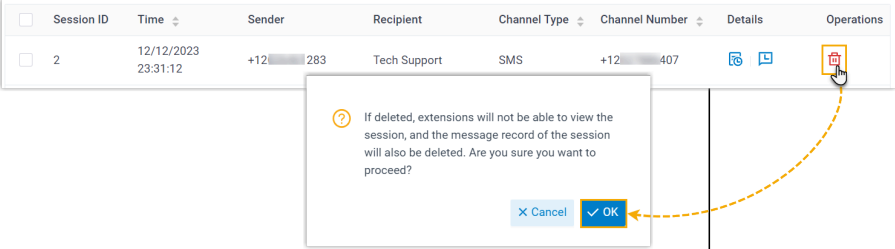
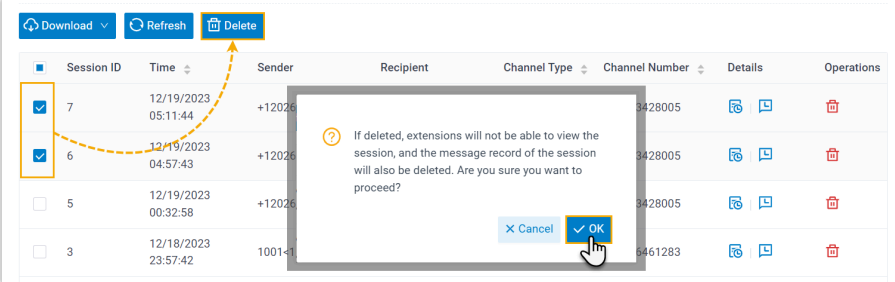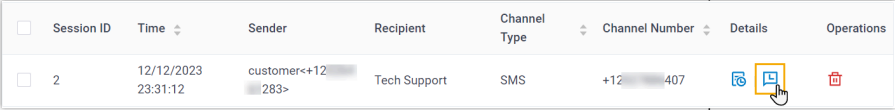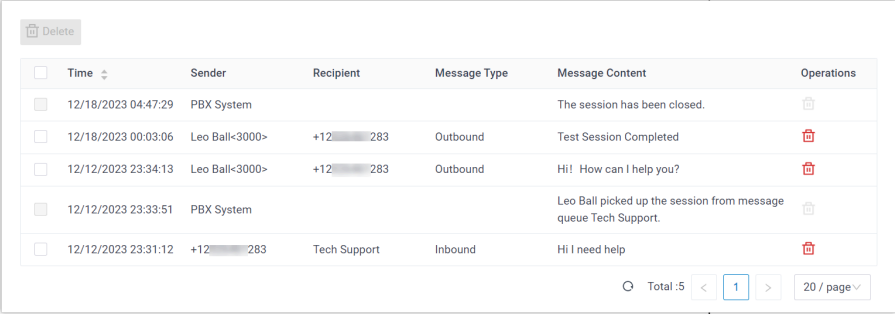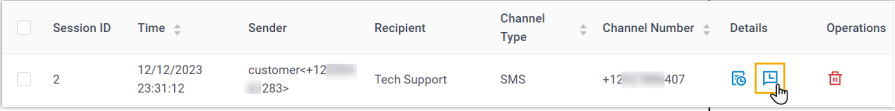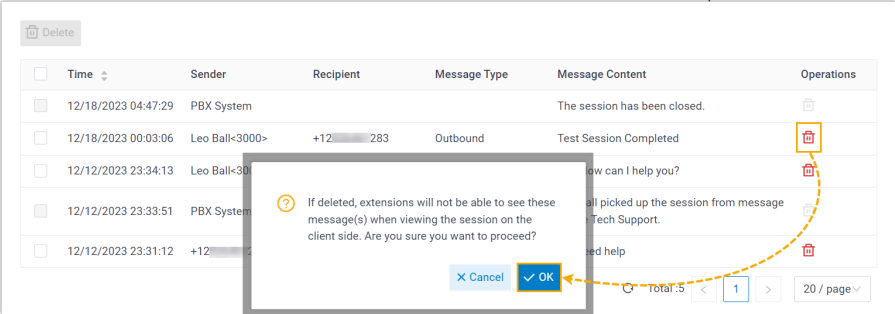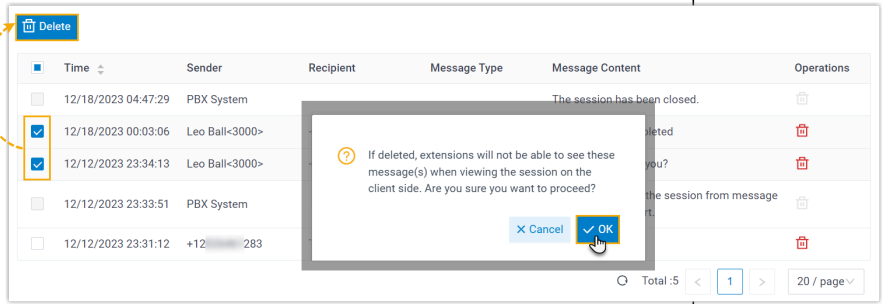   The relevant records of external chat sessions are displayed on the page.

3. Check and manage the records according to your need.

Operation	Instruction
External Chat Session	
Check operation records of an external chat session	a. Click 🔍 beside the desired session. A window pops up, displaying the operation records of the session in a timeline view. **Note:** Only the following operations will be recorded: • Create a session • Transfer a session • Pick up a session from a message queue • Close a session

Operation	Instruction
Delete external chat session(s)	• To delete a session, do as follows: a. Click 🗑 beside the session that you want to delete. b. In the pop-up window, click **OK**. • To delete multiple sessions, do as follows: a. Select the desired sessions, then click **Delete**. b. In the pop-up window, click **OK**.
External Chat History	
Check the detailed chat histories of a session	a. Click 🖵 beside the desired session.

Operation	Instruction
	The detailed messages in the session are displayed.
Delete chat histories of a session	**Note:** Messages sent by the PBX system can NOT be deleted. a. Click [icon] beside the desired session. The detailed messages in the session are displayed. b. To delete a single message, do as follows: i. Click [icon] beside the desired message. ii. In the pop-up window, click **OK**. c. To delete multiple messages, do as follows:

| Operation	Instruction
	  i. Select the desired messages, then click **Delete**. ii. In the pop-up window, click **OK**.

Download External Chat Logs

This topic describes how to download external chat logs for legal compliance, dispute resolution, training, or other purposes.
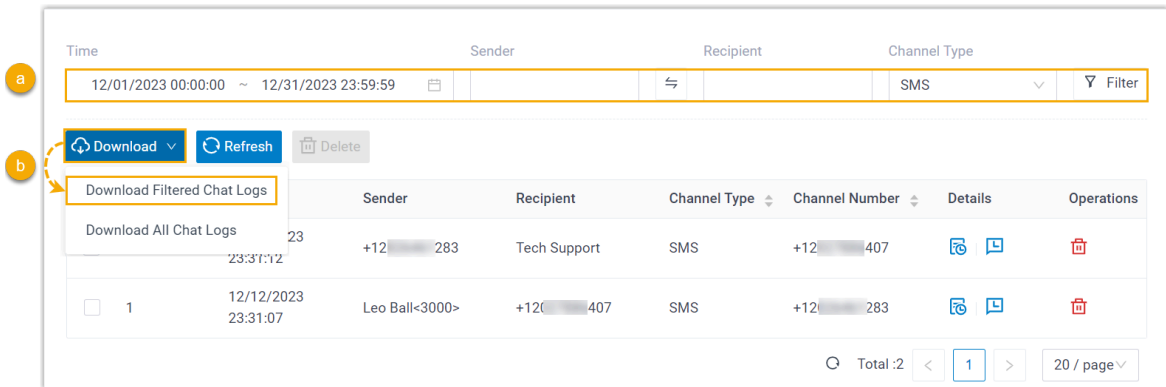
Requirements

The firmware version of Yeastar P-Series Cloud Edition is 84.13.0.25 or later.

Procedure

1. Log in to PBX web portal, go to **Reports and Recordings > External Chat Logs**.
2. To download all chat logs, click **Download** at the top of the list, then click **Download All Chat Logs**.
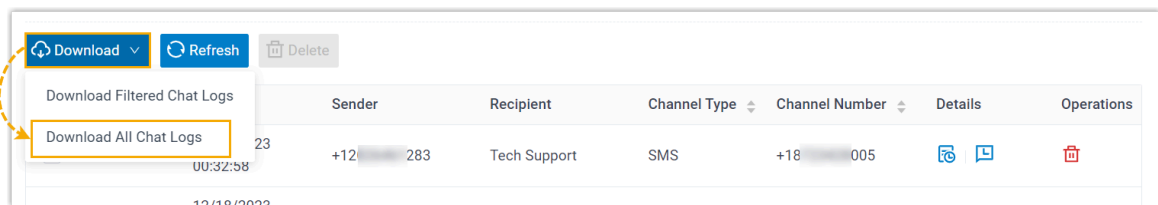
3. To download specific chat logs, do as follows:

a. Set criteria to filter the desired records.

The relevant records of external chat sessions are displayed on the page.

b. At the top of the list, click **Download**, then click **Download Filtered Chat Logs**.

Result

The external chat logs are downloaded to your computer, and each downloaded chat log has two CSV files:

- **Session_Record**: This file includes basic information about all the chat sessions in the download list.
- **Chat_Data_Record**: This file contains detailed chat histories of the entire chat session.

Agent Guide

Omnichannel Messaging Agent Guide

This guide provides guidance on how to manage incoming customer inquiries on a unified agent portal available on web, desktop, and mobile devices.

Audience

This guide is intended for customer service representatives (agents) who handles chat interaction with customers through multiple digital messaging channels.

Agent portal

To enhance communication mobility and improve agent productivity, Yeastar provides a unified agent portal integrated into the Linkus UC Clients that is available on mobile, desktop, and web-based platforms. Agents can efficiently handle message-based interactions come from multiple digital channels through the supported clients.

Supported Client	Description
Linkus Web Client	The Linkus Web Client allows agents to manage customers' chat interactions directly from a web browser. • For instructions on handling message-based interactions with customers on Linkus Web Client, see [Agent operations on Web Client](#). • For more information about utilizing Linkus Web Client, see [Linkus Web Client User Guide](#).
Linkus Desktop Client	The Linkus Desktop Client allows agents to manage customers' chat interactions with a desktop application installed on the agent's computer, providing a robust and stable environment for agents to perform their tasks. • For instructions on handling message-based interactions with customers on Linkus Desktop Client, see [Agent operations on Desktop Client](#). • For more information about utilizing Linkus Desktop Client, see [Linkus Desktop Client User Guide](#).
Linkus Mobile Client	The Linkus Mobile Client is suitable for agents who need the flexibility to handle customers' chat interactions on the go. • For instructions on handling message-based interactions with customers on Linkus Mobile Client, see [Agent operations on Mobile Client](#).

Supported Client	Description
	• For more information about utilizing Linkus Mobile Client, see [Linkus Mobile Client User Guide](#).

Agent Operations on Web Client

Manage Customer Queries from External Messaging Channels

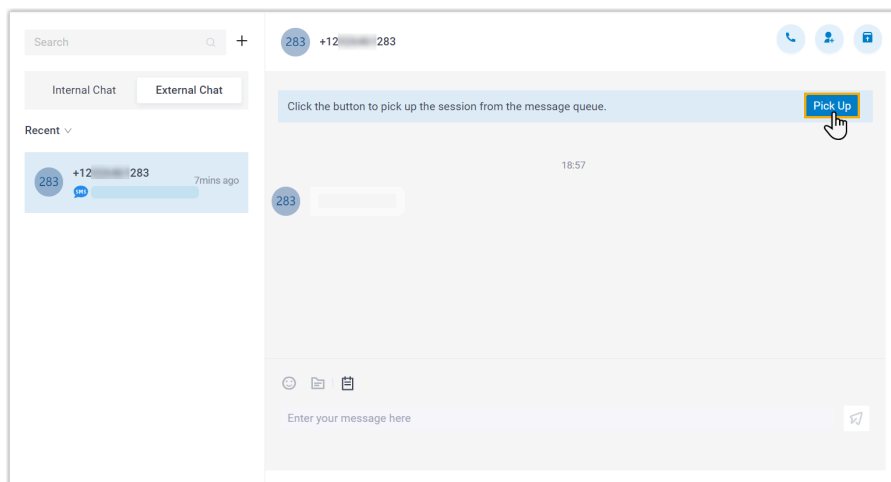This topic describes how to manage the messaging sessions of customer queries on Linkus Web Client.

Requirements

Contact system administrator to check if PBX server meets the following requirements:

- **Version**: 84.12.0.32 or later.
- **Plan**: **Enterprise Plan** or **Ultimate Plan**
- **Messaging**: At least one messaging channel is set up on PBX.

Pick up a messaging session

If you are an agent of a message queue, when the message queue receives inbound message(s) in a new session, you can see the message(s) and pick up the session from the queue.

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.

2. At the top of the messaging session, click **Pick Up**.

   There is a prompt indicating that you have picked up the session from the message queue; Only you can see the session and respond to messages in the session.

Transfer a messaging session

During a session, you can hand off a customer's issue to another colleague or a message queue by transferring the messaging session.
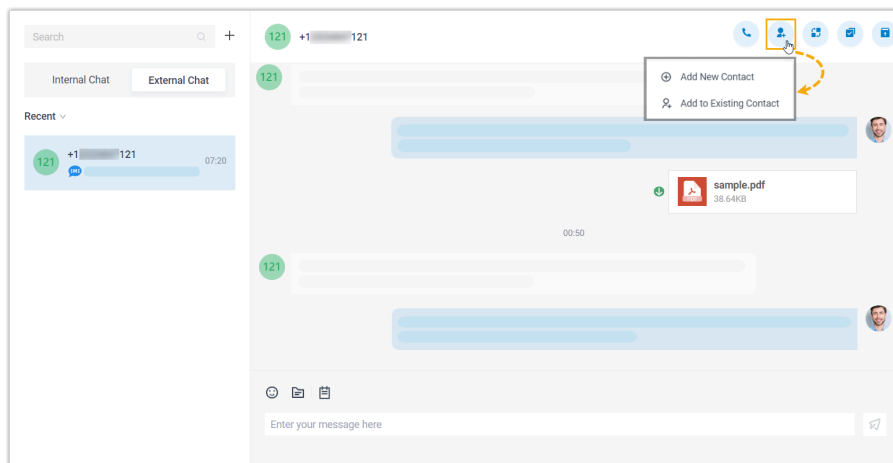

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.
2. At the top-right corner of the messaging session, click 🔀.
3. In the pop-up window, select the desired destination and click **OK**.

   The messaging session is removed from your external chat list, and transferred to the colleague / message queue with whole chat history.

Initiate a voice call from a messaging session

You can initiate a voice call right from the messaging session to resolve a customer's issue if necessary.

> **Note:**
> This operation requires the permission to make outbound calls. Contact the system administrator to check if you have the permission.

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.

2. At the top-right corner of the messaging session, click 📞.

   Linkus Web Client quickly dials out the customer's number, and the call is sent through the PBX.

Add a customer to Contacts

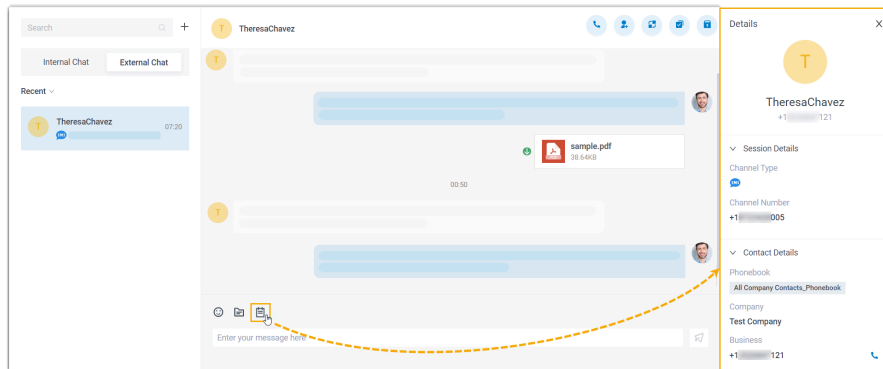You can add a customer to Contacts right from the messaging session.

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.

2. At the top-right corner of the messaging session, click 👤+ .

3. Add the customer to Contacts according to your needs.

   - To add the customer as a new contact, click **Add New Contact** and enter the customer's information.

- To add the customer to an existing contact, click **Add to Existing Contact** and edit the contact's information as needed.

View messaging session details

You can check the detailed information of a messaging session, including the message source channel, channel number, etc.
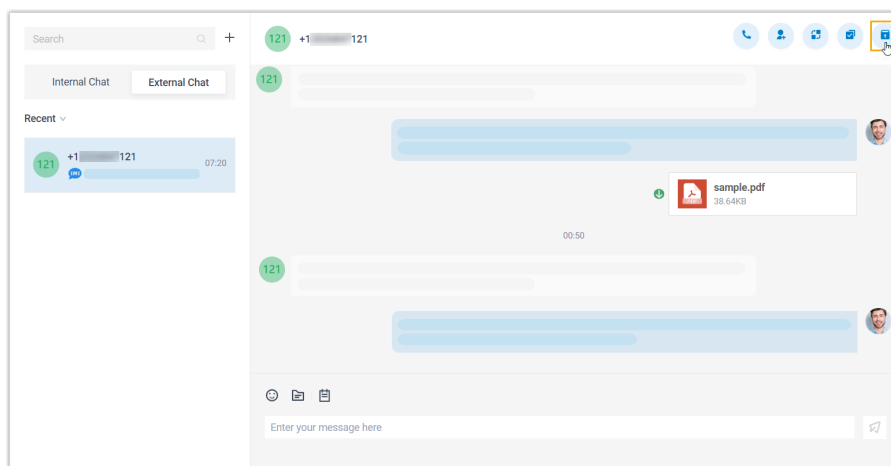

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.

2. At the bottom of the messaging session, click 🗒.

   The details of the messaging session is display at the right panel.

Archive a messaging session

You can archive a messaging session if there is no response from the customer or you wish to refer back to the session later.

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.

2. At the top-right corner of the messaging session, click ⬆.
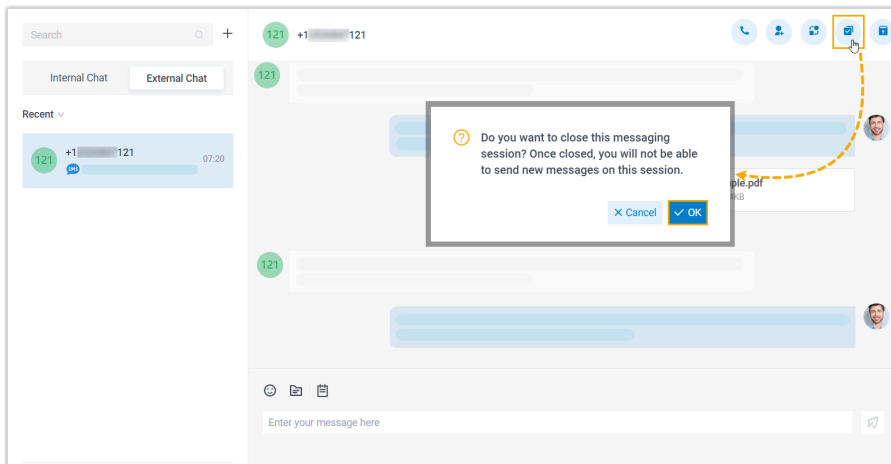   The messaging session is moved from **Recent** list to the **Archived** list.

> ✏ **Note:**
>
> To start the conversation again, you can directly send a message in the archived messaging session, or click ❌ at the top-right corner to unarchive the messaging session. The unarchived session will be moved back to the **Recent** list.

End a messaging session

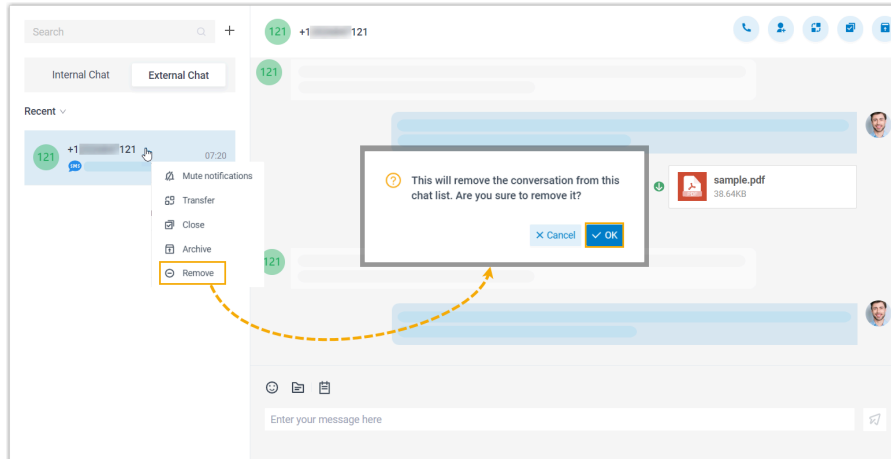When you're done helping a customer, you can end the messaging session.

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.
2. At the top-right corner of a messaging session, click ☑.
3. In the pop-up window, click **OK**.

   The messaging session is closed and moved to the **Archived** list; You can NOT send messages on this session any more. Next time the customer sends messages, a new messaging session will be created.

Remove a messaging session

To remove a messaging session, do as follows:

1. On Linkus Web Client, click **Chat**, then click the **External Chat** tab.
2. In the external chat list, right click the messaging session that you want to remove.
3. Click **Remove**.
4. In the pop-up window, click **OK**.

    The messaging session is removed from all your Linkus clients.

Agent Operations on Desktop Client

Manage Customer Queries from External Messaging Channels

This topic describes how to manage the messaging sessions of customer queries on Linkus Desktop Client.

Requirements

PBX Server

- **Version**: 84.12.0.32 or later.
- **Plan**: **Enterprise Plan** or **Ultimate Plan**
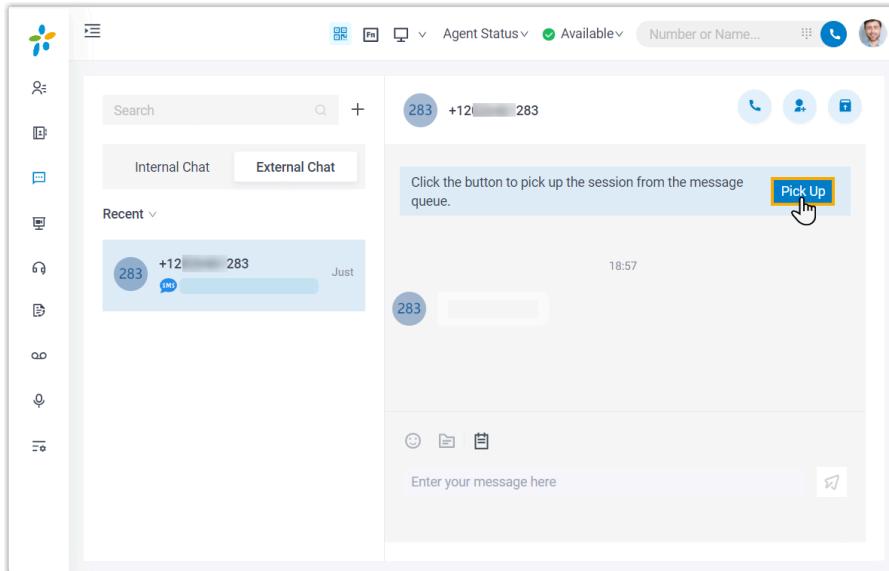- **Messaging**: At least one messaging channel is set up on PBX.

Linkus Desktop Client

Make sure that the version of your Linkus Desktop Client meets the following requirement:

- **Widows Desktop**: 1.2.14 or later
- **macOS Desktop**: 1.2.10 or later

Pick up a messaging session

If you are an agent of a message queue, when the message queue receives inbound message(s) in a new session, you can see the message(s) and pick up the session from the queue.
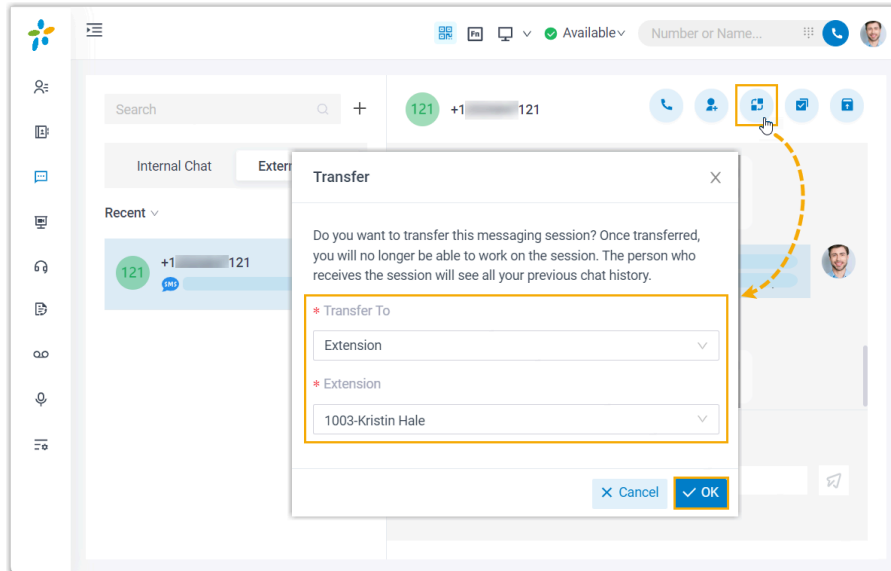

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.
2. At the top of the messaging session, click **Pick Up**.

   There is a prompt indicating that you have picked up the session from the message queue; Only you can see the session and respond to messages in the session.

Transfer a messaging session

During a session, you can hand off a customer's issue to another colleague or a message queue by transferring the messaging session.

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.

2. At the top-right corner of the messaging session, click 🔄.

3. In the pop-up window, select the desired destination and click **OK**.

   The messaging session is removed from your external chat list, and transferred to the colleague / message queue with whole chat history.

Initiate a voice call from a messaging session

You can initiate a voice call right from the messaging session to resolve a customer's issue if necessary.
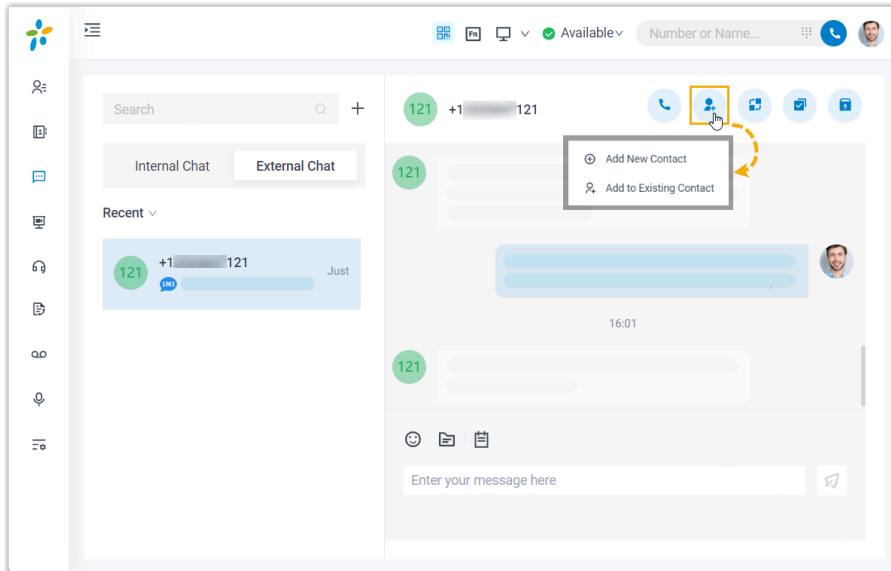
> 📝 **Note:**
> This operation requires the permission to make outbound calls. Contact the system administrator to check if you have the permission.
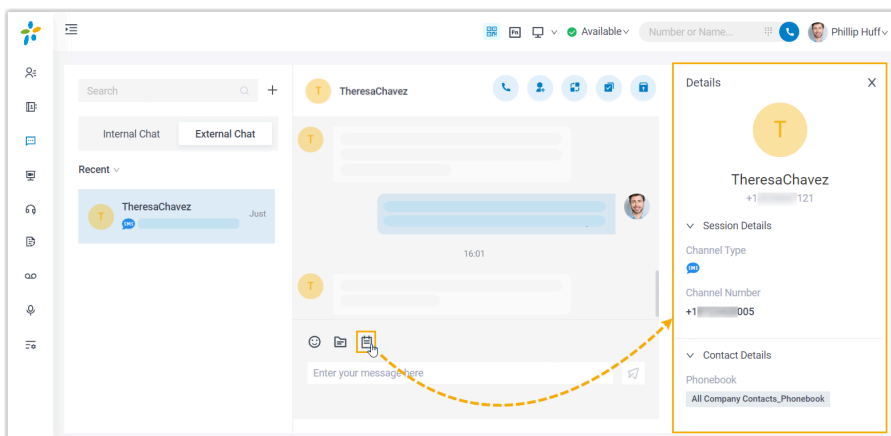
Add a customer to Contacts

You can add a customer to Contacts right from the messaging session.

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.

2. At the top-right corner of the messaging session, click ![icon] .

3. Add the customer to Contacts according to your needs.

   • To add the customer as a new contact, click **Add New Contact** and enter the customer's information.

   • To add the customer to an existing contact, click **Add to Existing Contact** and edit the contact's information as needed.

View messaging session details

You can check the detailed information of a messaging session, including the message source channel, channel number, etc.
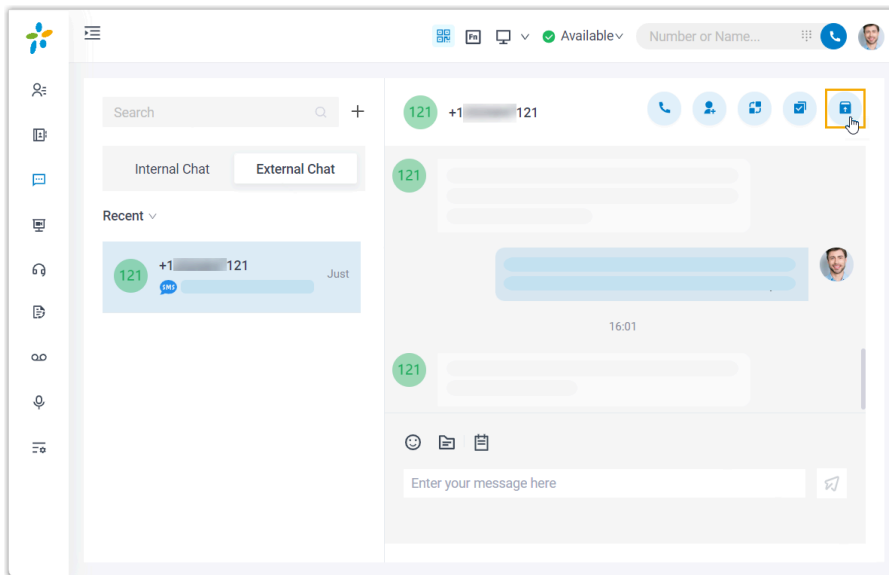
1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.

2. At the bottom-left of the messaging session, click ▤.

   The details of the messaging session is display at the right panel.

Archive a messaging session

You can archive a messaging session if there is no response from the customer or you wish to refer back to the session later.

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.

2. At the top-right corner of a messaging session, click 🔼 .
   The messaging session is moved from **Recent** list to the **Archived** list.
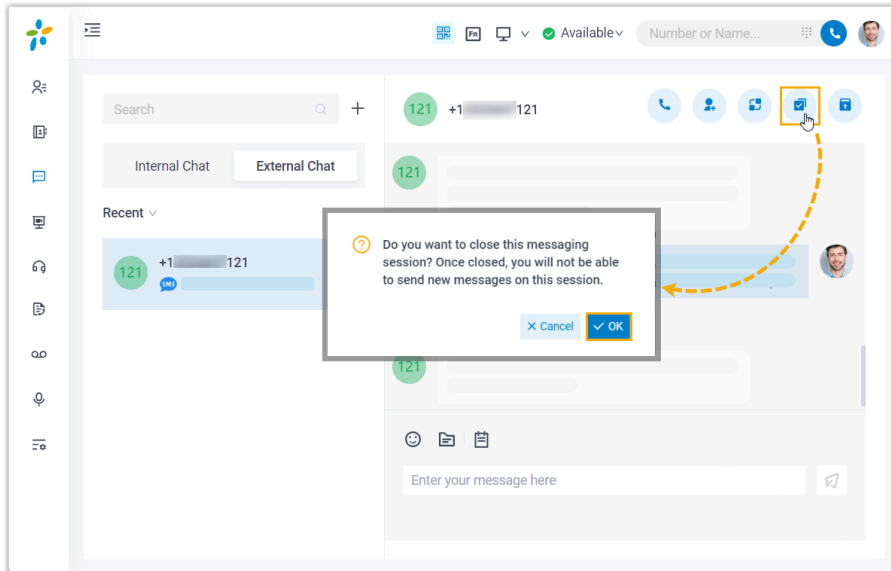
   > ✏️ **Note:**
   > To start the conversation again, you can directly send a message in the archived messaging session, or click ✖ at the top-right corner to unarchive the messaging session. The unarchived session will be moved back to the **Recent** list.

End a messaging session

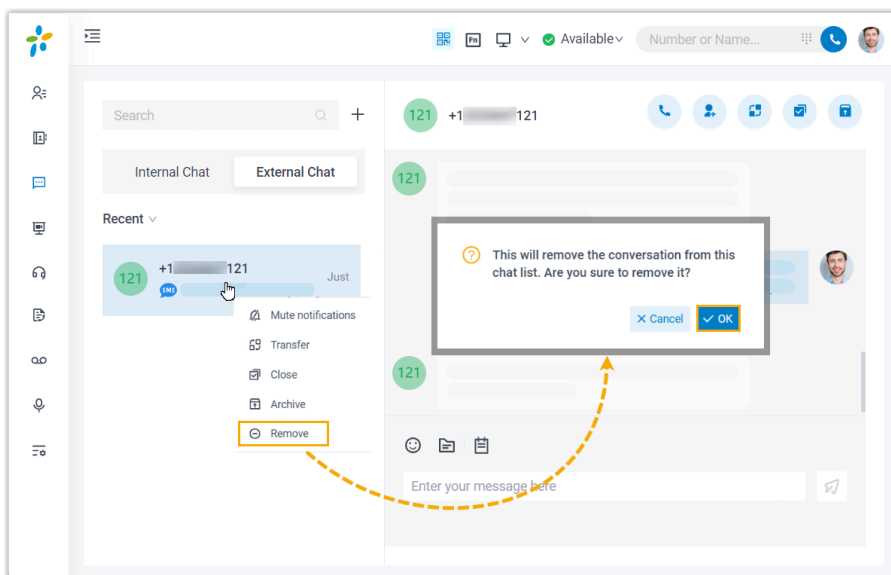When you're done helping a customer, you can end the messaging session.

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.

2. At the top-right corner of a messaging session, click .

3. In the pop-up window, click **OK**.

   The messaging session is closed and moved to the **Archived** list; You can NOT send messages on this session any more. Next time the customer sends messages, a new messaging session will be created.

Remove a messaging session

To remove a messaging session, do as follows:

1. On Linkus Desktop Client, click **Chat**, and click the **External Chat** tab.
2. In the external chat list, right click the messaging session that you want to remove.
3. Click **Remove**.
4. In the pop-up window, click **OK**.

   The messaging session is removed from all your Linkus clients.

Agent Operations on Mobile Client

Start a Messaging Session with a Customer

If you need to send customers messages for notifications, marketing campaigns or other purposes, you can proactively start a messaging session.

> **Note:**
> You can only proactively start a messaging session via SMS messaging channel.

Requirements

PBX Server

Contact the system administrator to make sure that PBX server meets the following requirements:
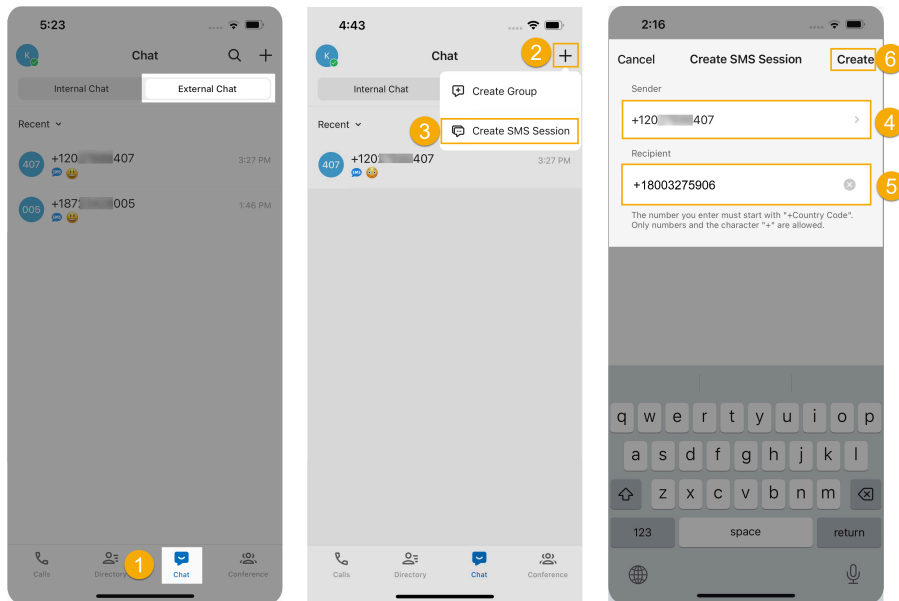
- **Version**: 84.12.0.57 or later.
- **Plan**: **Enterprise Plan** or **Ultimate Plan**
- **Messaging**: At least one messaging channel is set up on PBX.

Linkus Mobile Client

Make sure that the version of your Linkus Mobile Client meets the following requirements:

- **Linkus iOS Client**: Version 5.2.9 or later
- **Linkus Android Client**: Version 4.13.16 or later

Procedure

1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. At the top-right corner, tap ＋.

3. In the drop-down menu, select **Create SMS Session**.

4. Tap the **Sender** field, then select the channel number for sending messages.

5. In the **Recipient** field, enter the recipient's phone number in E.164 format (`[+][coun-try code][phone number]`). For example, `+18003275906`.

6. At the top-right corner, tap **Create**.

   The messaging session will appear in the external chat list after you send a message.

Related information
[Manage Customer Queries from External Messaging Channels](#)

Manage Customer Queries from External Messaging Channels

This topic describes how to manage the messaging sessions of customer queries on Linkus Mobile Client.

Requirements

PBX Server

Contact the system administrator to make sure that PBX server meets the following requirements:

- **Version**: 84.12.0.57 or later.
- **Plan**: **Enterprise Plan** or **Ultimate Plan**
- **Messaging**: At least one messaging channel is set up on PBX.

Linkus Mobile Client

Make sure that the version of your Linkus Mobile Client meets the following requirements:

- **Linkus iOS Client**: Version 5.2.9 or later
- **Linkus Android Client**: Version 4.13.16 or later

Pick up a messaging session

If you are an agent of a message queue, when the message queue receives inbound message(s) in a new session, you can see the message(s) and pick up the session from the queue.
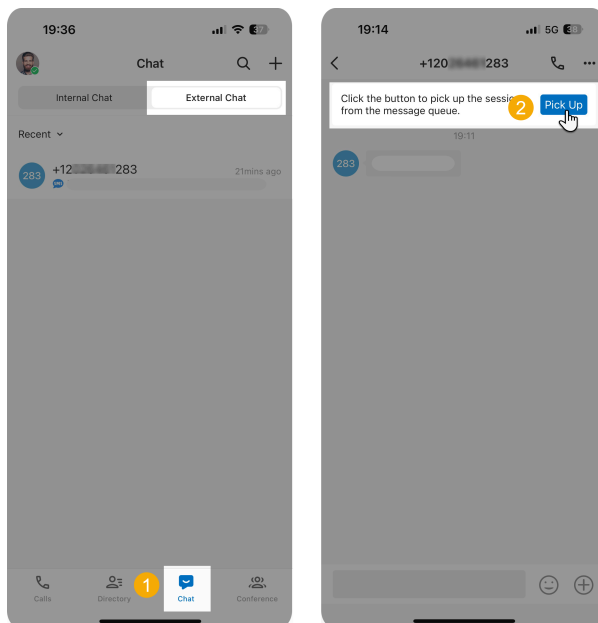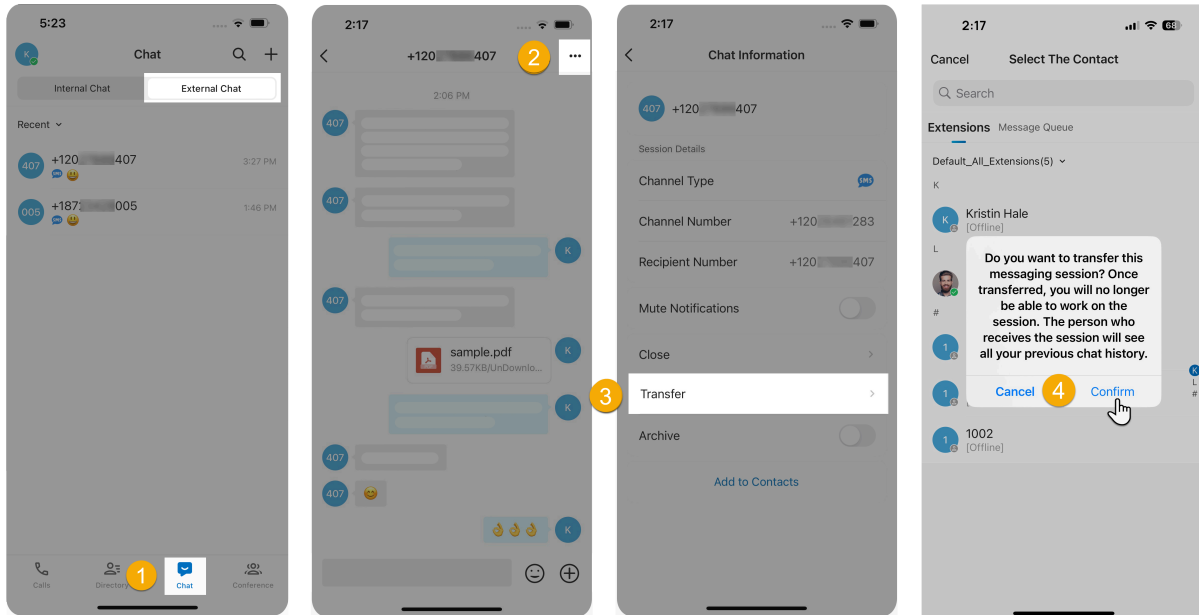

1. On Linkus Mobile Client, go to **Chat > External Chat**.
2. In the messaging session, tap **Pick Up** at the top.

   There is a prompt indicating that you have picked up the session from the message queue; Only you can see the session and respond to messages in the session.

Transfer a messaging session

During a session, you can hand off a customer's issue to another colleague or a message queue by transferring the messaging session.

1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. In an active messaging session, tap ••• at the top-right corner.

3. On the **Chat Information** page, tap **Transfer**.

4. Search and select the colleague, then tap **Confirm** in the pop-up window.

   The messaging session is removed from your external chat list, and transferred to the colleague / message queue with whole chat history.
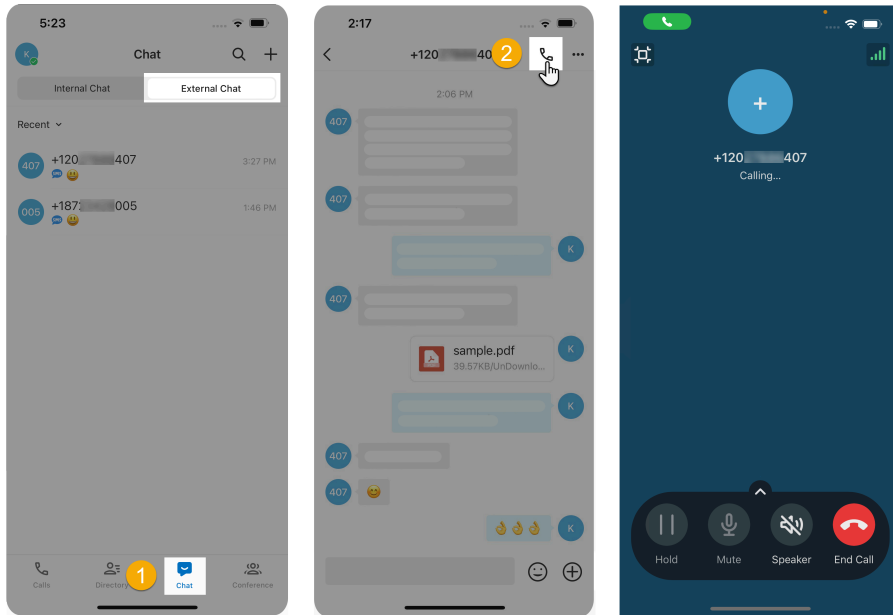
Initiate a voice call from a messaging session

You can initiate a voice call right from the messaging session to resolve a customer's issue if necessary.

> **Note:**
> This operation requires the permission to make outbound calls. Contact the system administrator to check if you have the permission.
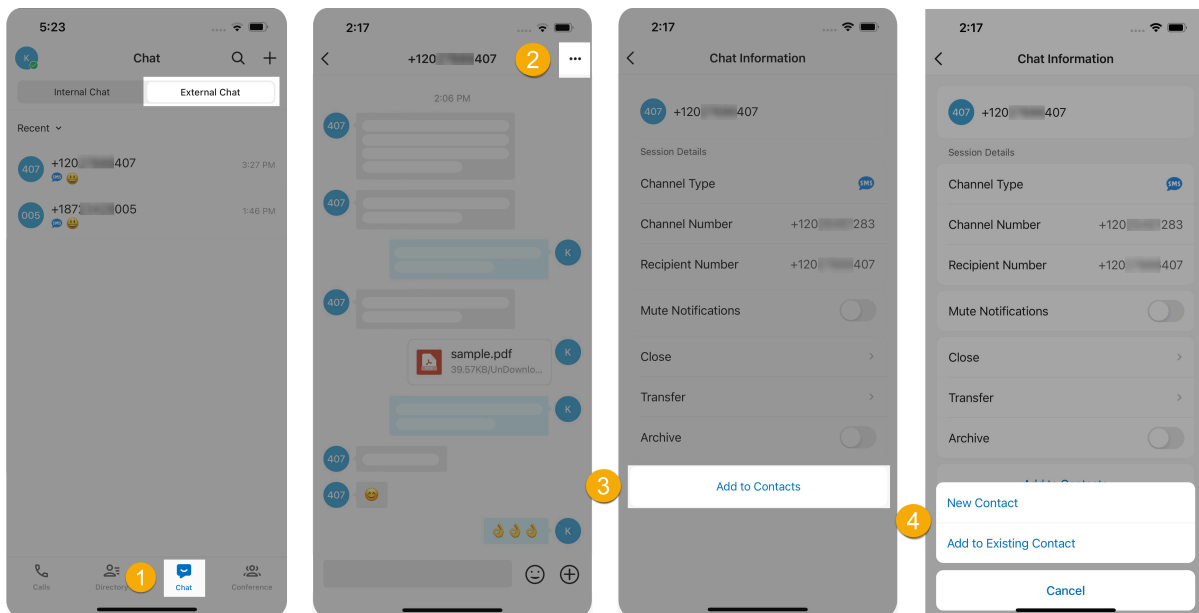
1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. In a messaging session, tap 📞 at the top-right corner.

   Linkus Mobile Client quickly dials out the customer's number, and the call is sent through the PBX.
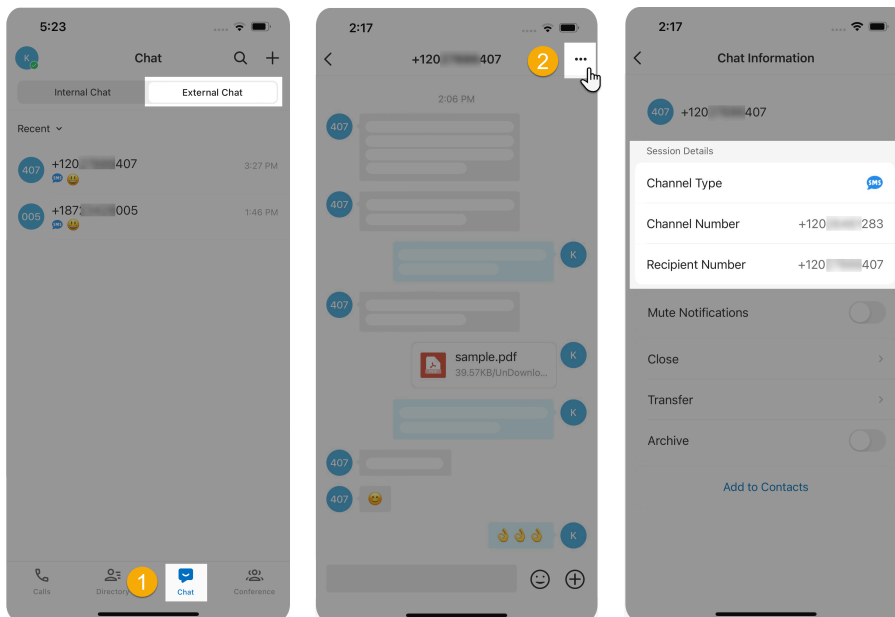
Add a customer to Contacts

You can add a customer to Contacts right from the messaging session.

1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. In a messaging session, tap ••• at the top-right corner.

3. At the bottom of the **Chat Information** page, tap **Add to Contacts**.

4. Add the customer to Contacts according to your needs.

   - To add the customer as a new contact, click **New Contact** in the pop-up window, and enter the customer's information.

   - To add the customer to an existing contact, click **Add to Existing Contact** in the pop-up window, select the contact and edit the information as needed.

View messaging session details

You can check the detailed information of a messaging session, including the message source channel, channel number, etc.
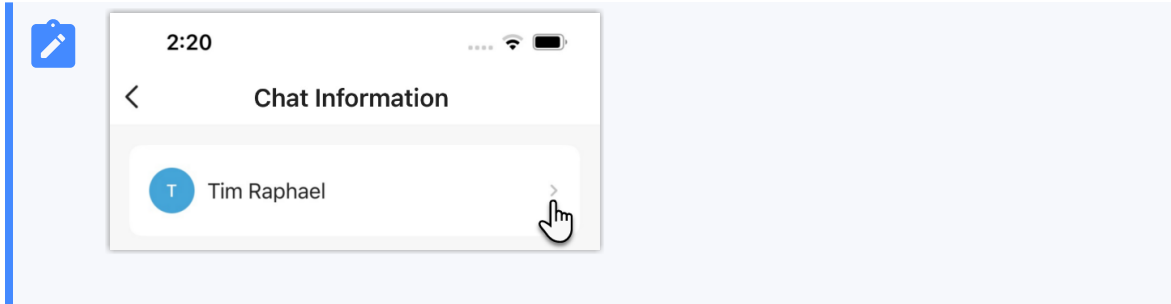

1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. In a messaging session, tap ••• at the top-right corner.

   The details of the messaging session is displayed in the **Session Details** section.
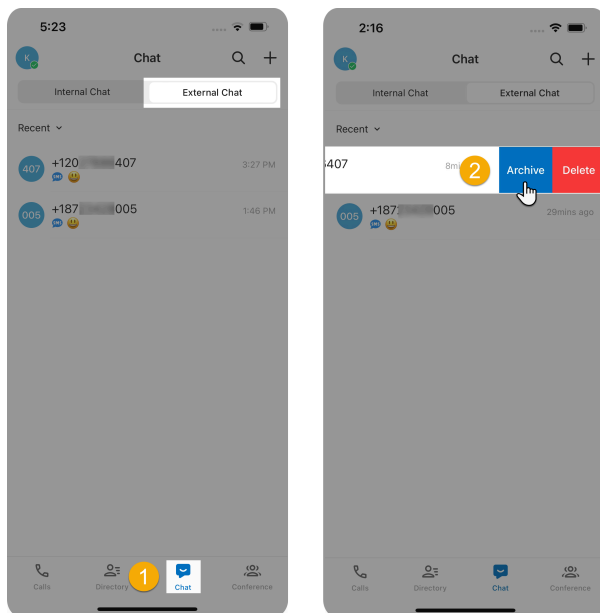
   > **Note:**
   > If the customer is an existing contact, you can also tap the customer to quickly access the contact's information.

Archive a messaging session

You can archive a messaging session if there is no response from the customer or you wish to refer back to the session later.

1. On Linkus Mobile Client, go to **Chat > External Chat**.
2. In the external chat list, touch and hold an active messaging session, then tap **Archive**.

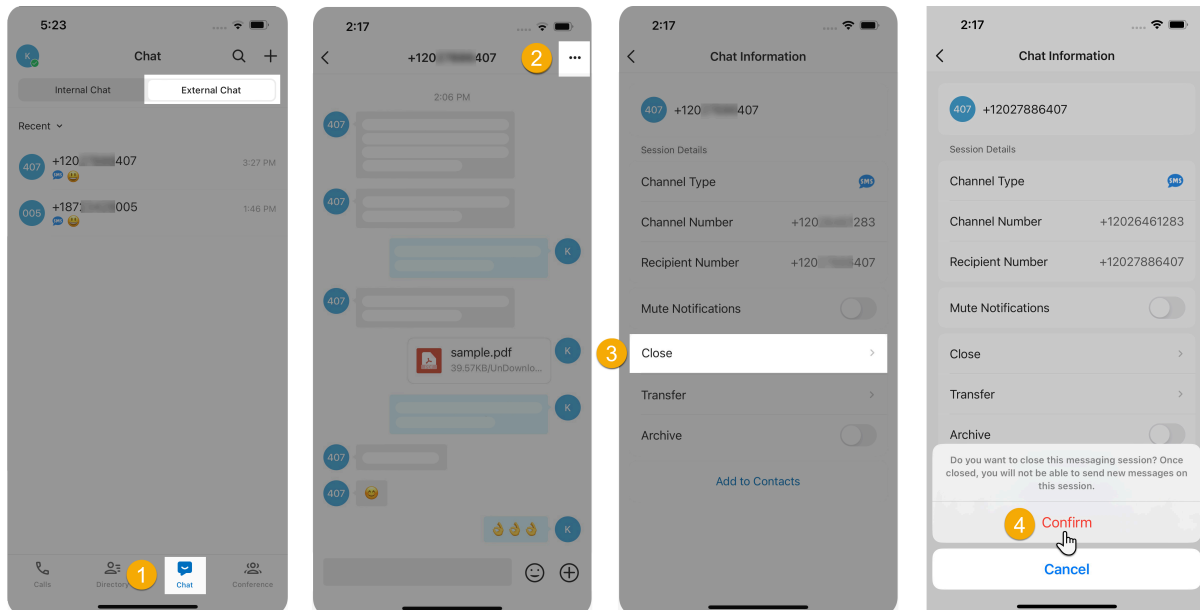   The messaging session is moved from **Recent** list to the **Archived** list.

   > **Note:**
   > To start the conversation again, you can directly send a message in the archived messaging session, the messaging session will be automatically unarchived and moved back to the **Recent** list.

End a messaging session

When you're done helping a customer, you can end the messaging session.

1. On Linkus Mobile Client, go to **Chat > External Chat**.

2. In an active messaging session, tap ⋯ at the top-right corner.
3. On the **Chat Information** page, tap **Close**.
4. In the pop-up window, click **Confirm**.

   The messaging session is closed and moved to the **Archived** list; You can NOT send messages on this session any more. Next time the customer sends messages, a new messaging session will be created.

Remove a messaging session

To remove a messaging session from the chat list, do as follows:
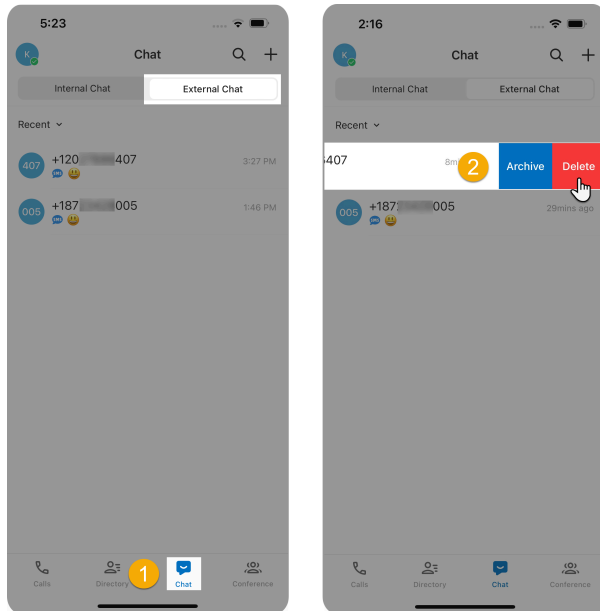
1. On Linkus Mobile Client, go to **Chat > External Chat**.
2. In the external chat list, touch and hold a messaging session, then tap **Delete**.

   The messaging session is removed from the chat list on all your Linkus clients.