

Linkus Server

Yeastar S-Series VoIP PBX

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Linkus Server

Yeastar Linkus Server App is designed to work with [Linkus client](#). Before users can log in Linkus and make calls using Linkus, you should first configure the Linkus Server on Yeastar S-Series VoIP PBX.

Quick Start

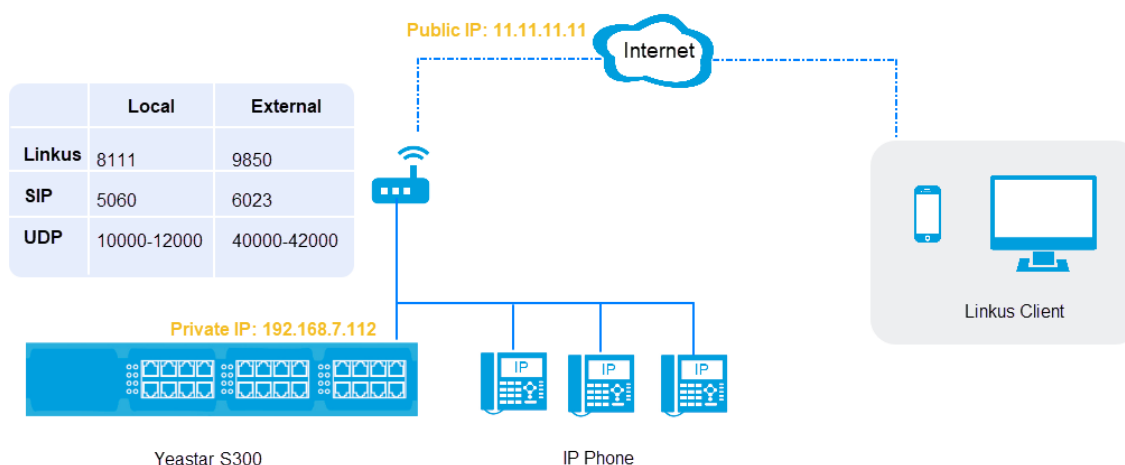
Step1. Set up Linkus Server

In this article, we introduce how to set up Linkus server based on a typical scenario.

Yeastar S-Series VoIP PBX supports for setting up Linkus server with LCS and setting up Linkus without LCS.

In this article, we introduce how to set up Linkus server without LCS based on a typical scenario, for more details of Linkus server settings, refer to [Set up Linkus Server with LCS](#) and [Set up Linkus Server without LCS](#).

The following figure shows a typical Linkus network typology and this article explains how to set up Linkus server based on this scenario.



1. According to the PBX network, forward the Linkus relevant ports on the router. In this example, forward the following ports:

Service	Local Port	External Port
Linkus service port	TCP&UDP 8111	TCP&UDP 9850
SIP registration port	TCP&UDP 5060	TCP&UDP 6023
RTP ports	UDP 10000-12000	UDP 40000-42000

2. Configure the PBX **NAT** to ensure that the Linkus could work properly in an external network.

Log in the PBX web interface, go to **Settings**→**PBX**→**General**→**SIP**→**NAT**, configure the NAT according to the PBX network.

NAT Type ⓘ:	External IP Address ▼	
External IP Address ⓘ:	11.11.11.11	: 6023
Local Network Identification ⓘ:	192.168.7.112	/ 255.255.255.0 +
NAT Mode ⓘ:	Yes ▼	

- **NAT Type:** Select a type according to your network environment. In this example, select **External IP Address**.
- **External IP Address:** Enter the public IP address of PBX and the external SIP port. In this example, enter *11.11.11.11#6023#*
- **Local Network Identification:** Enter the local IP address of the PBX and the subnet mask. In this example, enter *192.168.7.112/255.255.255.0#*
- **NAT Mode:** Select **Yes**.

3. Set up Linkus server.

- On the Linkus App **Linkus Server Settings** page, check the option **Enable Linkus Server**.
- According to the PBX network, configure the Linkus server.

Local Hostname/IP:Port ⓘ:	192.168.7.112	: 8111
External Hostname/IP:Port ⓘ:	11.11.11.11	: 9850
SIP Remote Registration Port ⓘ:	6023	

- **Local Hostname/IP:Port:** Enter the local IP address of the PBX and Linkus local port. In this example, enter *192.168.7.112#8111*.
- **External Hostname/IP:Port:** Enter the public IP address or domain name of the PBX and the Linkus external port. In this example, enter *11.11.11.11:9850*.
- **SIP Remote Registration Port:** Enter the SIP external port. In this example, enter *6023*.

- Click **Save** and **Apply**.

Step2. Enable Linkus Client for Users

After setting up the Linkus Server, you need to enable Linkus Client for extension users to allow them log in Linkus client.

Enable Linkus Client for users

- Log in the PBX web interface, go to **Linkus**→**Linkus Client Settings**.
- To enable Linkus Client for all users, do the followings:

i **Tip:** PBX only supports selecting all the extensions for the current page. You can set a larger **Displaying** value to display more extensions on one page.

- In the right-bottom corner, set a larger **Displaying** value.
- Select the checkbox for all the extensions.
- Click **Enable**.
- In the dialog box, click **Yes** to confirm.
- If you have more extensions in the next page, go to next page, and repeat step **a - d**.

Linkus

Linkus Server Settings | Linkus Client Settings

Enable Disable Login Mode Send Email Email Template

Extension,Name

<input checked="" type="checkbox"/>	extension	Name	Email Address	Enable Linkus Client For Users
<input checked="" type="checkbox"/>	1000	Carol	carol@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1001	Eve	eve@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1002	Ina	ina@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1003	Jason	jason@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1004	Daisy	daisy@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1005	Amber	amber@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1006	Niki	niki@yeastar.co	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1007	Jack	jack@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1008	Tim	tim@yeastar.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1009	Ramon	ramon@yeasta.com	<input type="checkbox"/>
<input checked="" type="checkbox"/>	1010	Andy	andy@yeastar.com	<input type="checkbox"/>

Displaying 1 - 17 of 17 100

3. To enable Linkus Client for a specific user, do the followings:

- a. Search the user by extension number or name.
- b. Switch the Linkus Client status for the user.

If the Linkus Client is enabled for the user, the status shows .

Step3. Send Linkus Emails to Users

Linkus server has an email template that contains instructions on how to log in via QR code and link. You can send Linkus emails to allow users to log in Linkus clients by themselves.

Send Linkus emails

Prerequisite:

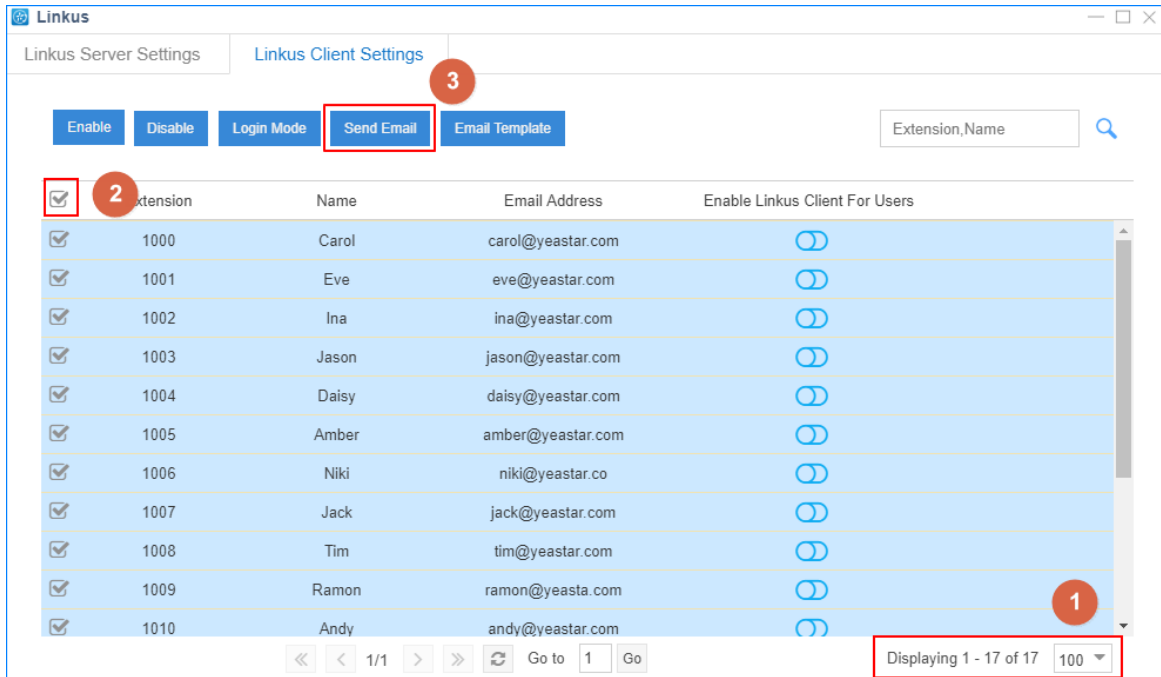
Make sure the following settings are configured:

- The System Email is working.
- Email addresses are bound with the extensions.

1. Log in the PBX web interface, go to **Linkus**→ **Linkus Client Settings**.
2. To send Linkus emails for all users, do the followings:

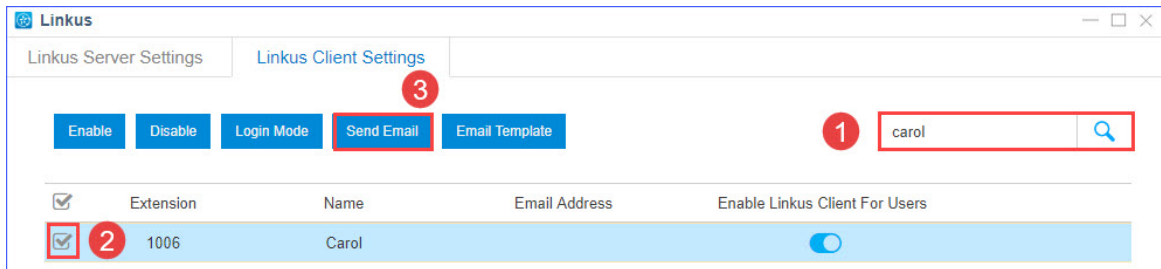
i **Tip:** PBX only supports selecting all the extensions for the current page. You can set a larger **Displaying** value to display more extensions on one page.

- a. In the right-bottom corner, set a larger **Displaying** value.
- b. Select the checkbox for all the extensions.
- c. Click **Send Email**.
- d. If you have more extensions in the next page, go to next page, and repeat step **a - d**.



Click Welcome Email. On the Send Welcome Email page, select All Extensions.

3. To send Linkus email to a specific user, do the followings:
 - a. Search the user by extension number or name.
 - b. Select the desired extension user.
 - c. Click **Send Email**.



Linkus Server Settings

To get start with Linkus, you should first enable Linkus server on Yeastar S-Series VoIP PBX and configure the server settings.

Linkus Server types

Yeastar S-Series VoIP PBX provides Linkus Cloud Service, which is short for LCS. You can set up two types of Linkus server in your PBX:

- Linkus server with LCS
- Linkus server without LCS



The following table shows the differences between the two types of servers.

Linkus Server Type	Prerequisite	Description
Linkus Server with LCS	Buy LCS	<ul style="list-style-type: none"> Simplifies Linkus server settings. Better Linkus experience. Supports Linkus Chat function.
Linkus Server without LCS	Professional network knowledge	No need to buy LCS, set up your Linkus server as a local server.

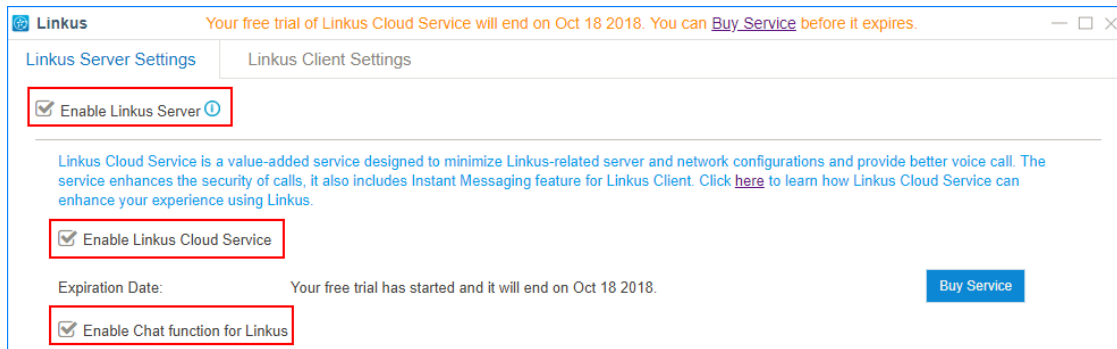
Linkus Server with LCS

Set up Linkus Server with LCS

LCS (Linkus Cloud Service) avoids the necessity of port forwarding when using Linkus outside of the company so the network security will not be compromised. With LCS (Linkus Cloud Service), you can easily and quickly set up your Linkus server and enable Linkus Chat function for the users.

- Go to **Linkus**→**Linkus Server Settings**.
- Enable Linkus Server.
 - Check the option **Enable Linkus Server**.
 - In the pop-up dialog box, click **Yes** to confirm.
- Enable Linkus Cloud Service.
 - Check the option **Enable Linkus Cloud Service**.
 - In the pop-up dialog box, click **Yes** to confirm.
- Enable Linkus Chat function.
 - Check the option **Enable Chat function for Linkus**.

b. In the pop-up dialog box, click **Yes** to confirm.



Buy Linkus Cloud Service

Yeastar provides 30-day free trial for LCS (Linkus Cloud Service). After you've tried the Linkus Cloud Service, you can subscribe and buy LCS for your Linkus server for one year.



Note: If you buy Linkus Cloud Service during the free-trial period, you will get a discount.

1. Go to **Linkus**→**Linkus Server Settings**, click **Buy Service**.

The purchase page opens and your PBX information is filled in the form on the web page automatically.

2. On the purchase page, enter the purchase information and complete the purchase process.

3. Select the checkbox to accept the Terms of Service and Privacy Policy.

Linkus Server without LCS

Set up Linkus Server without LCS

If you don't use Linkus server with LCS, you need to configure the Linkus server according to your network environment.



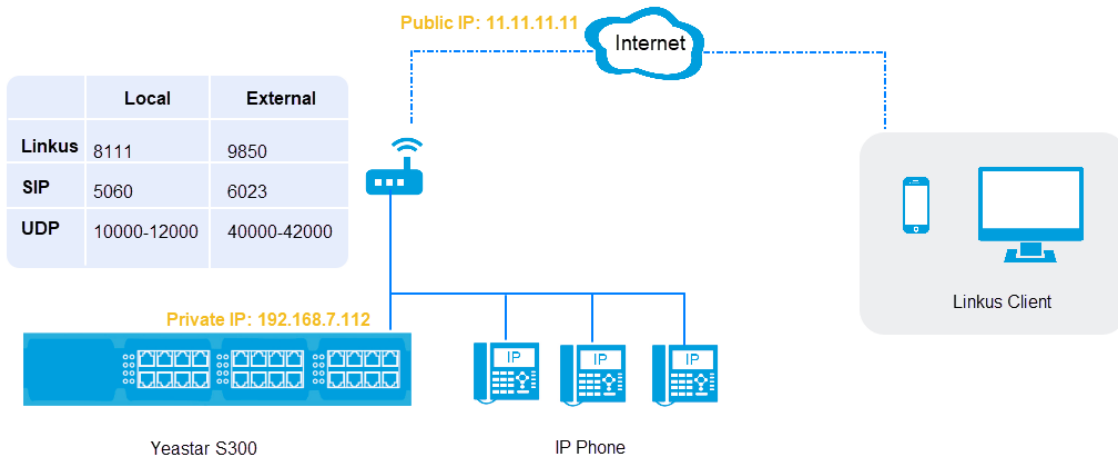
Note:

- To configure Linkus server without LCS, you should have a good knowledge of your network environment.
- The **Linkus server without LCS** doesn't support Linkus Chat function.

This article introduces how to set up Linkus server with LCS according to different network scenarios#

PBX is behind a router

If the PBX is behind a router and the Linkus communicates with the PBX through the network interface that is configured with a private IP, you need to forward the Linkus relevant ports on your router and configure NAT on your PBX.



1. Forward the Linkus relevant ports on your router. In this example, forward the following ports:

Service Port	Local Port	External Port
Linkus Service Port	TCP&UDP 8111	TCP&UDP 9850
SIP Registration Port	TCP&UDP 5060	TCP&UDP 6023
RTP Ports	UDP 10000-12000	UDP 40000-42000

2. To ensure successful communication through Linkus, configure the PBX NAT settings. Go to **Settings**→**PBX**→**General**→**SIP**→**NAT** to configure NAT settings.

NAT Type ⓘ:	External IP Address	
External IP Address ⓘ:	11.11.11.11	: 6023
Local Network Identification ⓘ:	192.168.7.112	/ 255.255.255.0
NAT Mode ⓘ:	Yes	

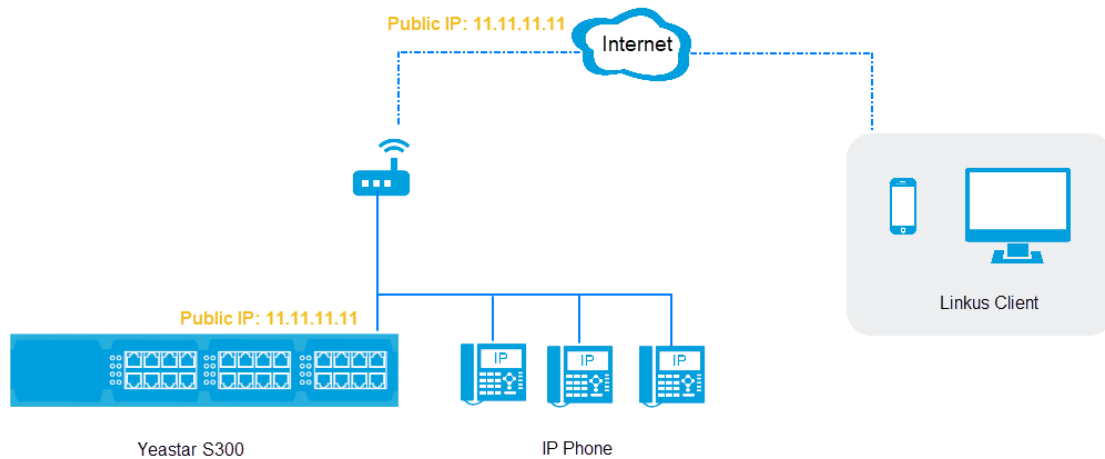
- **NAT Type:** Select a type according to your network environment. In this example, select **External IP Address**.
 - **External IP Address:** Enter the public IP address, and enter the external SIP port. In this example, enter *11.11.11.11:6023*.
 - **Local Network Identification:** Enter the local IP address and subnet mask of the PBX. In this example, enter *192.168.7.112/255.255.255.0*.
 - **NAT Mode:** Select **Yes**.
3. Configure the Linkus Server according to your network circumstance.

Local Hostname/IP:Port ⓘ:	192.168.7.112	:	8111
External Hostname/IP:Port ⓘ:	11.11.11.11	:	9850
SIP Remote Registration Port ⓘ:	6023		

- **Local Hostname/IP:Port:** Enter the local IP address of the PBX and Linkus local port. In this example, enter *192.168.7.112#8111#*
- **External Hostname/IP:Port:** Enter the public IP address or domain name of the PBX and the Linkus external port. In this example, enter *11.11.11.11:9850*.
- **SIP Remote Registration Port:** Enter the SIP external port. In this example, enter *6023*.

PBX is connected to the ISP router directly

If the PBX is connected to a ISP router, you do NOT need to do port forwarding and configure NAT on your PBX.



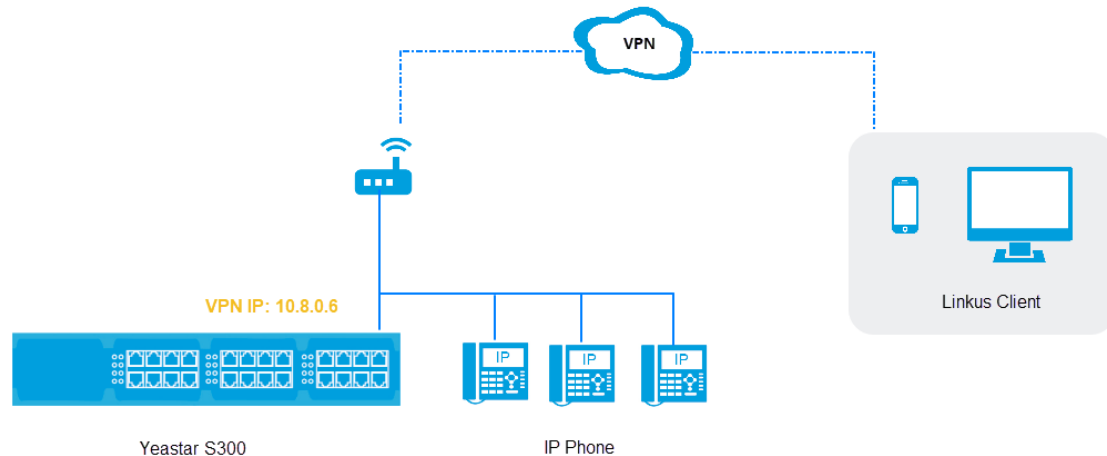
1. Configure the Linkus server according to your network circumstance.

Local Hostname/IP:Port ⓘ:	11.11.11.11	:	8111
External Hostname/IP:Port ⓘ:		:	
SIP Remote Registration Port ⓘ:			

- **Local Hostname/IP: Port:** Enter the IP address of the PBX and the Linkus local port. In this example, enter *11.11.11.11#8111*.
- **External Hostname/IP:Port:** Leave it blank.
- **SIP Remote Registration Port:** Leave it blank.

PBX is connected to a VPN network

You do NOT need to do port forwarding on your router.



1. Configure the Linkus Server according to the VPN network information.

Local Hostname/IP:Port ⓘ:	10.8.0.6	:	8111
External Hostname/IP:Port ⓘ:		:	
SIP Remote Registration Port ⓘ:			

- **Local Hostname/IP:Port:** Enter the VPN IP address of the PBX and the Linkus local port. In this example, enter *10.8.0.6:8111*.
- **External Hostname/IP:Port:** Leave it blank.
- **SIP Remote Registration Port:** Leave it blank.

Linkus Event Settings

To get informed of Linkus events, you can enable notification of Linkus related events and allow the PBX to record the Linkus events.

Linkus Event Settings

Go to **Settings**→**Event Center**→**Event Settings**→**Operation**, decide which Linkus event will be recorded in the Event Log and which Linkus event notification you will receive.

Yeastar S-Series VoIP PBX provides the following Linkus events:



- Linkus Login Failed
- Linkus Client has been Locked
- Linkus Cloud Service Expiration Reminder

Linkus Event Log

If the **Record** function is enabled for a Linkus event, when the Linkus event occurs, the log will be recorded.

To view the Linkus event logs:

1. Go to **Settings**→**Event Center**→**Event Log**.
2. From the **Event Name** drop-down list, select a Linkus event.
3. Select the time period, click **Search**.

Event Log			
Event Type ⓘ:	Operation		
Event Name ⓘ:	Linkus Login Failed		
Time ⓘ:	2018-08-03 	-	2018-09-18 
Download		Search	
Time	Type	Event Name	Event Message
2018-08-30 16:26:44	operation	Linkus Login Failed	The extension 2000 Linkus client Login failed.
2018-08-30 16:25:43	operation	Linkus Login Failed	The extension 2000 Linkus client Login failed.

Linkus Login Information

Users can log in Linkus by themselves after they receive the Linkus emails. You can also provide the detailed Linkus login information to them.

Linkus Server with LCS

The LCS recognizes your PBX by the SN (Serial Number), you need to enter the PBX Serial Number on the Linkus Login page.

1. Log in the PBX web interface, go to **Resource**→**Information** to find the Serial Number.
2. Open your Linkus Client, enter the login information, and click **Login**.
 - **Username:** According to the [Login Mode](#) settings, enter the extension number or the email address that is associated with the extension.
 - **Password:** Enter the extension's User Password.
 - **SN/Domain:** Enter the PBX Serial Number.



Note: If the **SN/Domain** field is uneditable, click **Custom Settings** and unselect the option **Enable Custom Settings**.

Figure 1: Linkus Destop Login

Linkus

Account Login | Login via Link

Extension Number or Email

Extension User Password

PBX Serial Number

Custom Settings

Auto Login

Login

Figure 2: Linkus Mobile Login

5:45 PM 4G 46%

Yeastar

Extension Number or Email

Extension User Password

PBX Serial Number

Custom Settings

Login

Linkus Server without LCS

If you set up your Linkus server without LCS, you need to enter the login information according to the PBX's network environment.

1. On the Linkus login page, click **Custom Settings**.
2. On the **Custom Settings** page, enter your Linkus server information, click **Save**.
 - **Enable Custom Settings:** Check this option.
 - **Local IP Address: Local Port:** Enter the local IP address of the PBX and the Linkus local port.
 - **Remote IP Address: Remote Port:** Enter the public IP address or domain of the PBX and the Linkus external port.


 **Note:** If you set both **Local IP Address** and **Remote IP Address**, Linkus will detect your mobile network or PC network, and choose a relevant IP to log in.

Figure 3: Custom settings of Linkus desktop client

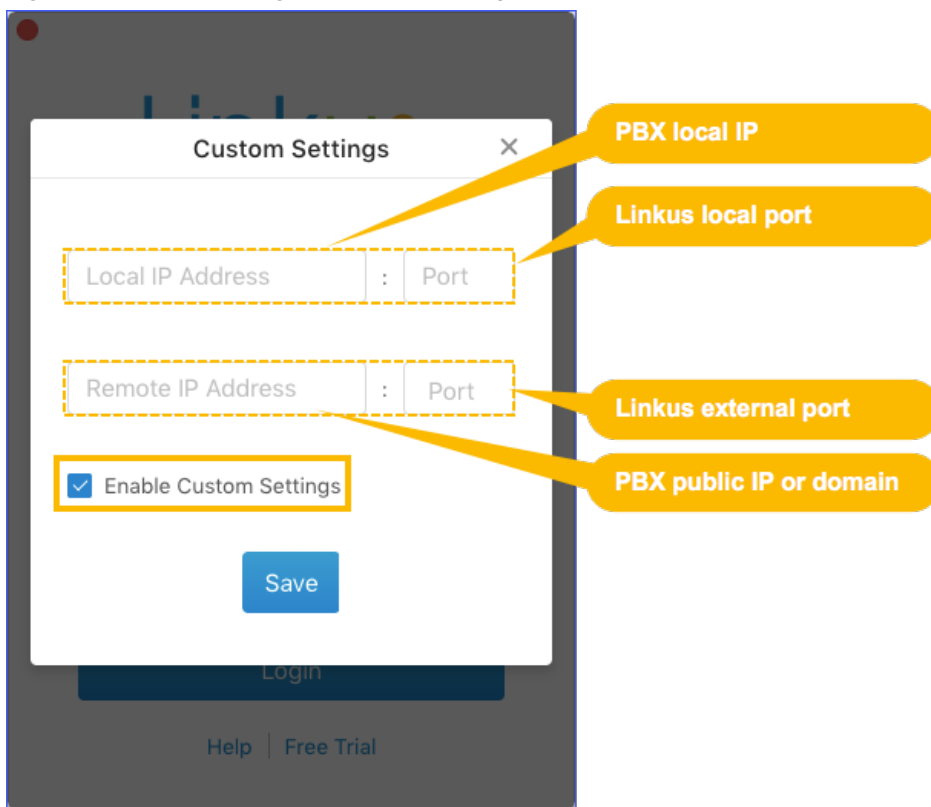
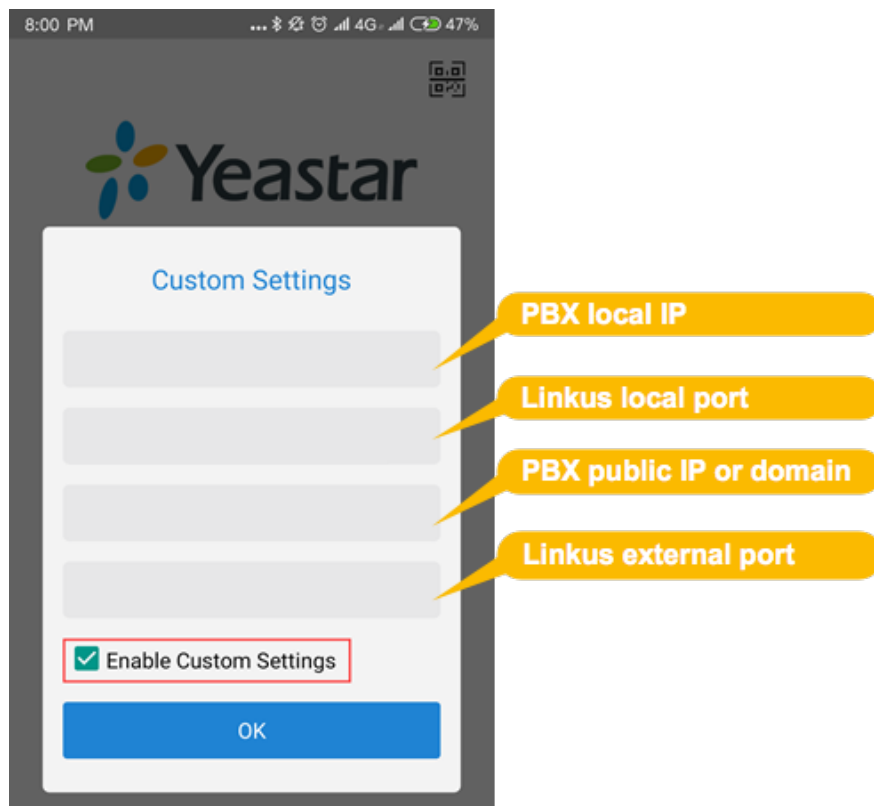


Figure 4: Custom settings of Linkus mobile client



3. Back to the Linkus login page, enter the username and password, click **Login**.

- **Username:** According to the [Login Mode](#) settings, enter the extension number or the email address that is associated with the extension.
- **Password:** Enter the extension user password.

[Set up Linkus Server with LCS](#) [*LCS (Linkus Cloud Service) avoids the necessity of port forwarding when using Linkus outside of the company so the network security will not be compromised. With LCS (Linkus Cloud Service), you can easily and quickly set up your Linkus server and enable Linkus Chat function for the users.*]

[Set up Linkus Server without LCS](#) [*If you don't use Linkus server with LCS, you need to configure the Linkus server according to your network environment.*]

Linkus Client Settings

Enable or disable Linkus client for the extension users, send Linkus emails to the users, and edit the Linkus email template.

Linkus Client

With Linkus, all the features of a desk phone can be realized by your mobile device and desktop. Available using Microsoft Windows, macOS, iOS, and Android, Linkus makes real-time communication easy across multiple devices.

To know more about the Linkus Client, refer to the [Linkus Help](#).

Enable/Disable Linkus Client for Users

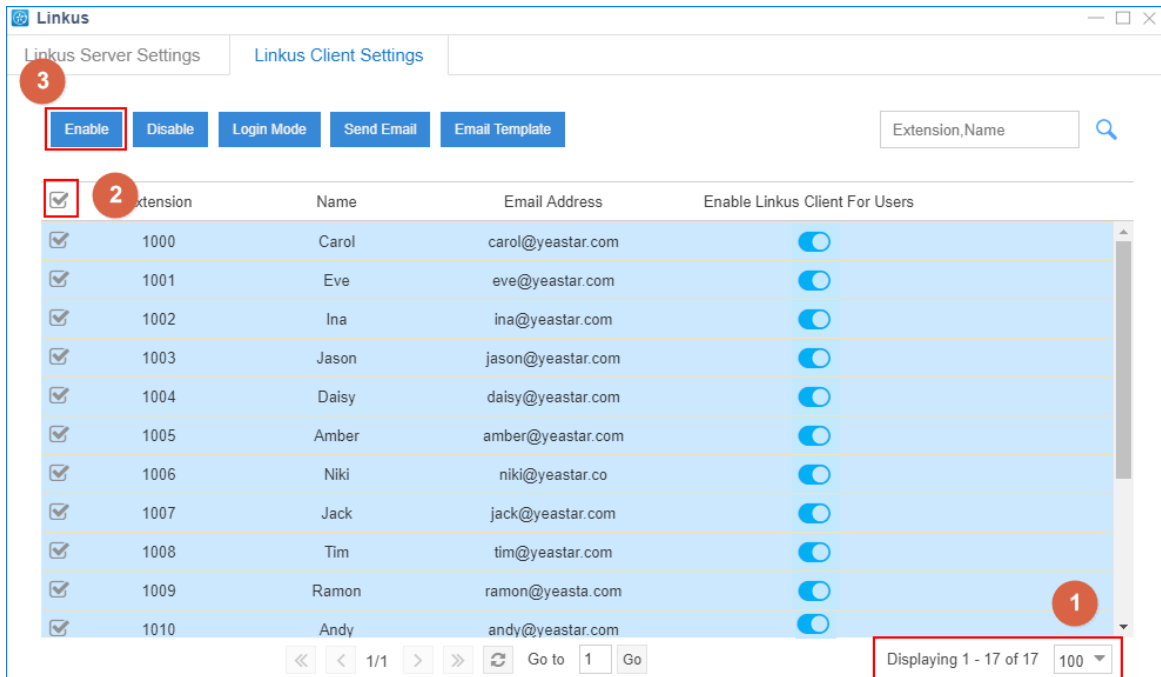
After setting up the Linkus Server, you need to enable Linkus Client for extension users to allow them log in Linkus client. To disallow a user to use Linkus, you can disable Linkus Client for the user.

Enable Linkus Client for users


1. Log in the PBX web interface, go to **Linkus**→**Linkus Client Settings**.
2. To enable Linkus Client for all users, do the followings:

i Tip: PBX only supports selecting all the extensions for the current page. You can set a larger **Displaying** value to display more extensions on one page.

- a. In the right-bottom corner, set a larger **Displaying** value.
- b. Select the checkbox for all the extensions.
- c. Click **Enable**.
- d. In the dialog box, click **Yes** to confirm.
- e. If you have more extensions in the next page, go to next page, and repeat step **a - d**.

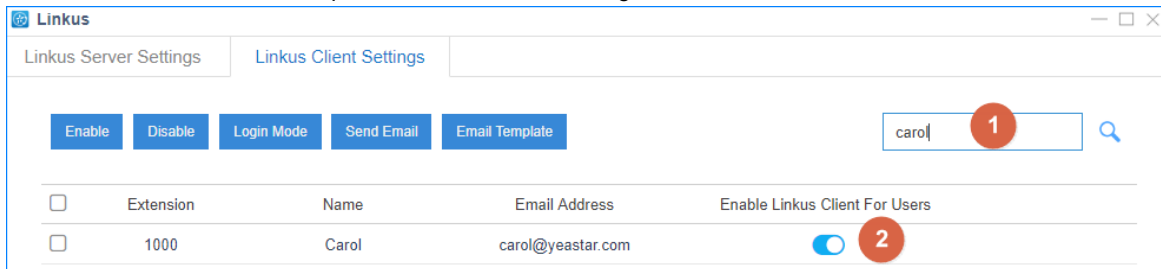


3. To enable Linkus Client for a specific user, do the followings:
 - a. Search the user by extension number or name.
 - b. Switch the Linkus Client status for the user.

If the Linkus Client is enabled for the user, the status shows .

Disable Linkus Client for users

1. To disable Linkus Client for a specific user, do the followings:



- a. Log in the PBX web interface, go to **Linkus**→**Linkus Client Settings**.
 - b. Search the user by extension number or name.
 - c. Click to enable Linkus service for the user.
The status will be switched to (Disabled).
2. To disable Linkus Client for all users, unselect the checkbox **Enable Linkus Server** on **Linkus Server Settings** page.
 3. In the pop-up dialog box, click **Yes** to confirm.

Linkus Email

The PBX has a default Linkus email template. You can edit the template according to your needs.


Send Linkus emails

Prerequisite:

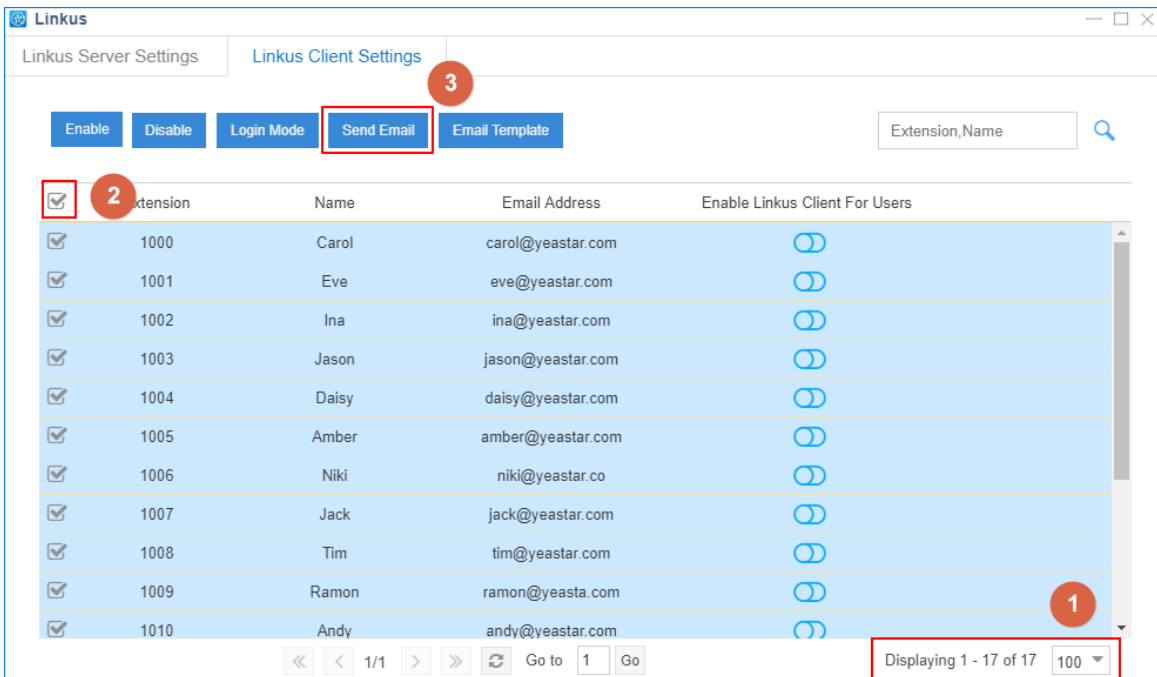
Make sure the following settings are configured:

- The System Email is working.
- Email addresses are bound with the extensions.

1. Log in the PBX web interface, go to **Linkus**→ **Linkus Client Settings**.
2. To send Linkus emails for all users, do the followings:

 **Tip:** PBX only supports selecting all the extensions for the current page. You can set a larger **Displaying** value to display more extensions on one page.

- a. In the right-bottom corner, set a larger **Displaying** value.
- b. Select the checkbox for all the extensions.
- c. Click **Send Email**.
- d. If you have more extensions in the next page, go to next page, and repeat step **a - d**.



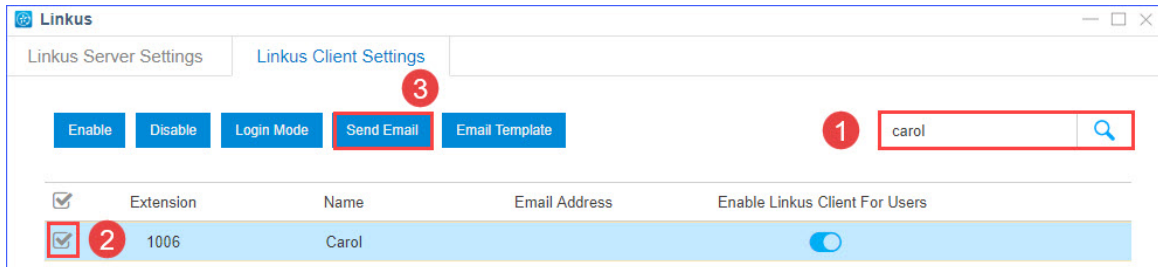
The screenshot shows the Linkus Client Settings page. At the top, there are tabs for 'Linkus Server Settings' and 'Linkus Client Settings'. Below the tabs are buttons for 'Enable', 'Disable', 'Login Mode', 'Send Email', and 'Email Template'. A search bar for 'Extension, Name' is on the right. The main content is a table with columns: Extension, Name, Email Address, and Enable Linkus Client For Users. The table lists 10 users from extension 1000 to 1010. The first checkbox in the table is checked. At the bottom right, there is a pagination control showing 'Displaying 1 - 17 of 17' and a dropdown menu set to '100'.

Extension	Name	Email Address	Enable Linkus Client For Users
<input checked="" type="checkbox"/>	1000	Carol	carol@yeastar.com
<input checked="" type="checkbox"/>	1001	Eve	eve@yeastar.com
<input checked="" type="checkbox"/>	1002	Ina	ina@yeastar.com
<input checked="" type="checkbox"/>	1003	Jason	jason@yeastar.com
<input checked="" type="checkbox"/>	1004	Daisy	daisy@yeastar.com
<input checked="" type="checkbox"/>	1005	Amber	amber@yeastar.com
<input checked="" type="checkbox"/>	1006	Niki	niki@yeastar.co
<input checked="" type="checkbox"/>	1007	Jack	jack@yeastar.com
<input checked="" type="checkbox"/>	1008	Tim	tim@yeastar.com
<input checked="" type="checkbox"/>	1009	Ramon	ramon@yeasta.com
<input checked="" type="checkbox"/>	1010	Andy	andy@yeastar.com

Click Welcome Email. On the Send Welcome Email page, select All Extensions.

3. To send Linkus email to a specific user, do the followings:

- a. Search the user by extension number or name.
- b. Select the desired extension user.
- c. Click **Send Email**.



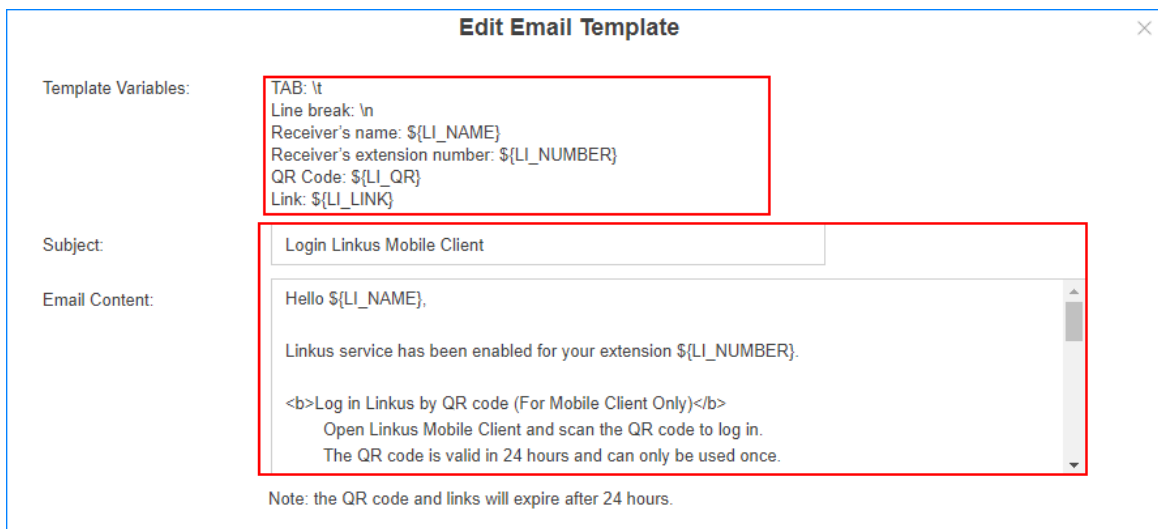
Linkus email template

The PBX has a default Linkus email template. You can edit the template according to your needs.

1. Go to **Linkus**→**Linkus Client Settings**, click **Edit Template**.
2. On the **Edit Email Template** page, edit the email subject and email contents.



Note: The variable names are unchangeable. You can adjust the placement of the variables according to your contents.



3. Click **Save** and **Apply**.

Linkus Login Mode

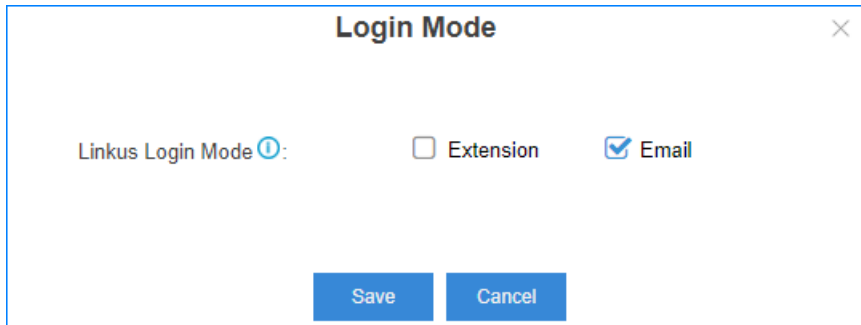
Linkus server provides two login modes for users: Extension Mode and Email Mode. By default, users should log in Linkus client by their extension numbers. To enhance the Linkus security, you can change the login mode to Email Mode, which will force users to log in Linkus by email addresses.

Set Linkus login mode

1. Go to **Linkus**→**Linkus Client Settings**, click **Login Mode**.
2. On the **Login Mode** page, select the login mode.



Note: If you select both **Extension** mode and **Email** mode, users can log in Linkus by extension numbers or email addresses.



Login Mode ×

Linkus Login Mode ⓘ: Extension Email

Save Cancel

- **Extension:** Users should log in Linkus by their extension numbers.
- **Email:** Users should log in Linkus by the email addresses that are associated with their extensions.

3. Click **Save** and **Apply**.