

# IP Phone Configuration Guide

Yeastar P-Series Appliance Edition

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# Overview

Yeastar P-Series PBX System supports most SIP-based IP phones, allowing you to configure IP phones to work with the PBX system. This topic describes different configuration methods (including phone provisioning and extension registration) to help you understand the configuration process between IP phones and Yeastar P-Series PBX System, and offers the detailed configuration guides for the IP phones of many popular phone vendors.

## Configuration methods

Yeastar supports multiple configuration methods to help you connect your IP phones to Yeastar PBX, as the following table shows.

Methods	Description
<a href="#">Auto Provisioning</a>	<p>Provision a large number of identical IP phones at one time to complete general settings (preferences, codecs, etc) and extension registration, which significantly improves deployment efficiency. In addition, the IP phones can be managed centrally on Yeastar P-Series PBX System.</p> <p>This method is applicable for <a href="#">IP phones that support Auto Provisioning</a>.</p>
<a href="#">Manual Registration</a>	<p>Register PBX extension(s) on an IP phone, without additional phone auto provisioning.</p> <p>This method is applicable for IP phones that are compatible with the standard SIP protocol.</p>

### Auto Provisioning

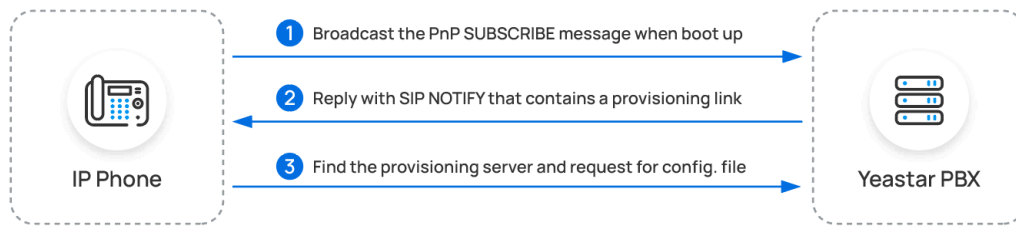
Yeastar supports to auto provision IP phones via **PnP**, **DHCP**, and **RPS** methods, you can select the most suitable auto provisioning method according to different network environment and the IP phone compatibility.

### PnP (Plug and Play) method

If your IP phone is deployed in the SAME subnet as the PBX and supports PnP provisioning, you can auto provision the phone via **PnP** method.

The provisioning process is shown below.

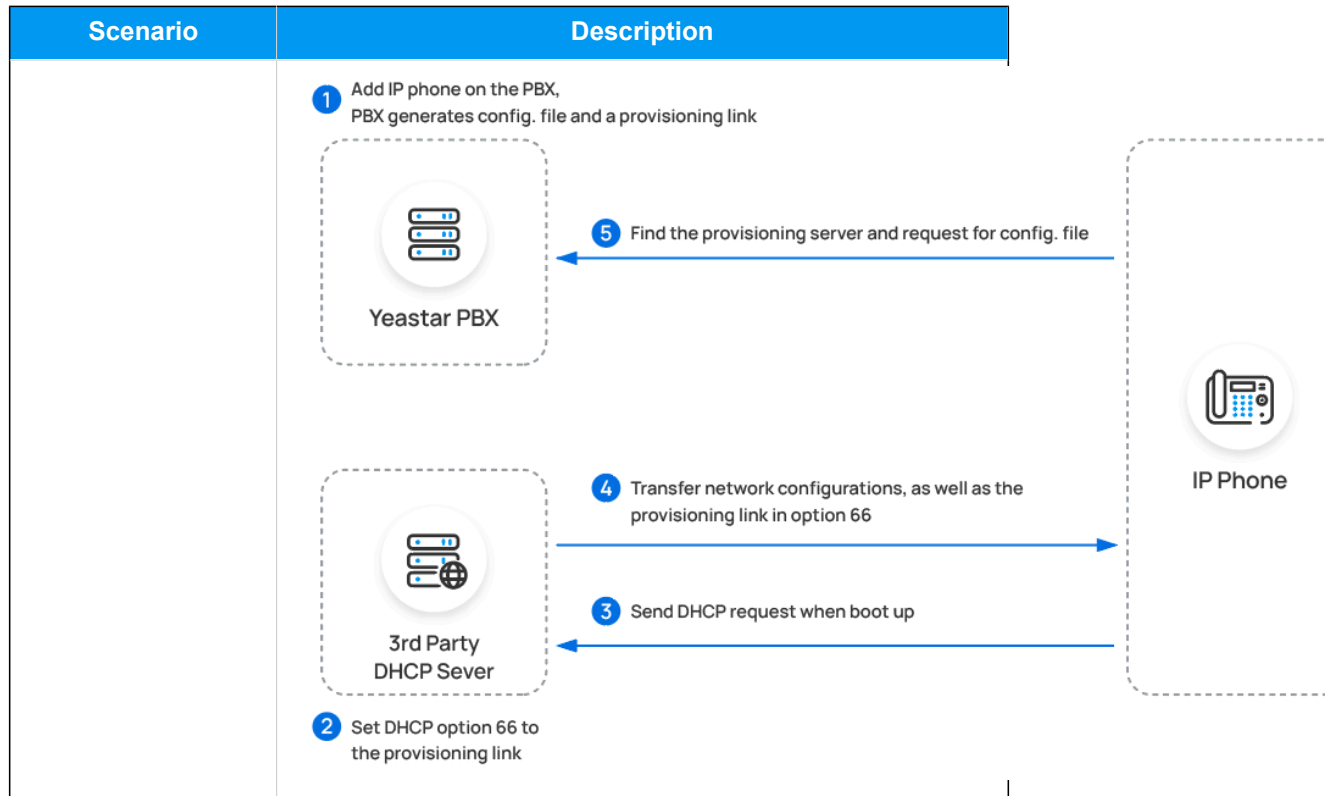




## DHCP method

According to the network environment of IP phone and Yeastar PBX, you can auto provision IP phones using the PBX's built-in DHCP server or a third-party DHCP server:

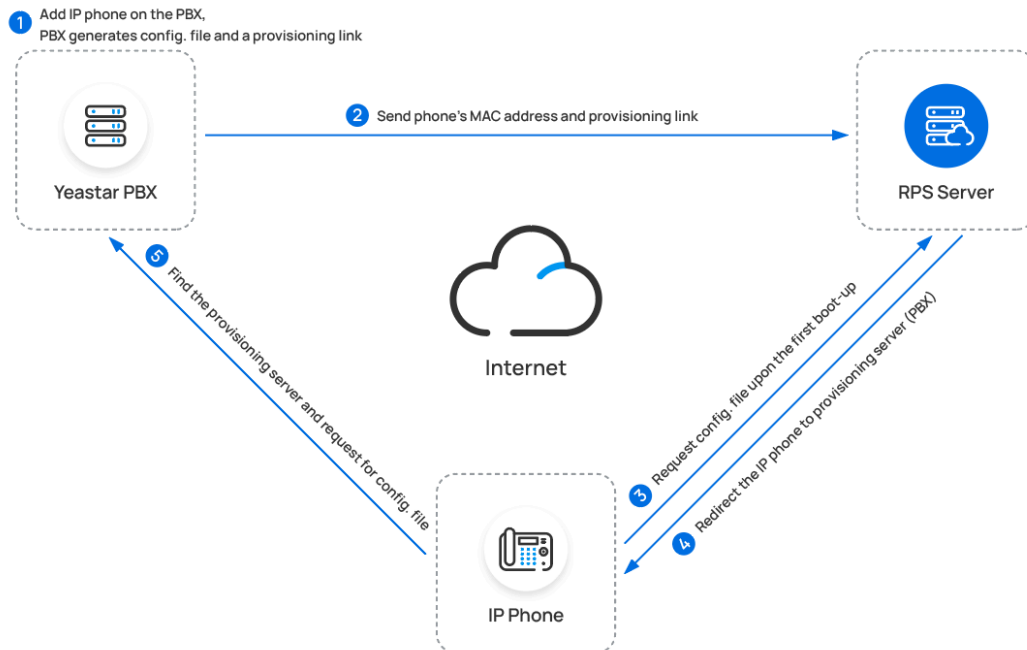
Scenario	Description
IP phone is deployed in the SAME subnet as the PBX, but does NOT support PnP provisioning	<p>In this scenario, you can use the PBX's built-in DHCP server. The provisioning process is shown below:</p> <p>The diagram shows the IP Phone on the right and the PBX Built-in DHCP Server on the left. The process follows five steps:</p> <ol style="list-style-type: none"> <li><b>1</b> Add IP phone on the PBX, PBX generates config. file and a provisioning link (from Yeastar PBX to PBX Built-in DHCP Server).</li> <li><b>2</b> The DHCP option 66 is set to the provisioning link automatically (from PBX Built-in DHCP Server to Yeastar PBX).</li> <li><b>3</b> Send DHCP request when boot up (from IP Phone to PBX Built-in DHCP Server).</li> <li><b>4</b> Transfer network configurations, as well as the provisioning link in option 66 (from PBX Built-in DHCP Server to IP Phone).</li> <li><b>5</b> Find the provisioning server and request for config. file (from IP Phone to Yeastar PBX).</li> </ol>
IP phone and PBX are deployed in DIFFERENT subnets	<p>In this scenario, you can use a third-party DHCP server. The provisioning process is shown below:</p>



### RPS (Redirection and Provisioning Service) method

If your IP phone is deployed in remote network, you can provision the phone via **RPS** method, either using public IP address or Yeastar FQDN of the PBX.

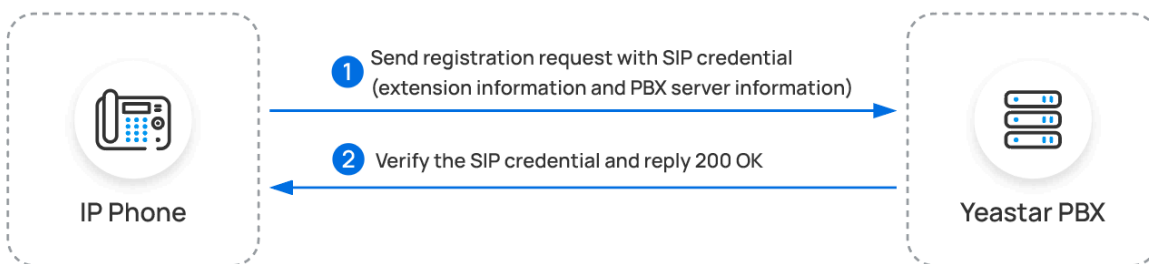
The provisioning process is shown below:



## Manual Registration

You can manually register IP phones to Yeastar PBX by entering the SIP credentials (extension information and PBX server information) on the phone's web interface.

The registration process is shown below:



## Configuration guides

Based on the configuration methods mentioned above, the following configuration guides offer detailed instructions to assist you in configuring IP phones from various phone vendors.

 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>	 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>	 <a href="#">Auto Provisioning</a>
 <a href="#">Auto Provisioning</a>	 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>	 <a href="#">Auto Provisioning</a>
 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>	 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>	 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>
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 <a href="#">Auto Provisioning</a> <a href="#">Manual Registration</a>		

# Yealink

## Auto Provision Yealink IP Phone with Yeastar P-Series PBX System

This topic takes Yealink SIP-T53W (firmware: 96.85.0.5) as an example to introduce how to auto provision a Yealink IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Yealink IP Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
CP920	78.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
CP925	148.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
CP960	73.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
CP965	143.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
SIP-CP935W	149.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
SIP-T19P_E2	53.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
SIP-T21P_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
SIP-T21_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
SIP-T23P	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T23G	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T27G	69.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T29G	46.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T30	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T30P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31W	124.86.0.75 or later	37.11.0.56 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T34W	124.86.0.75 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
SIP-T40P	54.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T40G	76.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41P	36.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42G	29.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T43U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44U	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44W	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46G	28.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48G	35.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T52S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T56A	58.83.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T57W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T58	58.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
SIP-T58W	150.86.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
VP59	91.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W60B (W53P, W41P, W60P, CP930W-Base)	77.83.0.85 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W70B (W79P, W76P, W73P)	146.85.0.20 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W80B	W80DM-103.83.0.80	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W90DM	130.85.0.15 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

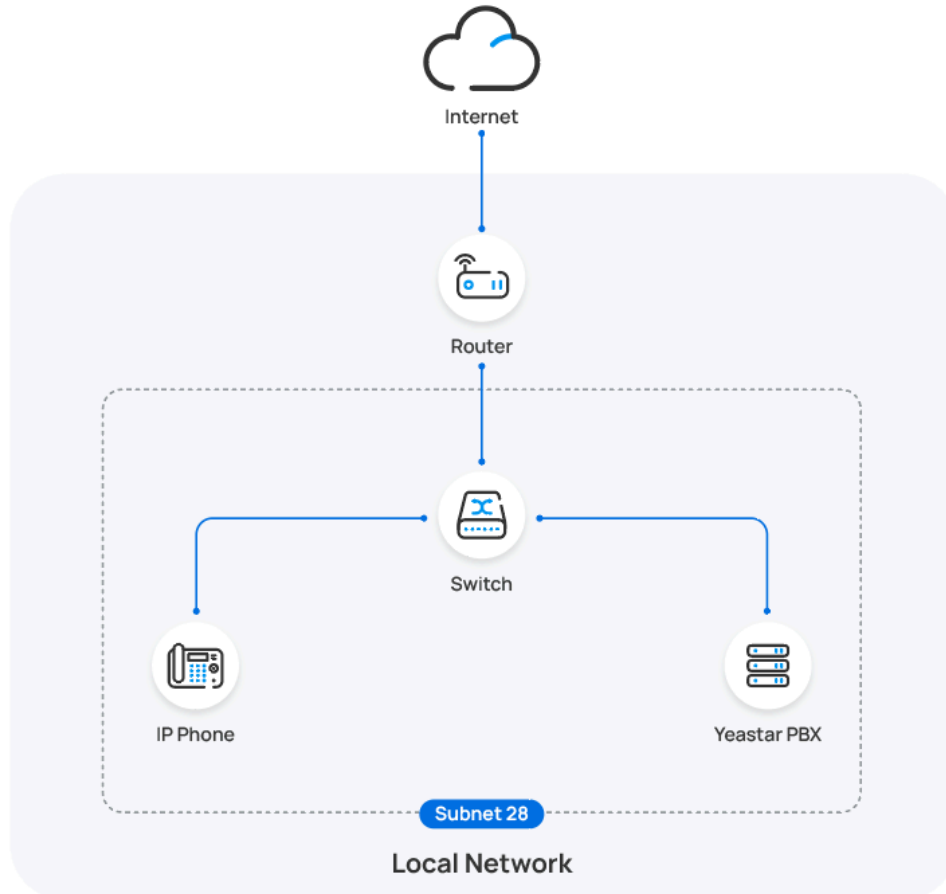
## Scenarios

The provisioning methods and operations vary depending on the network environment of **Yealink IP Phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Yealink IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Yealink IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Yealink IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Yealink IP phone in the different subnets (DHCP)</a>.</p>
IP Phone and PBX are in DIFFERENT network	<p>In this scenario, you can provision the Yealink IP phone with the PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision a Yealink IP phone in remote network (RPS)</a>.</p>

## Auto provision a Yealink IP phone in the same subnet (PnP)

In this example, the Yealink IP phone (IP: 192.168.28.192) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.




### Prerequisites






- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

### Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

- Click  beside the Yealink IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Yealink	SIP-T53W	192.168.28.192	-	   

- Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- In the **Assign Extension** section, assign an extension to the IP phone.

### Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

- Click **Save**.

## Result

**Note:**

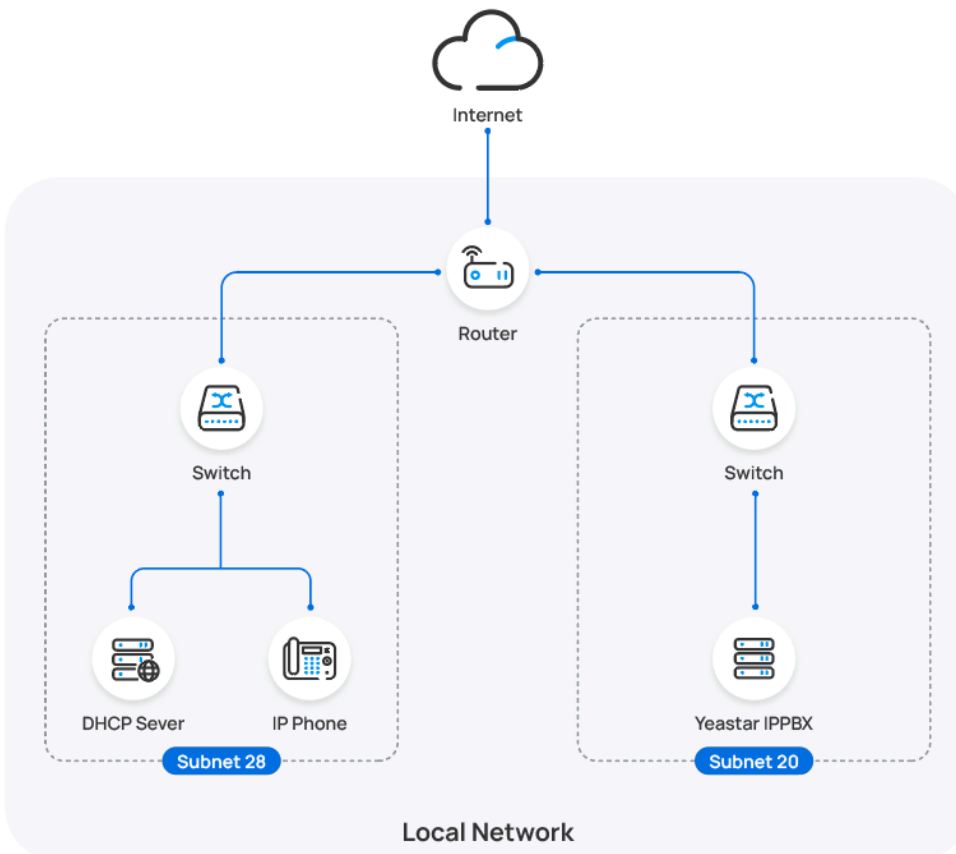
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Yealink	SIP-T53W	192.168.28.192	-	

## Auto provision a Yealink IP phone in the different subnets (DHCP)

In this example, the Yealink IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

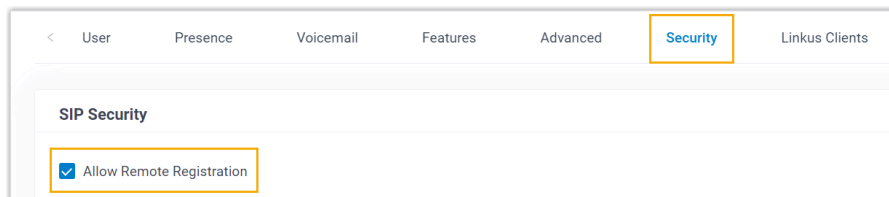
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Yealink IP phone on PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Yealink IP phone on PBX

1. On PBX web portal, go to **Auto Provisioning > Phones**.

2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

The screenshot shows the 'IP Phone' configuration section. It contains three required fields:
 

- \* Vendor:** A dropdown menu with 'Yealink' selected.
- \* Model:** A dropdown menu with 'SIP-T53W' selected.
- \* MAC Address:** A text input field containing a blurred MAC address.

- **Vendor:** Select **Yealink**.
  - **Model:** Select the phone model. In this example, select **SIP-T53W**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

The screenshot shows the 'Options' configuration section. It contains three fields:
 

- \* Template:** A dropdown menu with 'YSDP\_YealinkT5' selected.
- \* Provisioning Method:** A dropdown menu with 'DHCP (In the Office)' selected.
- Provisioning Link:** A text input field displaying the URL 'http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB' with a copy icon.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

The screenshot shows the 'Assign Extension' configuration section. It contains one required field:
 

- \* Select Extension:** A dropdown menu with '3000-Leo Ball' selected.



**Note:**





If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

Options	
* Template	YSDP_YealinkT5
* Provisioning Method	<div>           DHCP (In the Office)           <div></div> </div> <div>           Provisioning Link           <div>http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB</div> </div>

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

Interfaces » LAN

General Settings Advanced Settings Firewall Settings **DHCP Server**

General Setup **Advanced Settings** IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒   
 ? Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐   
 ? Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0   
 ? Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5   
 66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB   
 ? Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

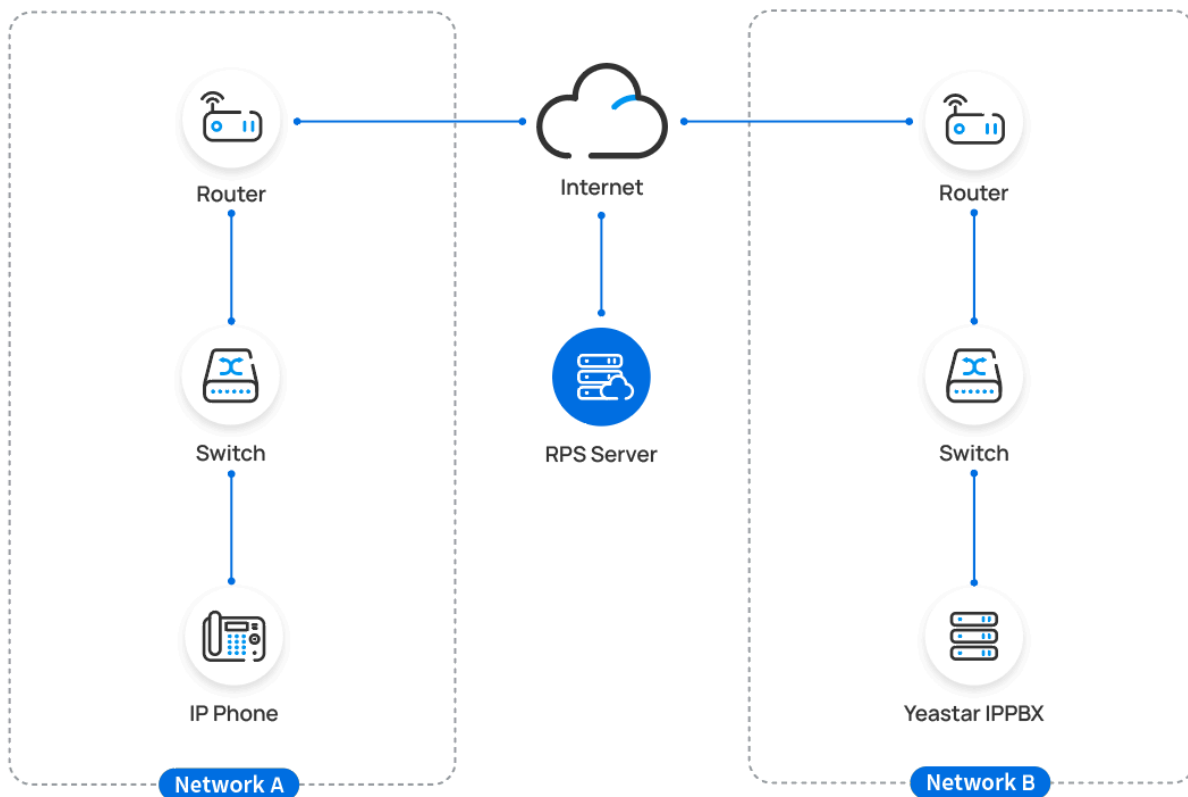
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Yealink	SIP-T53W	-	-	

## Auto provision a Yealink IP phone in remote network (RPS)

In this example, the Yealink IP phone and the Yeastar PBX are deployed in different network.


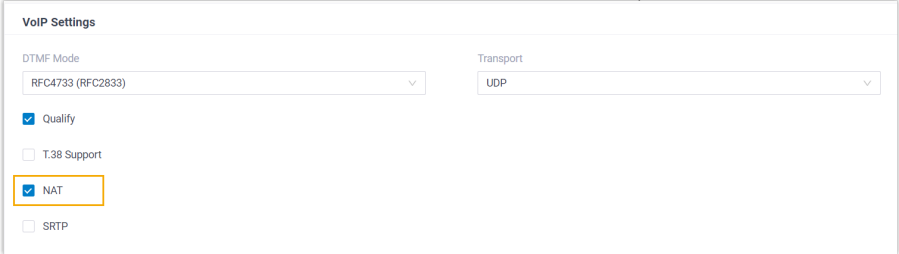

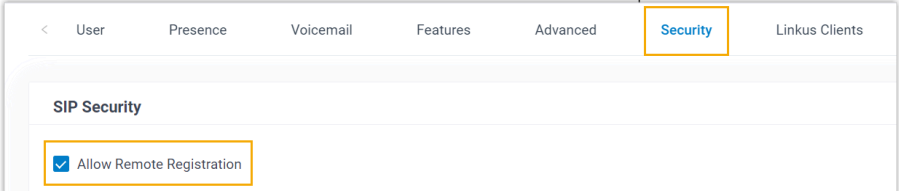


## Prerequisites

Yeastar P-Series PBX System supports to auto provision a Yealink phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• Grant remote access permission for extension to be registered and the remote IP phones: <ul style="list-style-type: none"> <li>◦ <a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>

Method	Setting
	<div data-bbox="672 260 1565 621"> </div> <p>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</p> <div data-bbox="678 877 1265 1119"> </div> <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div data-bbox="591 1556 1300 1814" style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>Important:</b></p> <p>The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> </div> <ul style="list-style-type: none"> <li>• Set up the extension for remote registration.</li> </ul>

Method	Setting
	<ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul>  <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>

## Procedure

- [Step 1. Add the Yealink IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Yealink IP phone on PBX

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

The form is titled "IP Phone". It contains three fields:
 

- \* Vendor:** A dropdown menu with "Yealink" selected.
- \* Model:** A dropdown menu with "SIP-T53W" selected.
- \* MAC Address:** A text input field with a blurred value.

- **Vendor:** Select **Yealink**.
- **Model:** Select the phone model. In this example, select **SIP-T53W**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

Figure 1. **RPS using Yeastar FQDN**

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_YealinkT5" selected.
- \* Provisioning Method:** A dropdown menu with "RPS FQDN (Remote)" selected.
- Provisioning Link:** A text input field containing the URL "https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oii".
- ☒ **Authentication for the First-time Auto Provisioning**

Figure 2. **RPS using Public IP Address / External Host domain name**

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_YealinkT5" selected.
- \* Provisioning Method:** A dropdown menu with "RPS (Remote)" selected.
- Provisioning Link:** A text input field containing the URL "https://110.35.77.110:18207/api/autoprovision/H70R1oiiPnJCnp6L".
- ☒ **Authentication for the First-time Auto Provisioning**

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.

**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

1. Reboot the IP phone.
2. If you have enabled **Authentication for the First-time Auto Provisioning** on the PBX, enter the authentication credential on the IP phone.





Invalid Provisioning Credential

Username:

Password:

Back


OK

- **Username:** Enter the extension number that is assigned to the phone.
- **Password:** Enter the extension's Voicemail Access PIN.








**Tip:**

You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.

The screenshot shows the 'Voicemail' tab in a configuration interface. Under 'Enable Voicemail', there is a section for 'Voicemail PIN Authentication' with a dropdown set to 'Enabled'. To the right, the 'Voicemail Access PIN' field is highlighted with a yellow box and contains the value '8742'.

## Result

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Yealink	SIP-T53W	-	-	   

## Related information

[Allow Users to Query Contacts on IP Phones](#)

[Auto Provision LDAP for IP Phones](#)

[Auto Provision Yealink Expansion Module with Yeastar P-Series PBX System](#)

[Auto Provision Yealink DECT Phones with Yeastar P-Series PBX System](#)

# Auto Provision Yealink Expansion Module with Yeastar P-Series PBX System

This topic takes Yealink T53W as an example to describe how to provision Yealink expansion module with Yeastar P-Series PBX System, so as to add extra programmable keys.

## Requirements

Refer to the table below to learn about the supported Yealink IP phone models for different expansion modules, as well as the required phone provisioning templates.

Expansion Module	Phone model	Phone provisioning template
EXP40	T46S, T48S	YSDP_YealinkT4 (1.0.5 or later)
	T46G, T48G	YSDP_YealinkT4xG (1.0.4 or later)
EXP43	T43U, T46U, T48U	YSDP_YealinkT4 (1.0.5 or later)
EXP50	SIP-T53, SIP-T53W, SIP-T54W, SIP-T57W	YSDP_YealinkT5 (1.0.5 or later)
	SIP-T56A	YSDP_YealinkT56 (1.0.5 or later)
	SIP-T58, SIP-T58W	YSDP_YealinkT58 (1.0.5 or later)

## Prerequisites

- The Yealink expansion module is connected to a Yealink IP phone.
- [The Yealink IP phone is connected to Yeastar P-Series PBX System via Auto Provisioning.](#)

## Supported methods

- [Provision function keys for Yealink expansion module via web interface](#)
- [Provision function keys for Yealink expansion module using auto provisioning template](#)

### Provision function keys for Yealink expansion module via web interface

On PBX web portal, you can easily customize function keys by directly selecting key types from the menu and setting up specific operation for each function key.



#### Note:

Yeastar P-Series PBX System supports to add up to **120** function keys on PBX web portal.

1. Add and configure function keys.
  - a. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
  - b. Click **Function Keys** tab.
  - c. Click **Add** to add and configure function keys for the expansion module.




#### Note:

Function key settings that **exceed the supported programmable keys of the IP phone** will be automatically applied to the connected expansion module. For example, Yealink T53W supports 21 programmable keys, then the function key settings starting from the 22nd key will take effect on the expansion module.

Function Key	Type	Value	Label	Operations	Sort
Key 1	BLF	*99	Global Business Hours		
Key 2	BLF	*042001	Phillip Huff		
Key ...					
Key 21	Park & Retrieve	6000	Park-6000		
Key 22	Check Voicemail	2008-Anna Simmons	VM-Anna Simmons		

+ Add

- **Type:** Select a key type.
  - **Value:** Configure a desired value based on the key type.
  - **Label:** Optional. Enter a label, which will be displayed on the LCD screen.
- d. Click **Save**.
2. Reprovision the IP phone.
- a. On PBX web portal, go to **Auto Provisioning > Phones**.
  - b. Click  beside the phone.
  - c. In the pop-up window, click **OK**.

## Provision function keys for Yealink expansion module using auto provisioning template

If you are familiar with the configuration parameters of IP phone, you can bulk configure function keys in a template file, via which the function key settings will be applied on the phone and expansion module automatically, thus saving time and effort.



### Important:

As custom auto provisioning template is created based on the default phone provisioning template, make sure that you have updated the default template of the desired phone model to the [required version](#) on PBX (Path: **Auto Provisioning > Resource Repository > Default Templates**).

1. Create a custom auto provisioning template.
  - a. Log in to PBX web portal, go to **Auto Provisioning > Resource Repository > Custom Templates**.
  - b. Click **Add**.
  - c. In the **Basic** section, set the basic information.
    - **Template Name:** Enter a name to help you identify the template.
    - **Source Default Template:** Search and select the [default template of the phone model](#). In this example, select **YSDP\_YealinkT5**.
    - **Template Type:** Select **Advanced**.
    - **Remark:** Optional. Add a note for the template.
  - d. **Optional:** In the **Preference, Distinctive Ringtone, Codecs**, and **LDAP Directory** sections, configure the settings according to your needs.
  - e. In the second text box of the **Customize Configuration Parameters in Text** section, select the specific phone model, then refer to specific IP phone's con-

figuration parameter explanations to add function key settings for the expansion module.



### Note:

Function key settings that **exceed the supported programmable keys of the IP phone** will be automatically applied to the connected expansion module. For example, Yealink T53W supports 21 programmable keys, then the function key settings starting from the 22nd key will take effect on the expansion module.

The configuration parameters below are used to configure function keys, which will define the value of the variables in the custom template: {{FunctionkeySyntax}}.  
If you need to provision function keys, please do not remove the variables from the custom template.


SIP-T53 **SIP-T53W** SIP-T54W SIP-T57W

```
#FUNCTIONKEY21
linekey.21.type = {{FunctionkeyType_21}}
linekey.21.line = {{FunctionkeyLine_21}}
linekey.21.value = {{FunctionkeyCodeValue_21}}{{FunctionkeyValue_21}}
linekey.21.label = {{FunctionkeyLabel_21}}
linekey.21.extension = {{FunctionkeyCodeExtension_21}}

expansion_module.1.key.1.type = {{FunctionkeyType_22}}
expansion_module.1.key.1.line = {{FunctionkeyLine_22}}
expansion_module.1.key.1.value = {{FunctionkeyCodeValue_22}}{{FunctionkeyValue_22}}
expansion_module.1.key.1.label = {{FunctionkeyLabel_22}}
expansion_module.1.key.1.extension = {{FunctionkeyCodeExtension_22}}

expansion_module.1.key.2.type = {{FunctionkeyType_23}}
expansion_module.1.key.2.line = {{FunctionkeyLine_23}}
expansion_module.1.key.2.value = {{FunctionkeyCodeValue_23}}{{FunctionkeyValue_23}}
expansion_module.1.key.2.label = {{FunctionkeyLabel_23}}
expansion_module.1.key.2.extension = {{FunctionkeyCodeExtension_23}}

expansion_module.1.key.3.type = {{FunctionkeyType_24}}
expansion_module.1.key.3.line = {{FunctionkeyLine_24}}
expansion_module.1.key.3.value = {{FunctionkeyCodeValue_24}}{{FunctionkeyValue_24}}
```

2. Apply the template to the phone.
  - a. On PBX web portal, go to **Auto Provisioning > Phones**, edit the desired phone.
  - b. In the **Options** section, select the template from the **Template** drop-down list.
  - c. Click **Save**.
3. Reprovision the IP phone.
  - a. On PBX web portal, go to **Auto Provisioning > Phones**.
  - b. Click  beside the phone.
  - c. In the pop-up window, click **OK**.

## Auto Provision Yealink DECT Phones with Yeastar P-Series PBX System

This topic describes how to provision Yealink DECT base station and DECT handsets with Yeastar P-Series PBX System in the local network.

## Requirements

The firmwares of **Yealink DECT Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
CP920	78.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP925	148.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP960	73.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP965	143.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-CP935W	149.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T19P_E2	53.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T21P_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T21_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T23P	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T23G	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T27G	69.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T29G	46.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
SIP-T30	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T30P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31W	124.86.0.75 or later	37.11.0.56 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T34W	124.86.0.75 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T40P	54.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T40G	76.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41P	36.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42G	29.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T43U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44U	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44W	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46G	28.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48G	35.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
SIP-T48U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T52S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T56A	58.83.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T57W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T58	58.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T58W	150.86.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
VP59	91.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W60B (W53P, W41P, W60P, CP930W-Base)	77.83.0.85 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W70B (W79P, W76P, W73P)	146.85.0.20 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			• RPS
W80B	W80DM-103.83.0.80	37.2.0.7 or later	• PnP • DHCP • RPS
W90DM	130.85.0.15 or later	37.2.0.80 or later	• PnP • DHCP • RPS

This topic takes the following Yealink devices as an example:

Device Model	Firmware Version
<b>Yealink DECT base station</b>	
Yealink W70B	146.85.0.20
<b>Yealink DECT handset</b>	
Yealink W73H	116.85.254.20

## Prerequisites

- Make sure that a DHCP Server is enabled in your local network to assign an IP address to the DECT base.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).




## Procedure


- [Step1. Provision the DECT base station](#)
- [Step2. Register the DECT handset](#)

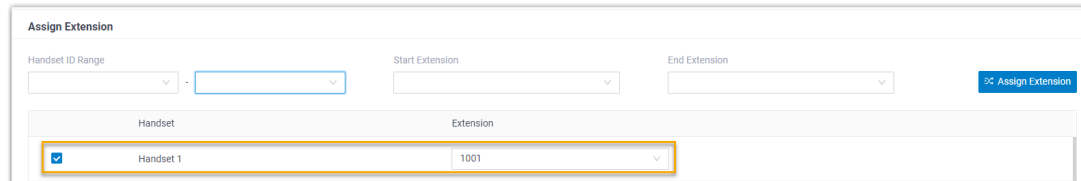
### Step1. Provision the DECT base station

1. Power on PBX first, then power on the DECT base.
2. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The DECT base is detected.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Firmware Version	MAC Address	Operations
<input type="checkbox"/>	+	...	...	Yealink	W70B	192.168.66.201	-	Docs_test0	146.85.0.20	80:5e:0c:18:30:22	  






3. Click  to edit the desired DECT base station.
  - a. In the **Options** section, select a desired template from the **Template** drop-down list.
  - b. In the **Assign Extension** section, assign an extension for the DECT handset.



The 'Assign Extension' form includes fields for 'Handset ID Range', 'Start Extension', and 'End Extension'. Below these is a table with two columns: 'Handset' and 'Extension'. The first row shows 'Handset 1' with a checked checkbox and '1001' in the extension column. A blue 'Assign Extension' button is located at the top right.

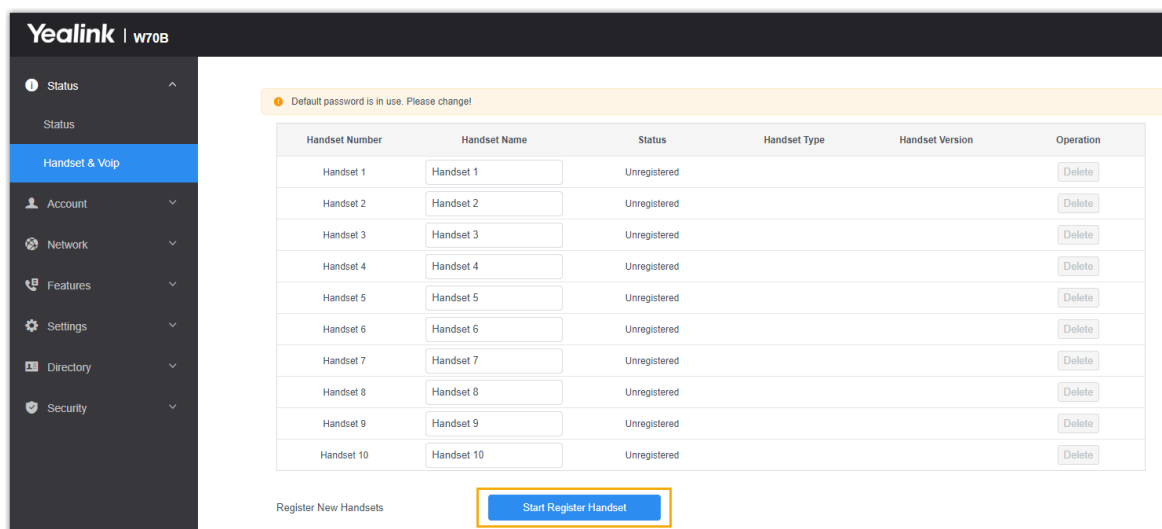
- c. Configure other settings according to your needs.
4. Click **Save**.

The handset is listed under the DECT base station.

Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Firmware Version	MAC Address	Operations
	...	...	Yealink	W70B	192.168.66.201	-	YSDP_YealinkW70	146.85.0.20	80:5e:0c:18:30:22	  
Status	Handset	Extension	Name							
	Handset 1	1001	1001							

## Step2. Register the DECT handset

1. Click on the IP address beside the DECT base station to log in to the web interface.
2. Go to **Status > Handset & Voip** to register the handset.
3. In the **Register New Handsets** section, click **Start Register Handset**.



The interface shows a sidebar with 'Status & Voip' selected. A notification at the top says 'Default password is in use. Please change!'. Below is a table with 10 rows, each representing a handset (Handset 1 to Handset 10) with a name input field, 'Unregistered' status, and a 'Delete' button. At the bottom, there is a 'Register New Handsets' section with a blue 'Start Register Handset' button.

4. Confirm registration on DECT handset.
  - a. On the handset, press **OK > Settings > Registration > Register Handset > OK**.

The handset starts to search for a DECT base, and displays the MAC address of the detected DECT base.

b. Press **OK**.

You are requested to enter the PIN of the DECT base.

c. Enter the PIN code, and press **Done**.



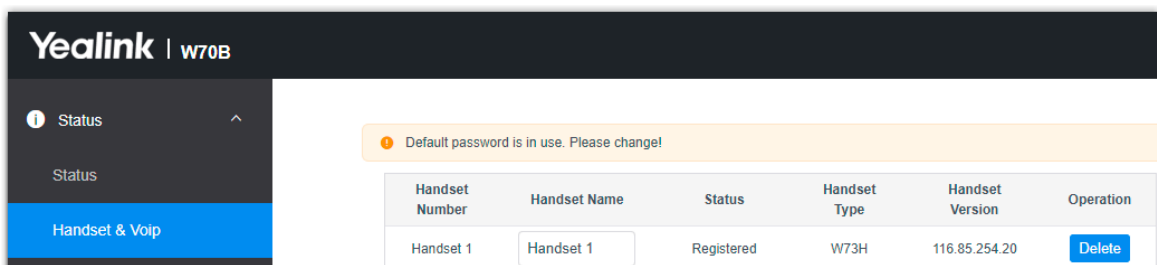
**Note:**

The default PIN is 0000. You can change the PIN on the DECT base web interface (Path: **Security > Base PIN**).

The handset prompts **Handset Subscribed**, indicating that the handset is successfully registered.

## Result

- You can manage the handset on the DECT base station web interface.



- You can use the handset as an extension to make and receive calls.

## Provision Yealink IP Phones on Multiple Servers

When you want to conduct IP phone diagnostics and manage the IP phones on the Yealink device management platform, and assign extension, supply configuration files and upgrade

device firmware for the IP phones on Yeastar P-Series PBX System, you can provision the IP phones on both servers.

## Applications

This topic is applied to the remote deployment of the following Yealink IP phones.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
CP920	78.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP925	148.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP960	73.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
CP965	143.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-CP935W	149.86.0.5 or later	37.5.0.9 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T19P_E2	53.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T21P_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T21_E2	52.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T23P	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T23G	44.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T27G	69.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
SIP-T29G	46.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T30	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T30P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T31W	124.86.0.75 or later	37.11.0.56 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33G	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T33P	124.85.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T34W	124.86.0.75 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T40P	54.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T40G	76.84.0.125 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41P	36.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T41U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42G	29.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T42U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T43U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44U	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T44W	108.86.0.90 or later	37.10.0.32 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46G	28.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T46U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48G	35.83.0.120 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
SIP-T48S	66.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T48U	108.85.0.39 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T52S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T53W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54S	70.84.0.70 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T54W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T56A	58.83.0.15 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T57W	96.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T58	58.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
SIP-T58W	150.86.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
VP59	91.85.0.5 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W60B (W53P, W41P, W60P, CP930W-Base)	77.83.0.85 or later	37.2.0.7 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			• RPS
W70B (W79P, W76P, W73P)	146.85.0.20 or later	37.2.0.7 or later	• PnP • DHCP • RPS
W80B	W80DM-103.83.0.80	37.2.0.7 or later	• PnP • DHCP • RPS
W90DM	130.85.0.15 or later	37.2.0.80 or later	• PnP • DHCP • RPS

## Prerequisites

You have an account of the Yealink Device Management Platform.

## Procedure

- [Step 1. Add IP phones on Yealink Device Management Platform](#)



### Note:

If the IP phone is already added to the PBX, you need to remove it from PBX first.

- [Step 2. Add IP phones on the PBX](#)
- [Step 3. Configure global Auto Provisioning URL on Yealink Device Management Platform](#)

## Step 1. Add IP phones on Yealink device management platform

1. Log in to the [Yealink Device Management Platform](#).
2. Go to **Device Management > Phone Device**, click **Add device** to add a phone.
  - a. Complete the following configurations.

[←](#) **Add device**

Device Name:

my\_ip\_phone1

\* Site:

DM\_Testing

\* Model:

SIP-T53W

\* MAC:

805ec04cab0c

\* Machine ID: ⓘ

201087B013200547

Bind Account (Up to 0)

+ Add

Before you add account, please enter the correct MAC

Synchronize to RPS: ⓘ

☒

Server name:

Please select

Unique Server URL:

Please enter a unique server URL, maximum 512 characters.

Username:

Please enter username, maximum 128 characters.

OK

Cancel



- **Device Name:** Specify a device name.
- **Site:** Select a site in the drop-down list.
- **Model:** Select the phone model in the drop-down list.
- **MAC:** Enter the MAC address of the IP phone.
- **Machine ID:** Enter the serial number of the IP phone.

- **Synchronize to RPS:** Enable this feature to synchronize the IP phone to RPS server.

b. Click **OK**.

3. Reboot the IP phone.

The phone is connected to the Device Management Platform, and the status displays "Online" on the platform.

0 selected										Delete	Site Settings	Update Configuration File	Update Firmware	Update Resource File	Auto Update	Diagnostics	More
<input type="checkbox"/>	MAC	Model	Public IP	Private IP	Firmware Version	Status	Account Status	Site	Operation								
<input type="checkbox"/>	805ec04cab0c	SIP-T53W	112.5.64.162	192.168.66.59	96.85.0.5	Online	--	DM_Testing	 								

## Step 2. Add IP phones on the PBX

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

**IP Phone**

\* Vendor

Yealink

\* Model

SIP-T53W

\* MAC Address

- **Vendor:** Select **Yealink**.
- **Model:** Select the phone model. In this example, select **SIP-T53W**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template

YSDP\_YealinkT5

\* Provisioning Method

RPS (Remote)

Provisioning Link

https://112.5.64.162:18207/api/autoprovision/H70R1oiPhJCnp6L

☒ Authentication for the First-time Auto Provisioning

- **Template:** Select a desired template from the drop-down list.



**Note:**



You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS (Remote)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.



**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Configure global Auto Provisioning URL on Yealink Device Management Platform

1. Log in to [Yealink Device Management Platform](#).
2. Go to **Device Configuration > Global Parameter Settings**.
3. Paste the PBX provisioning link in the **Auto Provisioning URL**.

The screenshot displays two overlapping windows from the Yealink Device Management Platform. The top window, titled 'Options', shows the 'Template' set to 'YSDP\_YealinkT5' and the 'Provisioning Method' set to 'RPS (Remote)'. A checkbox for 'Authentication for the First-time Auto Provisioning' is checked. The bottom window, titled 'Global Parameter Settings', shows the 'Auto Provisioning URL' field. A yellow box highlights the 'Provisioning Link' in the top window, and a dashed orange arrow points from this box to the 'Auto Provisioning URL' field in the bottom window, indicating where the link should be pasted. The URL shown is 'https://112.5.64.162:8342/api/autoprovion/HF9FDq/QE9fx3WIR'.

4. Click **Save and update**.
5. In the pop-up dialog box, click **OK** to update the settings.

## Manually Register Yealink IP Phone with Yeastar P-Series PBX System

This topic takes Yealink SIP-T53W (firmware: 96.85.0.5) as an example to introduce how to manually register an extension on a Yealink IP phone.


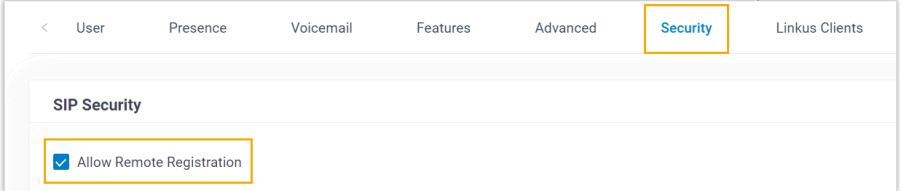
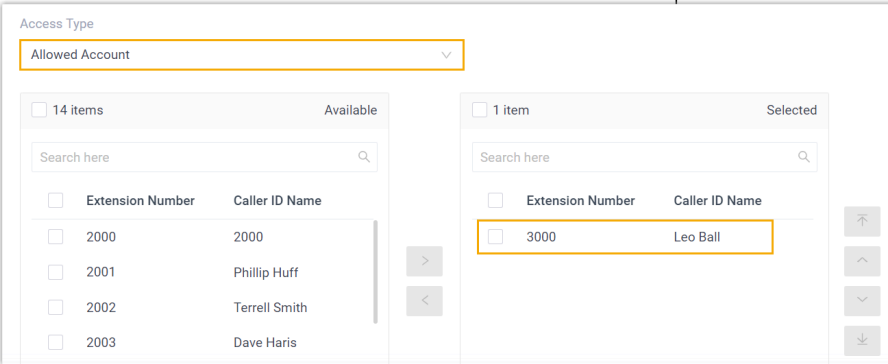

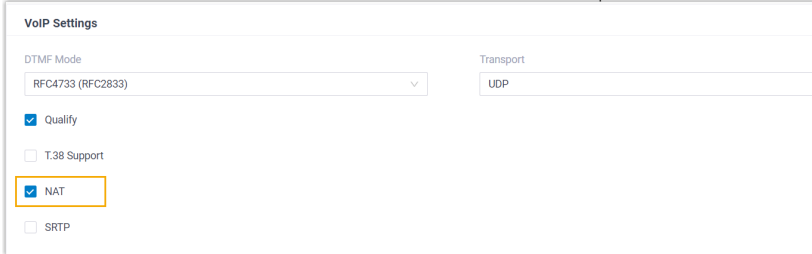
### Supported devices


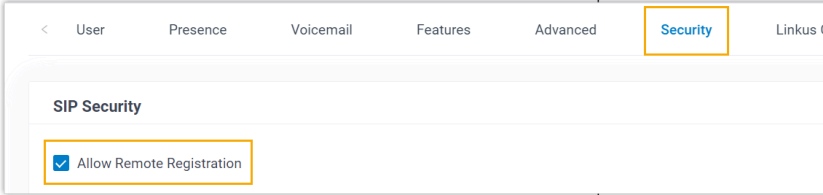
The Yealink IP phones that are compatible with SIP (Session Initiation Protocol).

### Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Yealink IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/

Network Environment		Setting
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li><a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>Set up the extension for remote registration. <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul>  <ul style="list-style-type: none"> <li>Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt;</b></li> </ul>


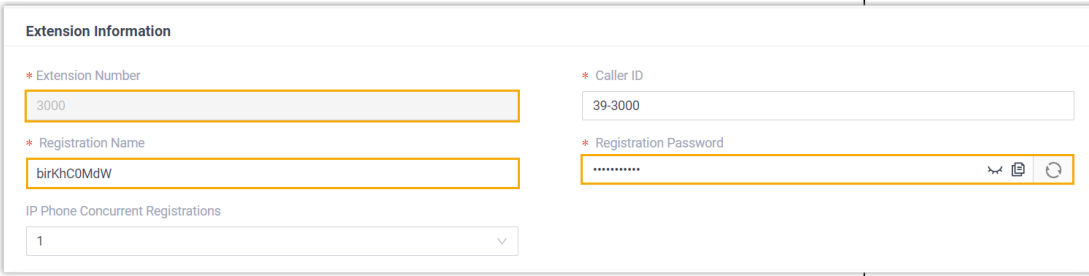

Network Environment	Setting
	<p><b>Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration).</b></p> 

## Procedure



- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Yealink IP phone](#)

### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>



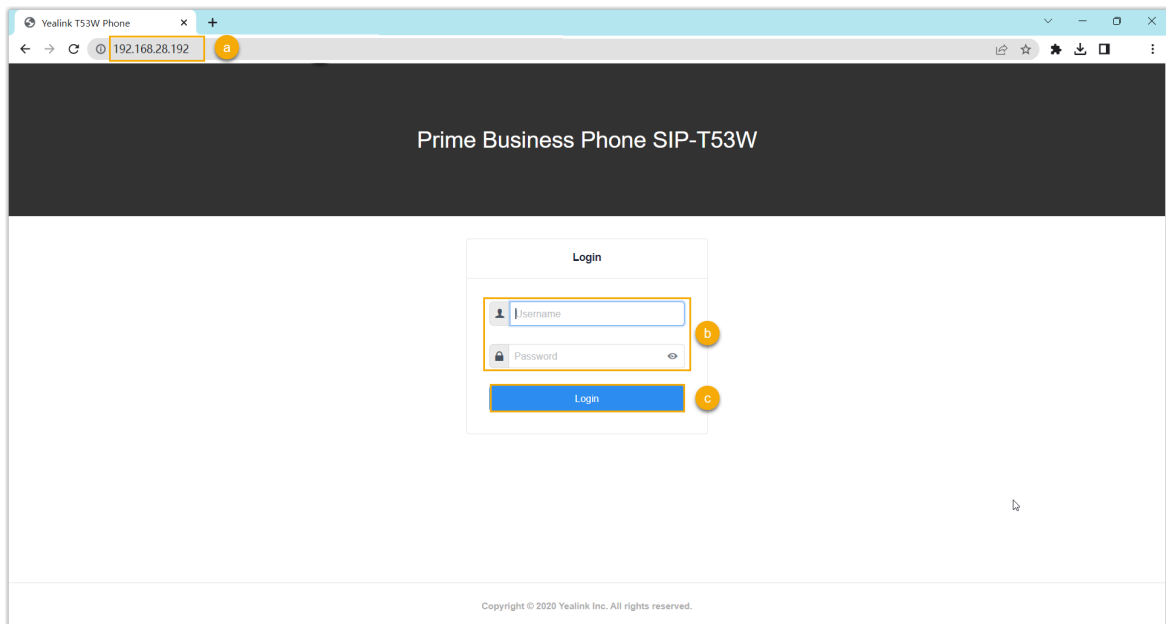
Information	Instruction
	<div data-bbox="540 260 1620 470"> <p>User   Presence   Voicemail   Features   <b>Advanced</b>   Security   Linkus Clients   Phone   Function Keys</p> <p><b>VoIP Settings</b></p> <p>DTMF Mode: RFC4733 (RFC2833)   Transport: <b>UDP</b></p> </div> <div data-bbox="540 512 1395 1346"> <p> <b>Note:</b></p> <ul style="list-style-type: none"> <li>If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> <div data-bbox="704 772 1598 989"> <p><b>Basic</b></p> <p>* SIP UDP Port: 5060   * SIP TCP Port: <input checked="" type="checkbox"/> 5060</p> <p>* RTP Port Range: 18256 : 18356   * Outbound SIP Port Range: <input type="checkbox"/> 5062 : 5082</p> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="704 1140 1198 1276"> <p><input checked="" type="checkbox"/> <b>TLS</b></p> <p>* SIP TLS Port: 5061</p> </div> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="540 1509 1395 1661"> <p> <b>Note:</b></p> <p>This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> </div> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p>

Information	Instruction
	<div data-bbox="540 260 1529 394"> <p>Status</p> <p>● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN)</p> <p>yeastardocs.ras.yealink.com</p> <p>* Expiration Date</p> <p>11/26/2023</p> <p>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="540 617 1019 823"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>Public IP Address</p> <p>* Public IP Address</p> <p>110.35.77.110</p> </div> <div data-bbox="1049 617 1529 823"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>External Host</p> <p>* External Host</p> <p>yeastar_docstest.com</p> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 997 1529 1222"> <p>HTTPS</p> <p>8088</p> <p>HTTP</p> <p>80</p> <p>SIP UDP</p> <p>5060</p> <p>SIP TCP</p> <p>5060</p> <p>SIP TLS</p> <p>5061</p> <p>Outbound SIP Port</p> <p>5062-5082</p> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1495 1529 1812"> <p>Features</p> <p>SIP Access Remote Access</p> <p>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</p> <p>* Status</p> <p>Enabled</p> <p>Remote Access Service Port-SIP UDP&amp;TCP</p> <p>5060</p> <p>Remote Access Service Port-SIP TLS</p> <p>5061</p> </div>

Information	Instruction
	<p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>

## Step 2. Register extension on Yealink IP phone

1. Log in to the web interface of the Yealink IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

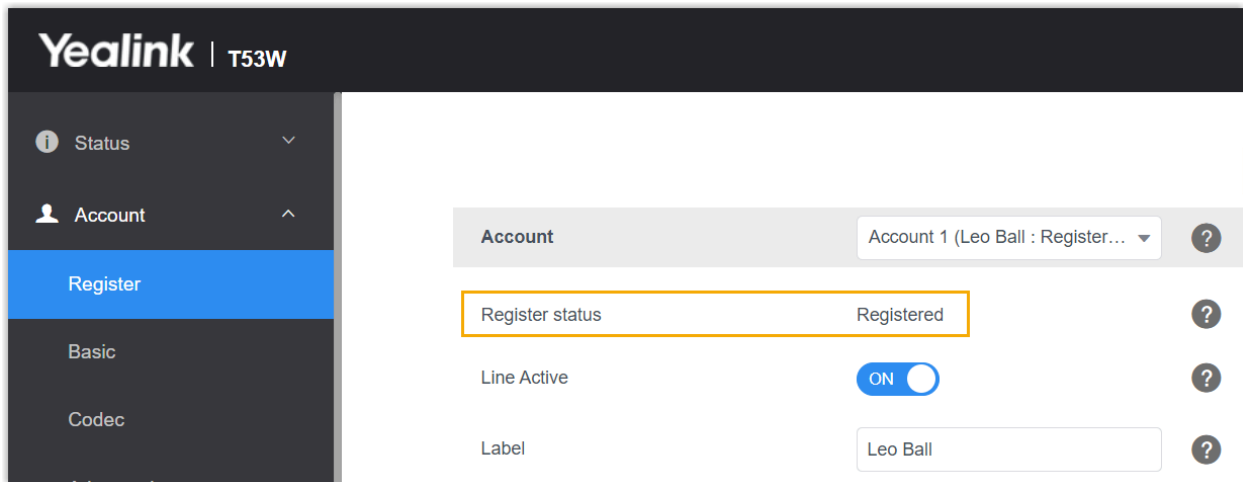
In this example, enter the default password `admin`.

- c. Click **Login**.
2. On the left navigation bar, go to **Account > Register**, and complete the registration configurations.

- a. In the **Account** drop-down list, select an available account.
  - b. Turn on the switch of **Line Active** to activate the account.
  - c. Enter the extension information.
    - **Label:** Enter the name associated with the account, which will be displayed on the phone screen.
    - **Register Name:** Enter the registration name of the extension.
    - **Username:** Enter the extension number.
    - **Password:** Enter the registration password of the extension.
  - d. Enter the PBX server information.
    - **Server Host:** Enter the IP address / domain name of the PBX.
    - **Port:** Enter the SIP registration port of the PBX.
    - **Transport:** Select the transport protocol of the extension. In this example, select **UDP**.
3. Click **Confirm**.

## Result

The extension is registered successfully. You can check the registration status in the **Register status** field.



# Fanvil

## Auto Provision Fanvil IP Phone with Yeastar P-Series PBX System

This topic takes Fanvil X6U-V2 (firmware: 2.12.1) as an example to introduce how to auto provision a Fanvil IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Fanvil IP Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
A10	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
A10W	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
A32	2.6.0.408 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
A32i	2.6.0.408 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
A320	2.6.0.1402 or later	37.11.0.22 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
A320i	2.6.0.1402 or later	37.11.0.22 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FH-S01	2.12.8 or later	37.9.0.20 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
H1	2.12.1 or later	37.10.0.32 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
H2U	2.4.7 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
H2U-V2	2.4.7.6 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
H3	2.12.1.7334 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
H3W	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
H5	2.12.1.7334 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
H5W	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10	1.2.7 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10D	1.2.7 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10S	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10SD	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10SV	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i10V	1.2.7 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i11S	1.2.7 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
i11SV	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i12	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i16S	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i16SV	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i16V	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i18S	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i20S	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i23S	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i30	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i31S	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i32V	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i33V	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i33VF	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
i504	2.12.43.13 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i505	2.6.6.391 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i506W	2.12.43.13 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i507W	2.6.6.394 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i51	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i51W	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i52	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i52W	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i53	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i53W	2.8.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i55A	1.0.0.45 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i56A	0.3.0.21 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
i57A	1.0.0.46 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i61	2.4.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i62	2.4.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i63	2.4.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i64	2.4.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i68	2.8.40.22 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
PA2	2.8.2.7009 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
PA2S	2.8.11 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
PA3	2.4.4 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
V62	2.4.10 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
V63	2.12.16.19 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
V64	2.4.10 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
V65	2.12.2.4 or later	37.7.0.16 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
V67	2.6.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W610W	2.12.0 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
W611W	pvt-2.8 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X1S / X1SP	2.2.12 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X1SG	2.2.12 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X2/X2P	2.14.0.7386 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X2C/X2CP	2.14.0.7386 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X210	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X210-V2	2.12.1.3 or later	37.7.0.16 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X210i	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X210i-V2	2.12.1.3 or later	37.7.0.16 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3SG	2.2.12 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3S/X3SP/X3G	2.14.0.7386 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
X3S Lite / X3SP Lite	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3S Pro / X3SP Pro	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3SW	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3SG Lite	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3SG Pro	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3U	2.2.12 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X3U Pro	2.4.5 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X301	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X301G	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X301W	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X303	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X303G	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
X303W	0.0.16 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X305	2.12.1.6 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X4/X4G	2.14.0.7386 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X4U	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X4U-V2	2.12.1 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X5U	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X5U-V2	2.12.1 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X5S	2.2.1 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X6	2.2.1 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X6U	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X6U-V2	2.12.1 or later	37.6.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X7	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X7A	2.2.0.229 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
X7C	2.2.11 or later	37.2.0.80 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X7-V2	2.12.1.3 or later	37.7.0.16 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
X7C-V2	2.12.1.3 or later	37.7.0.16 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
Y501	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
Y501W	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
Y501-Y	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
Y501-YW	2.12.4 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

## Scenarios

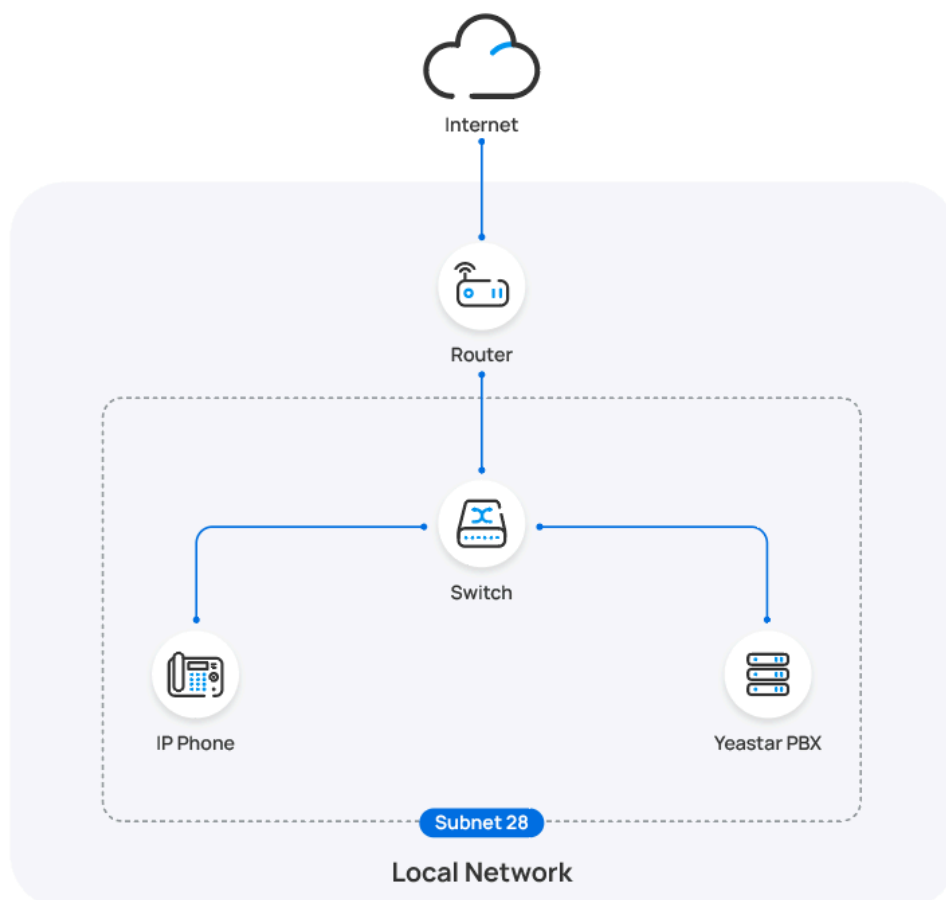
The provisioning methods and operations vary depending on the network environment of **Fanvil IP Phone** and **Yeastar PBX**, as the following table shows:

Scenario	Description
IP Phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Fanvil IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Fanvil IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Fanvil IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Fanvil IP phone in different subnets (DHCP)</a>.</p>

Scenario	Description
IP Phone and PBX are in DIFFERENT network	<p>In this scenario, you can provision the Fanvil IP phone with the PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision a Fanvil IP phone in remote network (RPS)</a>.</p>

## Auto provision a Fanvil IP phone in the same subnet (PnP)

In this example, the Fanvil IP phone (IP: 192.168.28.206) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.




## Prerequisites






- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Fanvil IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Fanvil	X6U-V2	192.168.28.206	-	   

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



### Note:

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



### Note:

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.








## Result



### Note:

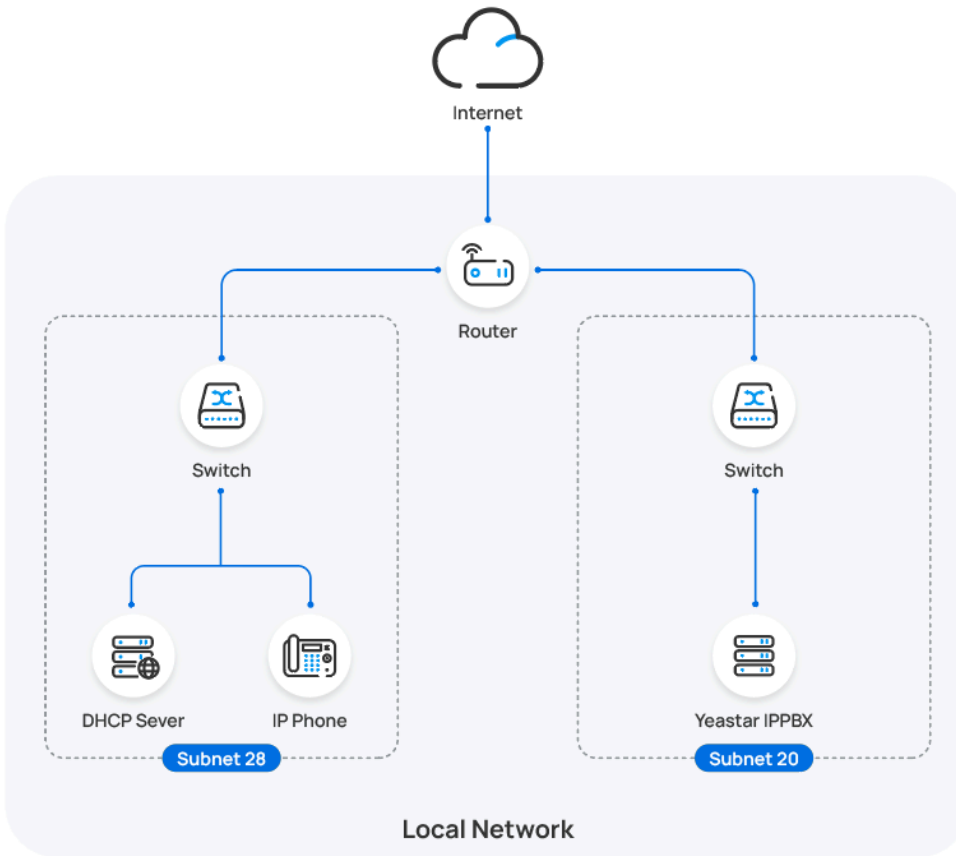
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Fanvil	X6U-V2	192.168.28.206	*****@	   

## Auto provision a Fanvil IP phone in different subnets (DHCP)

In this example, the Fanvil IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

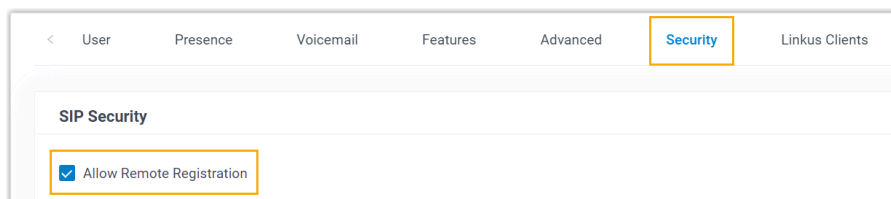
- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Fanvil IP phone on PBX](#)

- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Fanvil IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

 A screenshot of the 'IP Phone' configuration form. It contains three fields: 'Vendor' (a dropdown menu with 'Fanvil' selected), 'Model' (a dropdown menu with 'X6U-V2' selected), and 'MAC Address' (a text input field with a placeholder value). Each field is preceded by a red asterisk indicating it is required.

- **Vendor:** Select **Fanvil**.
  - **Model:** Select the phone model. In this example, select **X6U-V2**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

Options

\* Template  
YSDP\_FarvilX6

\* Provisioning Method  
DHCP (In the Office)

Provisioning Link  
http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

Interfaces » LAN

General Settings Advanced Settings Firewall Settings DHCP Server

General Setup Advanced Settings IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒  
Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐  
Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0  
Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options

6,223.5.5.5

66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

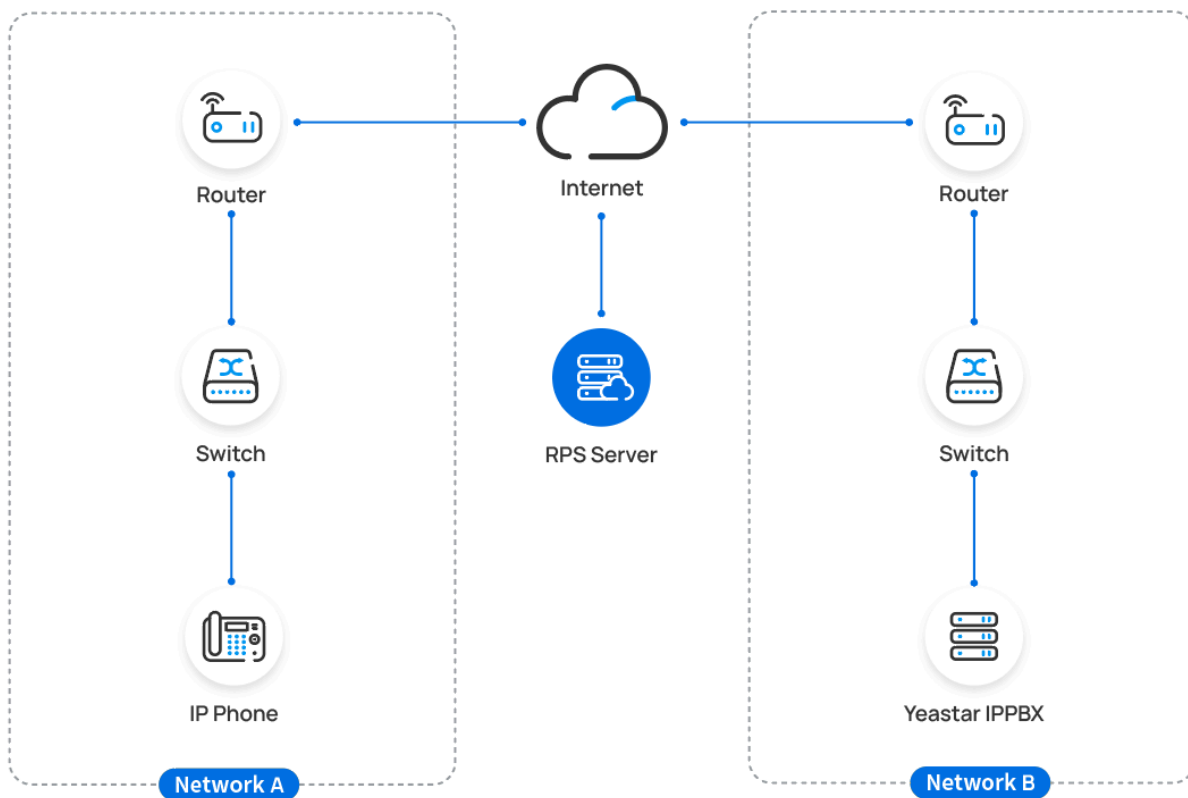
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Fanvil	X6U-V2	-	*****@	

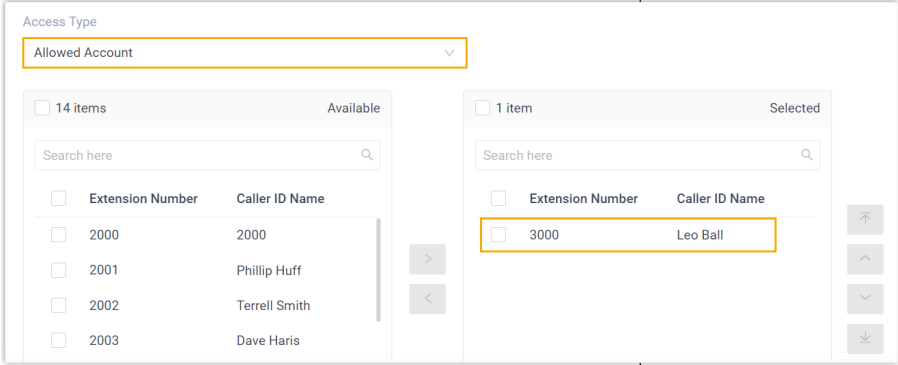
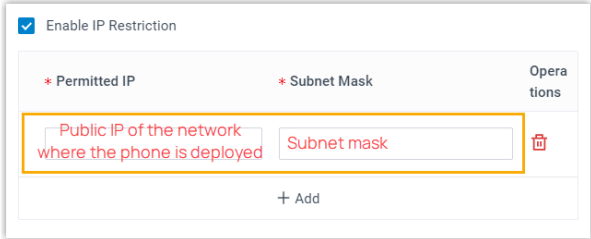

## Auto provision a Fanvil IP phone in remote network (RPS)



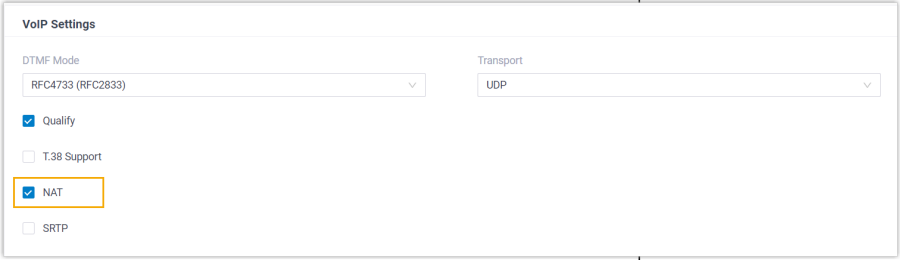

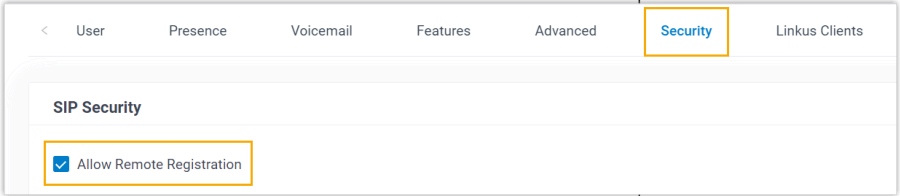
In this example, the Fanvil IP phone and the Yeastar PBX are deployed in different network.



## Prerequisites

Yeastar P-Series PBX System supports to auto provision a Fanvil phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• Grant remote access permission for extension to be registered and the remote IP phones:             <ul style="list-style-type: none"> <li>◦ <a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>  <ul style="list-style-type: none"> <li>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div>  <b>Important:</b> </div>

Method	Setting
	<p> The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> <ul style="list-style-type: none"> <li>• Set up the extension for remote registration.           <ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul>  <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>

## Procedure

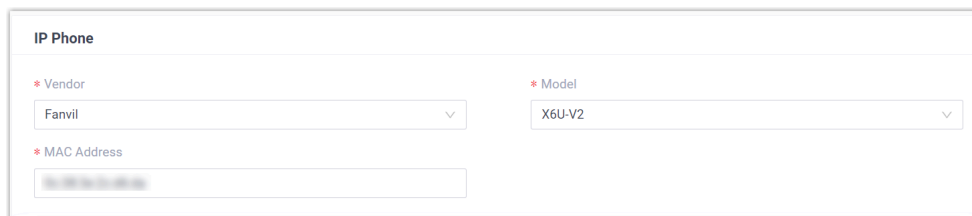
- [Step 1. Add the Fanvil IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)



## Step 1. Add the Fanvil IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

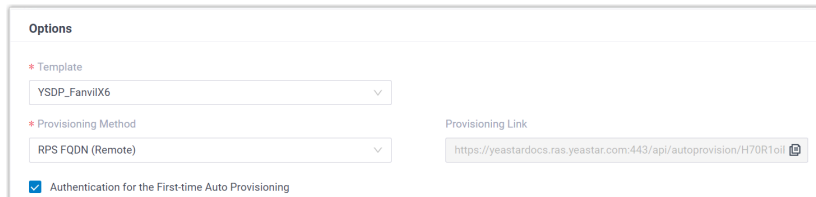
1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.



The screenshot shows the 'IP Phone' configuration form. It has three main fields: 'Vendor' with a dropdown menu showing 'Fanvil', 'Model' with a dropdown menu showing 'X6U-V2', and 'MAC Address' with a text input field containing a masked address (XX-XX-XX-XX-XX-XX).

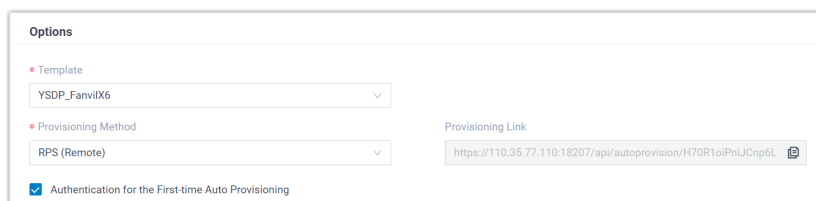
- **Vendor:** Select **Fanvil**.
  - **Model:** Select the phone model. In this example, select **X6U-V2**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

Figure 3. RPS using Yeastar FQDN



The screenshot shows the 'Options' configuration form. It has three main fields: 'Template' with a dropdown menu showing 'YSDP\_FanvilX6', 'Provisioning Method' with a dropdown menu showing 'RPS FQDN (Remote)', and 'Provisioning Link' with a text input field containing the URL 'https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oiI'. There is also a checkbox for 'Authentication for the First-time Auto Provisioning' which is checked.

Figure 4. RPS using Public IP Address / External Host domain name



The screenshot shows the 'Options' configuration form. It has three main fields: 'Template' with a dropdown menu showing 'YSDP\_FanvilX6', 'Provisioning Method' with a dropdown menu showing 'RPS (Remote)', and 'Provisioning Link' with a text input field containing the URL 'https://110.35.77.110:18207/api/autoprovision/H70R1oiPnIJCnp6L'. There is also a checkbox for 'Authentication for the First-time Auto Provisioning' which is checked.

- **Template:** Select a desired template from the drop-down list.



### Note:

You can select the default template corresponding to the phone model, or customize your own template. For more



information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.



**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

1. Reboot the IP phone.
2. If you have enabled **Authentication for the First-time Auto Provisioning** on the PBX, enter the authentication credential on the IP phone.

**Farvil**

Update Prompt

11:38

1. Username

2. Password

Return

OK

- **Username:** Enter the extension number that is assigned to the phone.
- **Password:** Enter the extension's Voicemail Access PIN.

**Tip:**






You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.

The screenshot shows the 'Voicemail' tab in the extension configuration page. It includes a toggle for 'Enable Voicemail' and a dropdown for 'Voicemail PIN Authentication' set to 'Enabled'. The 'Voicemail Access PIN' field is highlighted with a yellow box and contains the value '8742'.

**Result**

- The IP phone automatically downloads the configurations from the PBX and applies the settings.

- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Fanvil	X6U-V2	-	*****@	   

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Fanvil IP Phone with Yeastar P-Series PBX System


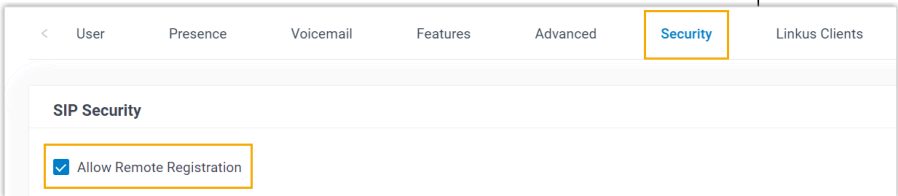
This topic takes Fanvil X6U-V2 (firmware: 2.12.1) as an example to introduce how to manually register an extension on a Fanvil IP phone.

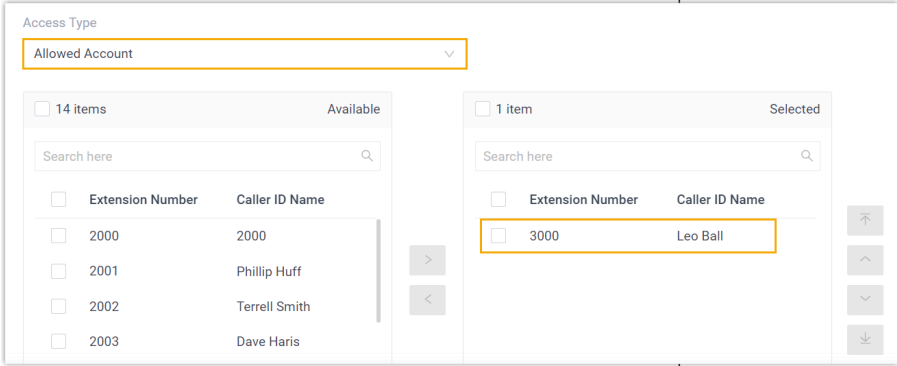


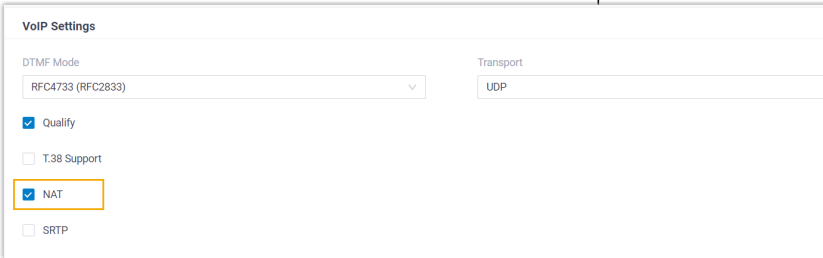
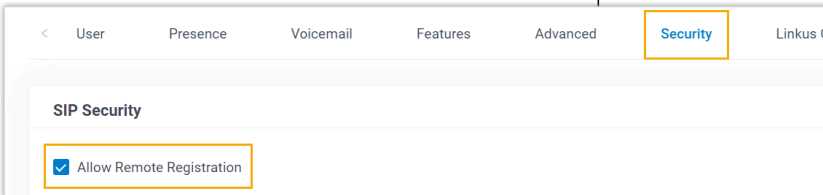
## Supported devices

The Fanvil IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Fanvil IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 


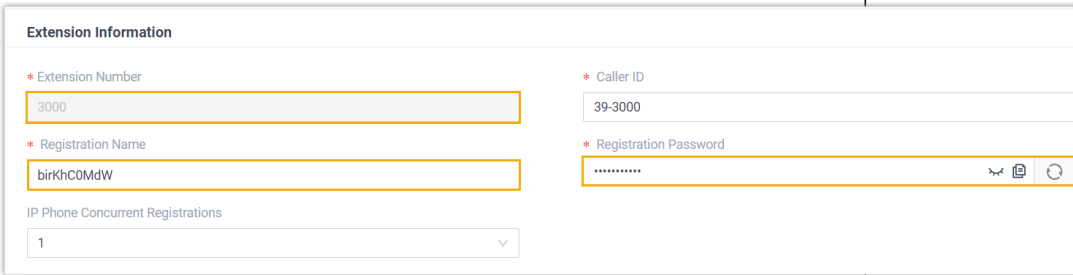

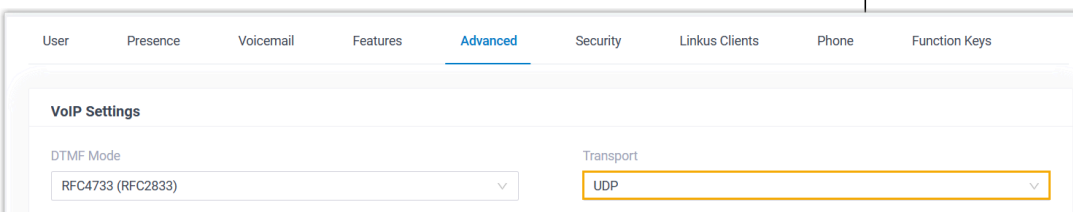

Network Environment		Setting
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li><a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>Set up the extension for remote registration. <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> <li>Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> </li> </ul>  

## Procedure


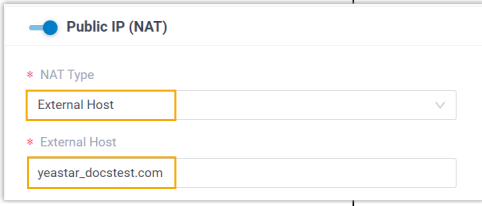
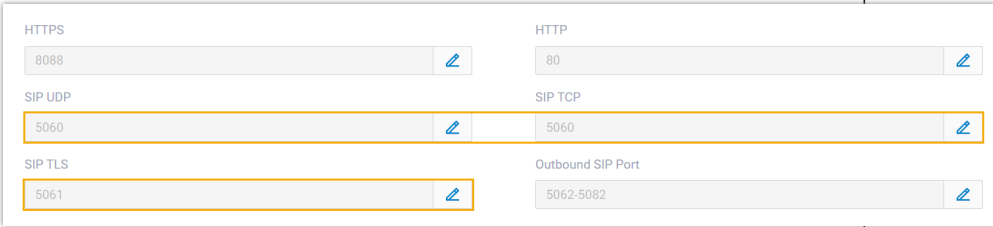
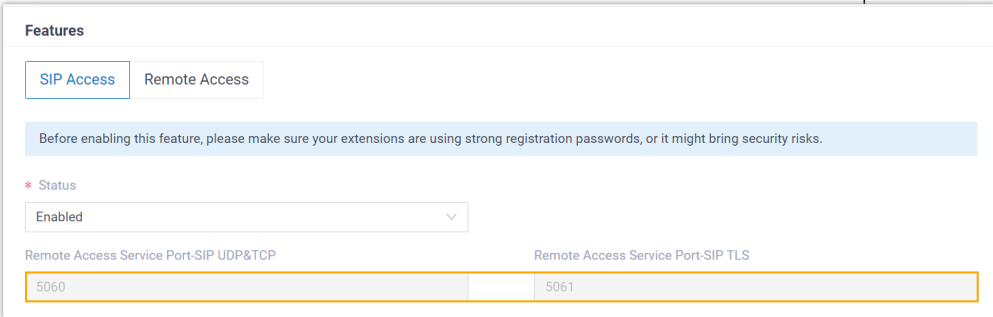
- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Fanvil IP phone](#)

### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>  <div>  <b>Note:</b> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div>

Information	Instruction
	<div data-bbox="560 262 609 315"></div> <div data-bbox="706 262 1599 472"> <p><b>Basic</b></p> <p>* SIP UDP Port 5060</p> <p>* SIP TCP Port <input checked="" type="checkbox"/> 5060</p> <p>* RTP Port Range 18256 : 18356</p> <p>* Outbound SIP Port Range <input type="checkbox"/> 5062 : 5082</p> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="706 619 1201 766"> <p><input checked="" type="checkbox"/> <b>TLS</b></p> <p>* SIP TLS Port 5061</p> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 1018 609 1071"></div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="544 1333 1534 1459"> <p>Status ● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN) yeastardocs.ras.yeastar.com</p> <p>Expiration Date 11/26/2023</p> <p><small>The domain name can be configured only once and cannot be altered after the configuration.</small></p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p>

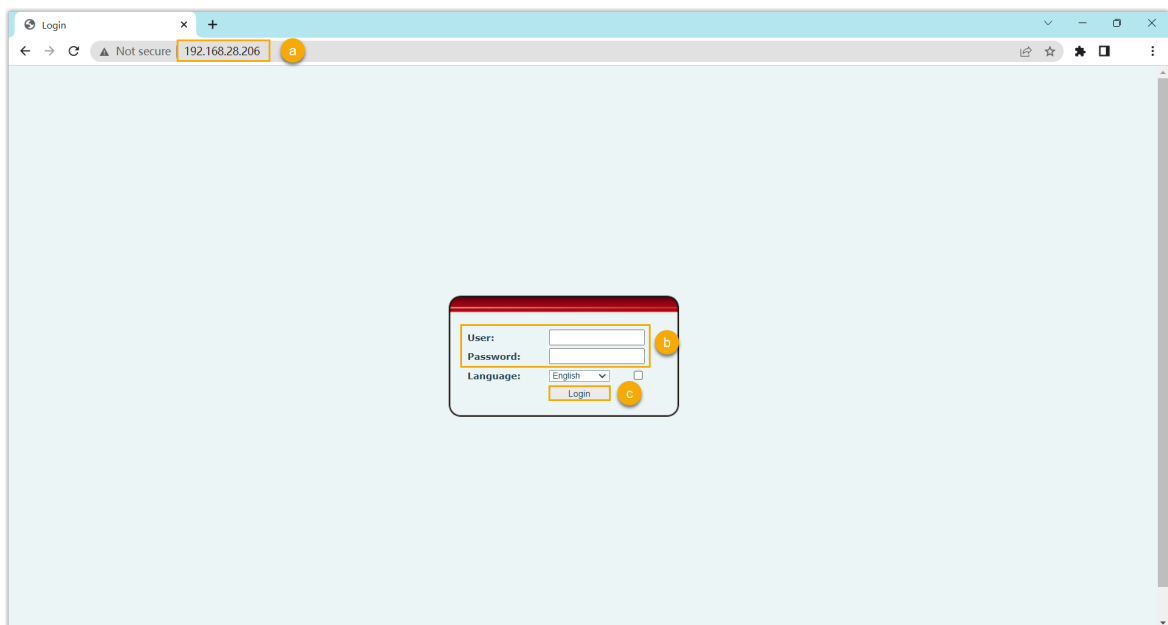
Information	Instruction
	<div data-bbox="540 260 1019 464">  </div> <div data-bbox="1049 260 1528 464">  </div>
SIP registration port	<p data-bbox="540 495 1097 527"><b>Scenario: Register extension in local network</b></p> <p data-bbox="540 548 1312 615">Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 642 1528 863">  </div> <p data-bbox="540 890 1084 921">In this example, we use the SIP UDP port 5060.</p> <p data-bbox="540 957 1268 989"><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p data-bbox="540 1010 1357 1115">Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1142 1528 1451">  </div> <p data-bbox="540 1499 1325 1566"><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p data-bbox="540 1587 1365 1692">Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>



Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> </div> <div> <div>External SIP TCP Port</div> <div>18205</div> </div> <div> <div>External SIP TLS Port</div> <div>18208</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Fanvil IP phone

1. Log in to the web interface of the Fanvil IP phone.



a. In the browser's address bar, enter the IP address of the IP phone.

b. Enter the username `admin` and the associated password.

In this example, enter the default password `admin`.

c. Click **Login**.

2. On the left navigation bar, go to **Line > SIP**, and select an available account.

**Fanvil X6U**

SIP SIP Hotspot Dial Plan Action Plan Basic Settings RTCP-XR

System  
Network  
Line  
Phone settings

Line: SIP1

**Register Settings >>**

Line Status: Inactive Activate: ☐

Username: Authentication User:

Display name: Authentication Password:

Realm: Server Name:

3. In the **Register Settings** section, complete the registration configurations.

**Fanvil X6U**

SIP SIP Hotspot Dial Plan Action Plan Basic Settings RTCP-XR

System  
Network  
Line  
Phone settings  
Phonebook  
Call logs  
Function Key

Line: SIP1

**Register Settings >>**

Line Status: Inactive Activate: ☒

Username: 3000 Authentication User: birKhcOMdW

Display name: Leo Ball Authentication Password: \*\*\*\*\*

Realm: Server Name:

**SIP Server 1:**

Server Address: 192.168.28.39

Server Port: 5060

Transport Protocol: UDP

Registration Expiration: 3600 second(s)

**SIP Server 2:**

Server Address:

Server Port: 5060

Transport Protocol: UDP

Registration Expiration: 3600 second(s)

a. Select the checkbox of **Activate** to activate the account.

b. Enter the extension information.

- **Username:** Enter the extension number.
- **Display Name:** Enter the name associated with the account, which will be displayed on the phone screen.
- **Authentication User:** Enter the registration name of the extension.
- **Authentication Password:** Enter the registration password of the extension.

c. Enter the PBX server information.

- **Server Address:** Enter the IP address / domain name of the PBX.
- **Server Port:** Enter the SIP registration port of the PBX.
- **Transport Protocol:** Select the transport protocol of the extension. In this example, select **UDP**.

4. At the bottom of the page, click **Apply**.

## Result

The extension is registered successfully. You can check the registration status on the **Line Status** field.

The screenshot shows the Fanvil X6U web portal interface. On the left is a red sidebar with navigation links: System, Network, Line (selected), Phone settings, Phonebook, Call logs, and Function Key. The main content area has a top navigation bar with tabs: SIP, SIP Hotspot, Dial Plan, Action Plan, Basic Settings, and RTCP-XR. Below the tabs, the 'Line' dropdown is set to 'SIP1'. Under 'Register Settings >>', the 'Line Status' is highlighted with a yellow box and shows 'Registered' in red text. Other fields include Username (3000), Display name (Leo Ball), and Realm. To the right, there are checkboxes for 'Activate' (checked) and fields for 'Authentication User' (UeT6tFqfaK), 'Authentication Password' (masked), and 'Server Name'. Below this, there are two sections for 'SIP Server 1' and 'SIP Server 2', each with fields for Server Address, Server Port, Transport Protocol (set to UDP), and Registration Expiration (3600 seconds).

## Monitor Extension Status by BLF Key on Fanvil IP Phone

This topic takes Fanvil X6U-V2 (firmware: 2.12.1) as an example to describe how to configure a BLF key for auto-provisioned Fanvil IP phone on PBX web portal, so as to monitor the call status and DND (Do Not Disturb) presence status of a specific extension.

### Prerequisites

The phone is connected to Yeastar P-Series PBX System via Auto Provisioning, and has been assigned an extension.

For more information, see [Auto Provision Fanvil IP Phone with Yeastar P-Series PBX System](#).

### Step 1. Set up a function key for extension monitoring

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the extension that is assigned to the phone.
2. Click the **Function Keys** tab.

### 3. Configure a function key to monitor the status of an extension.

The following figure shows a configuration example of monitoring extension 1004.

Function Key	Type	Value	Label	Operations
Key 1	BLF	1004-Kristin Hale	1004-ExtStatus	
+ Add				

- **Type:** Select **BLF**.
  - **Value:** In the drop-down list, select an extension to monitor.
  - **Label:** Optional. Enter a value, which will be displayed on the phone screen.
4. Click **Save**.

## Step 2. Apply the configuration to the Fanvil IP phone

1. Go to **Auto Provisioning > Phones**, click beside the desired phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
<input type="checkbox"/>		3000	Leo Ball	Fanvil	X6U-V2	-	*****@	

The system prompts you whether to reprovision the phone.

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

## Result

- The LED of the BLF key shows the real-time status of extension 1004:
  - **Solid Green:** The extension is being monitored, and the status is idle.
  - **Solid Red:** The extension is sending a call or is in a call.
  - **Solid Yellow:** The extension is in DND (Do Not Disturb) status.



### Note:

If your Fanvil IP phone does not support differentiated DND status indication, the DND status is indicated by **Solid Red**. For more information regarding the supported phone models and firmware versions, contact your Fanvil IP phone provider.

- **Flashing Red:** The extension is ringing.

- **LED off:** The extension is not registered, or the extension has been deleted from the PBX system.
- You can press the BLF key on the phone to achieve the followings:
  - Place a call to the monitored extension.
  - Pick up the monitored extension's incoming calls.



**Note:**

To achieve this, make sure that the Extension Pickup feature code is enabled (Path: **Call Features > Feature Code > Call Pickup > Extension Pickup**).

**Related information**

[Linkus Web Client Guide - Configure Function Keys](#)

[Linkus Desktop Client Guide - Configure Function Keys](#)

# Avaya

## Auto Provision Avaya IP Phone with Yeastar P-Series PBX System

This topic takes Avaya J139 (firmware: 4.1.1.0.7) as an example to describe how to auto provision Avaya IP phone with Yeastar P-Series PBX System in Local Area Network (LAN).

### Requirements

The firmwares of **Avaya IP phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
J129	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP
J139	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP
J159	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP
J169	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP
J179	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP
J189	4.1.1.0.7 or later	37.12.0.23 or later	• DHCP

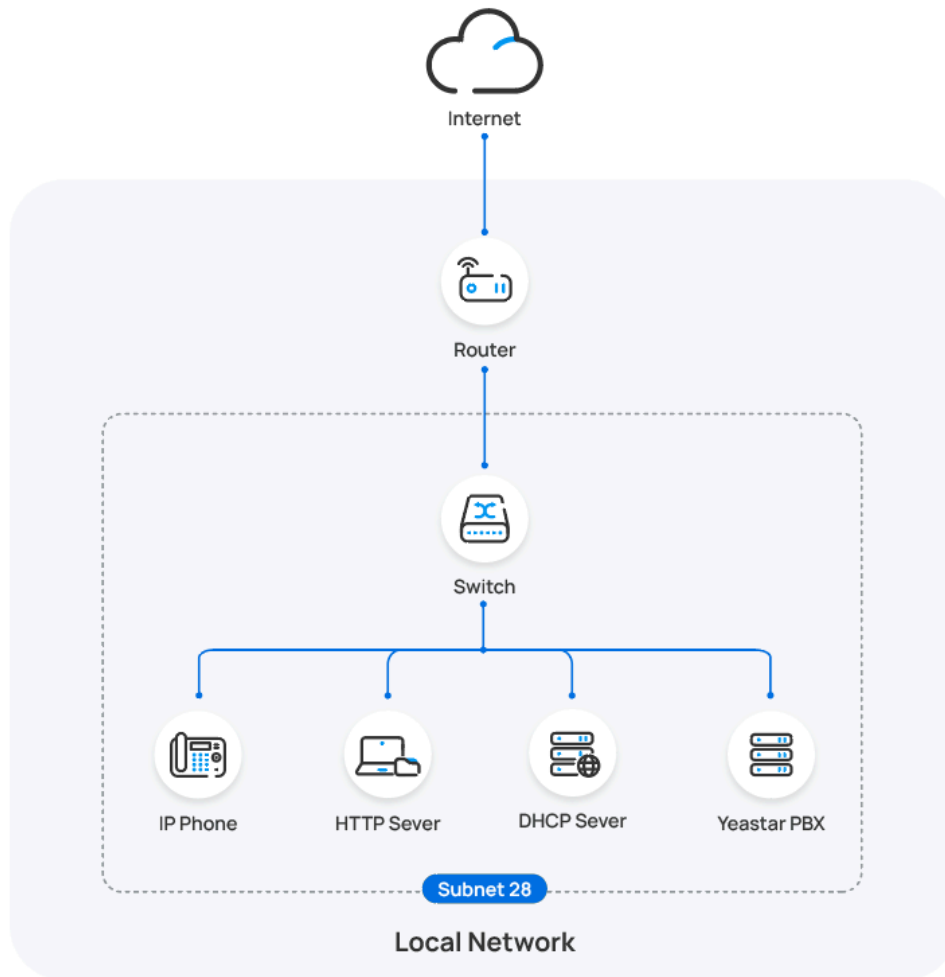
### Scenarios

Yeastar P-Series PBX System supports to auto provision Avaya IP phones via **DHCP** method in the local network. The provisioning operations vary depending on the network environment of **Avaya IP phone** and **Yeastar PBX**.


- [Auto provision an Avaya IP phone in the same subnet](#)
- [Auto provision an Avaya IP phone in different subnets](#)

### Auto provision an Avaya IP phone in the same subnet

In this example, the Avaya IP phone, a DHCP server, and Yeastar PBX (IP: 192.168.28.39) are deployed in subnet 28. Additionally, an HTTP server is set up on a PC located in the same subnet, which is used to host the phone's configuration files.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Gather information of IP phone, including Vendor, Model, and MAC address.
- Set the registration name to the same as the extension number for the extension that will be assigned to the IP phone (Path: **Extension and Trunk > Extension >  > User > Extension Information**).

Extension Information	
* Extension Number <input type="text" value="3000"/>	* Caller ID <input type="text" value="39-3000"/>
* Registration Name <input type="text" value="3000"/>	* Registration Password <input type="password" value="*****"/>

- Prepare an HTTP server on a PC that is located in the same subnet as the Avaya IP phone.



**Note:**

In this example, an [HFS \(HTTP File Server\)](#) is used.

## Procedure

- [Step 1. Add the Avaya IP phone on PBX](#)
- [Step 2. Set up HTTP server on PC](#)
- [Step 3. Configure DHCP option 242 on DHCP server](#)
- [Step 4. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Avaya IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address. You need to download the phone's configuration file from the PBX for later use.

1. Add the Avaya IP phone.
  - a. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
  - b. Click **Add > Add**.
  - c. In the **IP Phone** section, enter the following phone information.

IP Phone	
* Vendor <input type="text" value="Avaya"/>	* Model <input type="text" value="J139"/>
* MAC Address <input type="text" value="00142F000000"/>	

- **Vendor:** Select **Avaya**.
- **Model:** Select the phone model. In this example, select **J139**.
- **MAC Address:** Enter the MAC address of the IP phone.



d. In the **Options** section, configure the following settings.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

e. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**


If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.






- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

f. Click **Save**.

The IP phone is added and displayed in the Auto Provisioning phone list.

2. Set the phone language for the IP phone.

a. In the Auto Provisioning phone list, click  beside the Avaya IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Avaya	J139	-	*****@	   

b. In the phone configuration page, scroll down to the **Preference** section, and select the desired phone language based on the phone model.






**Preference**

\* Phone Language


J139 English

c. Click **Save**.

3. Download the phone's configuration file onto your PC.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Avaya	J139	-	*****@	   

Download
   
 Reboot
   
 Delete

a. Click  beside the Avaya IP phone.

b. In the drop-down list, click **Download** to download the phone's configuration file.

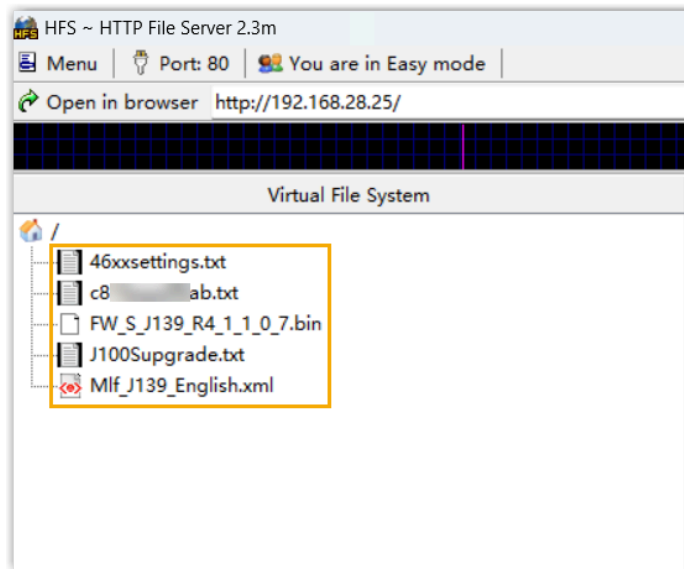
## Step 2. Set up HTTP server on PC

Yeastar has prepared a provisioning package to provision Avaya IP phones. You need to download the package and mount the required files in an HTTP server on your PC. In this example, an HFS is used as the HTTP server.

1. [Download the provisioning package](#) onto the PC, then extract the package.

The provisioning package contains all the files necessary to provision the Avaya IP phone, where you can mount the files of the corresponding phone model in the HTTP server.

2. On the running HTTP server ([HFS](#)), mount the following files to the root directory `/`.



- The following files obtained from the provisioning package.
  - **Setting file:** 46xxsettings.txt
  - **Upgrade file:** J100Supgrade.txt
  - **Firmware file:** Choose the firmware file based on the phone model. In this example, choose FW\_S\_J139\_R4\_1\_1\_0\_7.bin.
  - **Language file:** Choose the desired language file based on the phone model. In this example, choose Mlf\_J139\_English.xml.
- The [phone's configuration file {mac}.txt](#) downloaded from PBX.

### Step 3. Configure DHCP option 242 on DHCP server

Configure DHCP option 242 to point to the HTTP server. In this way, the Avaya IP phone can automatically retrieve its configuration files from the HTTP server. The following instructions take Tftpd64 DHCP server as an example to show how to configure the option 242.

1. On the running [Tftpd64](#) software, go to **Settings > DHCP > DHCP Options**.
2. Add option 242 and define the location of the configuration files.

The screenshot shows the 'Tftpd64: Settings' dialog box with the 'DHCP' tab selected. The 'Additional Option' field is highlighted with an orange box, showing the value '242' and the string 'HTTPSRRV=192.168.28.25,HTTPDIR=,'.


- In the **Additional Option** field, enter 242.
- In the string value field, enter the HTTP server address at the following format:

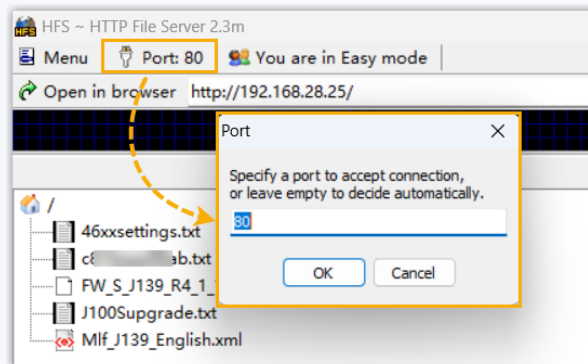
```
HTTPSRRV=192.168.28.25,HTTPDIR=,HTTPPORT=80,SIG=2
```

- **HTTPSRRV**: The IP address of the PC where the HTTP server is running.
- **HTTPDIR**: The path of the mounted files in the HTTP server. In this example, leave it blank as the files are mounted in the root directory.
- **HTTPPORT**: The port of the HTTP server. In this example, enter the default port is 80.



**Tip:**

 You can check the port, or specify a port as needed in the HFS software.



- **SIG:** The software version of the Avaya IP phone. Set the value to 2.

#### Step 4. Trigger the IP phone to complete provisioning

Reset the IP phone, and enter authentication information on the phone screen to complete provisioning.


1. On the phone screen, access the Admin menu and reset the IP phone to factory default.
  - a. On the IP phone, go to **Main menu > Administration**.
  - b. In the **Access code** field, enter the administrator password, then press **Enter**. In this example, enter the default password 27238.
  - c. In the Admin menu, select **Reset to defaults**, then select **Reset** when the phone prompts for confirmation.

The phone is reset to default settings. After booted up, the phone displays a prompt asking whether to activate auto provisioning now.

2. Select **No** to proceed.

The IP phone goes on searching for DHCP server for network configuration, which will take about 2-3 minutes.

3. In the **Login** page, enter the authentication information of the extension, then press **Enter**.



9:19pm  
10/09






---

**Login**

- **Username:** Enter the Extension Number.
- **Password:** Enter the Registration Password of the extension.

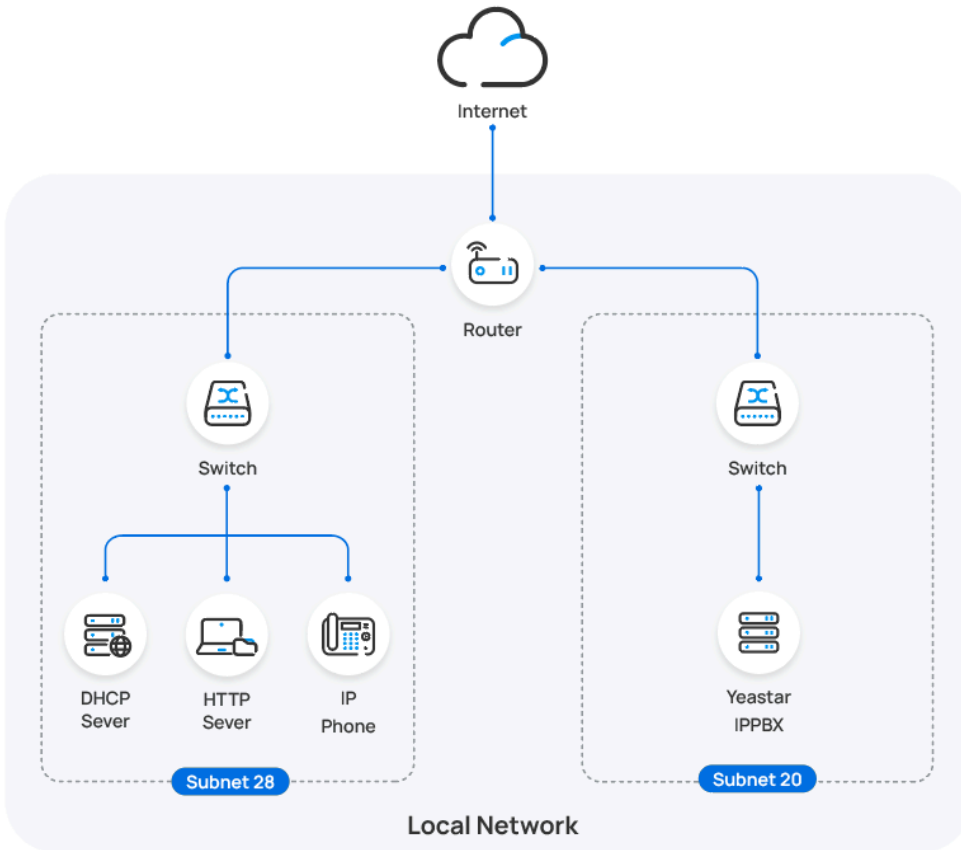
## Result

- The IP phone automatically downloads configurations from the HTTP server, and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.


<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Avaya	J139	-	*****@	   

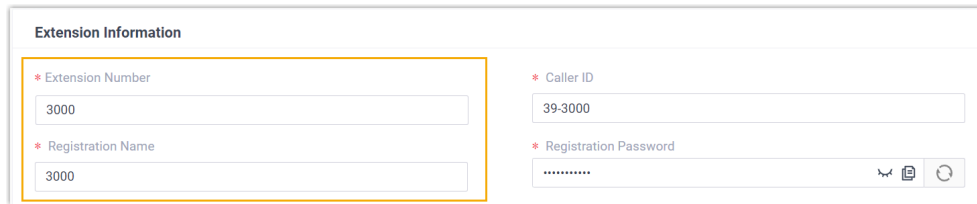
## Auto provision an Avaya IP phone in different subnets

In this example, the Avaya IP phone and DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20. Additionally, an HTTP server is set up on a PC located in the same subnet as the IP phone, which is used to host the phone's configuration files.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Gather information of IP phone, including Vendor, Model, and MAC address.
- Set the registration name to the same as the extension number for the extension that will be assigned to the IP phone (Path: **Extension and Trunk > Extension >  > User > Extension Information**).



Extension Information	
* Extension Number 3000	* Caller ID 39-3000
* Registration Name 3000	* Registration Password *****

- Prepare an HTTP server on a PC that is located in the same subnet as the Avaya IP phone.



**Note:**

In this example, an [HFS \(HTTP File Server\)](#) is used.

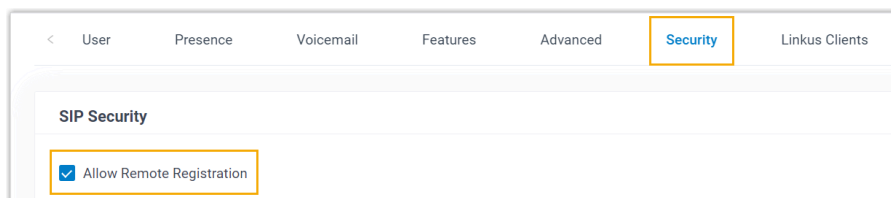
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Avaya IP phone on PBX](#)
- [Step 3. Set up HTTP server on PC](#)
- [Step 4. Configure DHCP option 242 on DHCP server](#)
- [Step 5. Trigger the IP phone to complete provisioning](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



<	User	Presence	Voicemail	Features	Advanced	Security	Linkus Clients
SIP Security							
<input checked="" type="checkbox"/> Allow Remote Registration							

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

### Step 2. Add the Avaya IP phone on PBX



Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address. You need to download the phone's configuration file from the PBX for later use.

1. Add the Avaya IP phone.

- a. On PBX web portal, go to **Auto Provisioning > Phones**.
- b. Click **Add > Add**.
- c. In the **IP Phone** section, enter the following phone information.

The screenshot shows a form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Avaya", "Model" with a dropdown menu showing "J139", and "MAC Address" with a text input field.

- **Vendor:** Select **Avaya**.
  - **Model:** Select the phone model. In this example, select **J139**.
  - **MAC Address:** Enter the MAC address of the IP phone.
- d. In the **Options** section, configure the following settings.

The screenshot shows a form titled "Options". It contains three fields: "Template" with a dropdown menu showing "YSDP\_AvayaJ100", "Provisioning Method" with a dropdown menu showing "DHCP (In the Office)", and "Provisioning Link" with a text input field containing the URL "http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQ8".

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.
- e. In the **Assign Extension** section, assign an extension to the IP phone.

### Assign Extension

\* Select Extension

3000-Leo Ball



#### Note:


If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

f. Click **Save**.

The IP phone is added and displayed in the Auto Provisioning phone list.

2. Set the phone language for the IP phone.

a. In the Auto Provisioning phone list, click  beside the Avaya IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Avaya	J139	-	*****@	

b. In the phone configuration page, scroll down to the **Preference** section, and select the desired phone language based on the phone model.

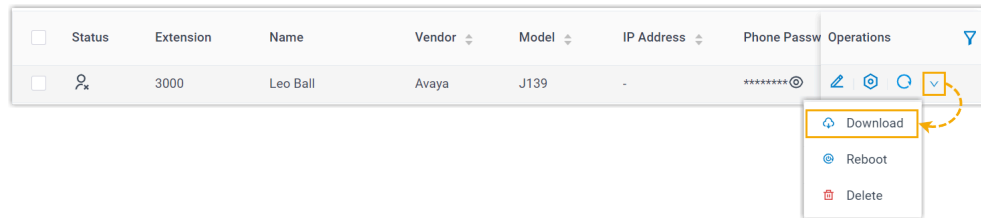
### Preference

\* Phone Language

J139 English

c. Click **Save**.

3. Download the phone's configuration file onto your PC.



- Click  beside the Avaya IP phone.
- In the drop-down list, click **Download** to download the phone's configuration file.

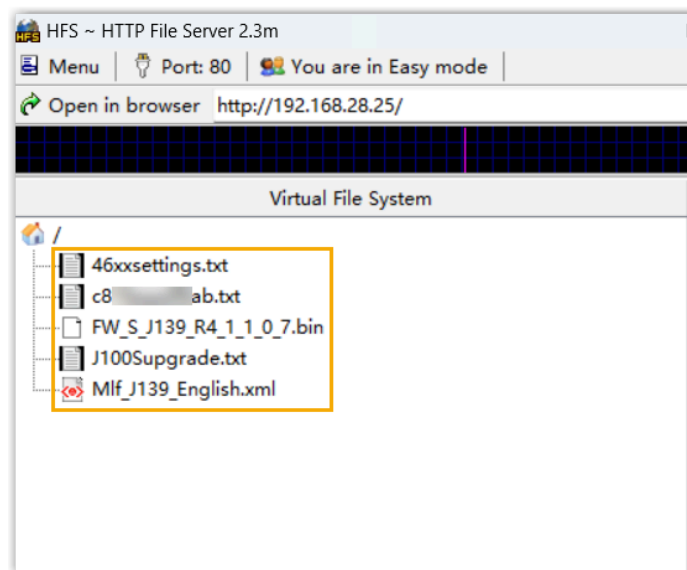
### Step 3. Set up HTTP server on PC

Yeastar has prepared a provisioning package to provision Avaya IP phones. You need to download the package and mount the required files in an HTTP server on your PC. In this example, an HFS is used as the HTTP server.

- [Download the provisioning package](#) onto the PC, then extract the package.

The provisioning package contains all the files necessary to provision the Avaya IP phone, where you can mount the files of the corresponding phone model in the HTTP server.

- On the running HTTP server ([HFS](#)), mount the following files to the root directory `/`.



- The following files obtained from the provisioning package.

- **Setting file:** 46xxsettings.txt
- **Upgrade file:** J100Supgrade.txt
- **Firmware file:** Choose the firmware file based on the phone model. In this example, choose FW\_S\_J139\_R4\_1\_1\_0\_7.bin.
- **Language file:** Choose the desired language file based on the phone model. In this example, choose Mlf\_J139\_English.xml.
- The phone's configuration file {mac}.txt downloaded from PBX.

#### Step 4. Configure DHCP option 242 on DHCP server

Configure DHCP option 242 to point to the HTTP server. In this way, the Avaya IP phone can automatically retrieve its configuration files from the HTTP server. The following instructions take Tftpd64 DHCP server as an example to show how to configure the option 242.

1. On the running [Tftpd64](#) software, go to **Settings > DHCP > DHCP Options**.
2. Add option 242 and define the location of the configuration files.

The screenshot shows the 'Tftpd64: Settings' dialog box with the 'DHCP' tab selected. The 'Additional Option' field is highlighted with an orange box, showing the value '242' and the string 'HTTPSRR=192.168.28.25,HTTPDIR=,'.

- In the **Additional Option** field, enter 242.
- In the string value field, enter the HTTP server address at the following format:

```
HTTPSRR=192.168.28.25,HTTPDIR=,HTTPPORT=80,SIG=2
```

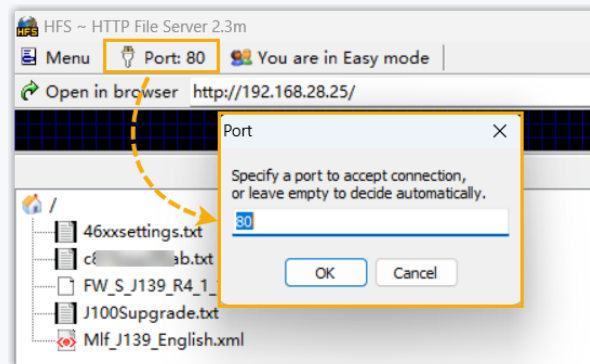
- **HTTPSRR**: The IP address of the PC where the HTTP server is running.
- **HTTPDIR**: The path of the mounted files in the HTTP server. In this example, leave it blank as the files are mounted in the root directory.
- **HTTPPORT**: The port of the HTTP server. In this example, enter the default port is 80.



**Tip:**



You can check the port, or specify a port as needed in the HFS software.



- **SIG:** The software version of the Avaya IP phone. Set the value to 2.

## Step 5. Trigger the IP phone to complete provisioning

Reset the IP phone, and enter authentication information on the phone screen to complete provisioning.

1. On the phone screen, access the Admin menu and reset the IP phone to factory default.
  - a. On the IP phone, go to **Main menu > Administration**.
  - b. In the **Access code** field, enter the administrator password, then press **Enter**. In this example, enter the default password 27238.
  - c. In the Admin menu, select **Reset to defaults**, then select **Reset** when the phone prompts for confirmation.

The phone is reset to default settings. After booted up, the phone displays a prompt asking whether to activate auto provisioning now.

2. Select **No** to proceed.

The IP phone goes on searching for DHCP server for network configuration, which will take about 2-3 minutes.

3. In the **Login** page, enter the authentication information of the extension, then press **Enter**.



9:19pm  
10/09

---

Login

Username

Password

Enter

More

- **Username:** Enter the Extension Number.
- **Password:** Enter the Registration Password of the extension.

## Result

- The IP phone automatically downloads configurations from the HTTP server, and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Avaya	J139	-	*****@	

# Cisco

## Auto Provision Cisco IP Phone with Yeastar P-Series PBX System

This topic describes how to auto provision Cisco IP phone with Yeastar P-Series PBX System in Local Area Network (LAN), so as to associate the Cisco IP phone with a Yeastar PBX extension.

### Requirements

The firmwares of **Cisco IP phone** and **Yeastar PBX** meet the following requirements.

**Note:**

Currently, the programmable line key configuration on Cisco 8811 via auto provisioning is NOT supported.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
3905	9.4(1)SR3 or later	37.12.0.23 or later	• DHCP
7821	14.2(1)SR1 or later	37.12.0.23 or later	• DHCP
7861	SIP78xx.14-2-1-0201-40 or later	37.13.0.29 or later	• DHCP
7942	SIP42.9-4-2SR3-1S or later	37.12.0.23 or later	• DHCP
8811	SIP88xx.12-1-1SR1-4 or later	37.13.0.29 or later	• DHCP
8845	14.2(1)SR1 or later	37.12.0.23 or later	• DHCP

### Scenarios

Yeastar P-Series PBX System supports to auto provision Cisco IP phone via **DHCP** method in local network. The provisioning operations vary depending on the network environment of **Cisco IP phone** and **Yeastar PBX**.

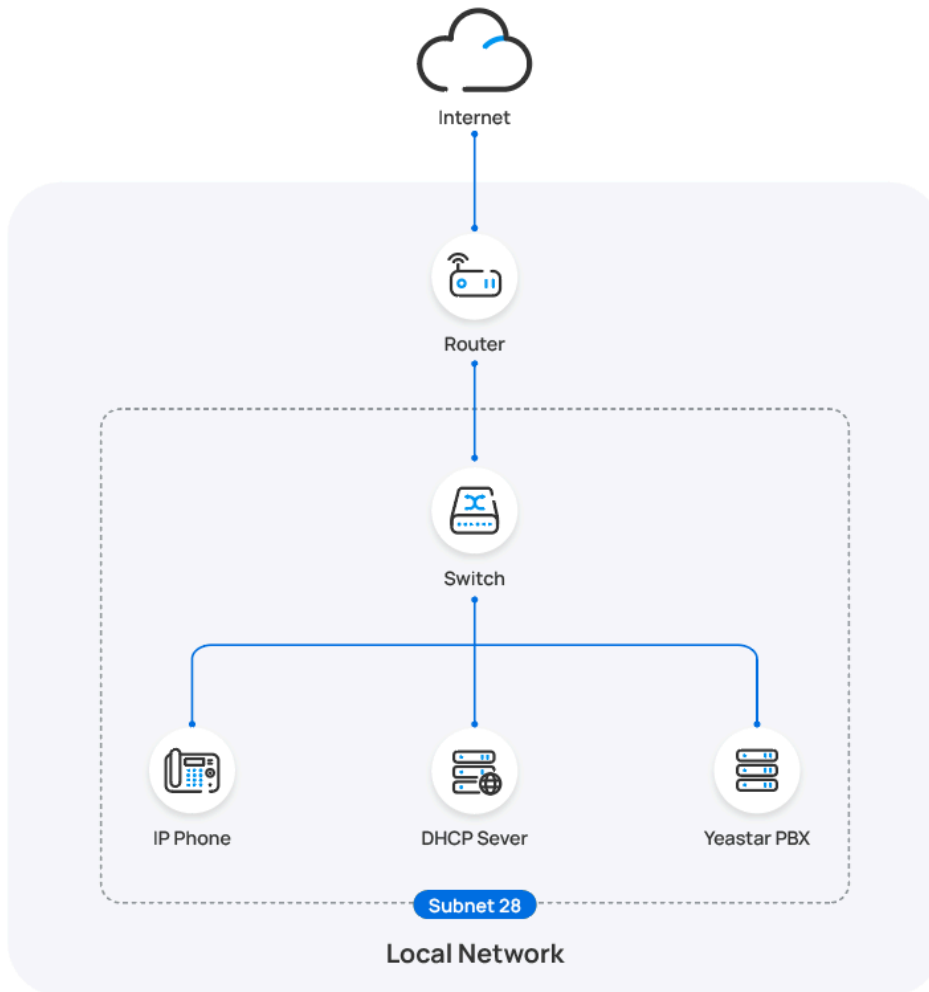
- [Auto provision a Cisco IP phone in the same subnet](#)



- [Auto provision a Cisco IP phone in different subnets](#)

## Auto provision a Cisco IP phone in the same subnet

In this example, the Cisco IP phone, a DHCP server, and the Yeastar PBX (IP: 192.168.28.41) are deployed in subnet 28.



### Prerequisites

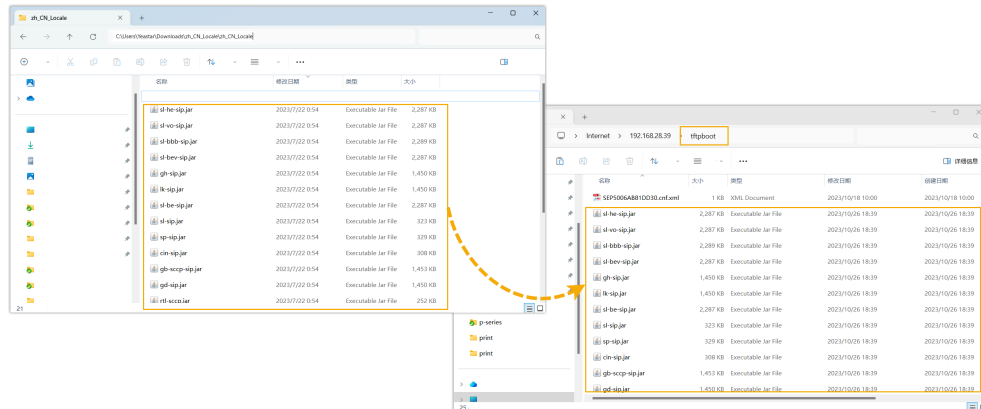
- Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Gather information of IP phone, including Vendor, Model, and MAC address.

- (Optional) Download your desired language files from Cisco website and [upload the language files to the folder `tftpboot` in the PBX via FTP.](#)

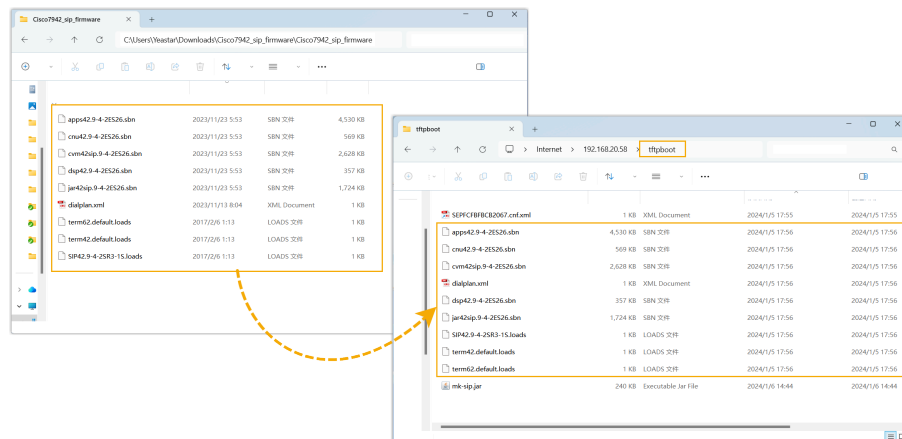


### Note:

By default, Cisco IP phone displays in **English**. If you want it to display in another language after auto provisioning, you can manually upload your language files to PBX.



- If you want to provision **Cisco 7942**, in addition to the above prerequisites, you will also need to complete the followings:
  - Download and extract the [Cisco 7942 provisioning package](#), and put the extracted files into the folder `tftpboot` of the PBX.



- Disable NAT for the extension on PBX web portal (Path: **Extension and Trunk > Extension > > Advanced > VoIP Settings**).

The screenshot shows the 'Advanced' tab of the 'VoIP Settings' configuration page. The 'DTMF Mode' is set to 'RFC4733 (RFC2833)' and 'Transport' is set to 'UDP'. The 'Qualify' checkbox is checked. The 'NAT' checkbox is highlighted with a yellow box. Other options include 'T.38 Support' and 'SRTP'.

## Procedure

- [Step 1. Enable the TFTP feature on PBX](#)
- [Step 2. Add the Cisco IP phone on PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)
- [Step 4. \(Optional\) Reset the Cisco IP phone](#)

### Step 1. Enable the TFTP feature on PBX

When provisioning a Cisco IP phone, the PBX works as a TFTP server to host the phone's configuration file. You need to enable the TFTP feature on PBX, so that the IP phone can download configurations from the PBX via TFTP.

1. Log in to PBX web portal, go to **System > Storage > File Sharing**.
2. Scroll down to the bottom, turn on the switch of **TFTP**, then click **OK** in the pop-up window.
3. Click **Save**.

### Step 2. Add the Cisco IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

**IP Phone**

\* Vendor: Cisco

\* Model: Cisco8845

\* MAC Address:

- **Vendor:** Select **Cisco**.
- **Model:** Select the phone model.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template: YSDP\_Cisco8845

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: tftp://192.168.28.41/

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Assign Extension**

\* Select Extension: 3000-Leo Ball



**Note:**



If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

Configure the DHCP option 66 on the DHCP server to deliver the PBX's IP address.

The configuration examples are shown below:

Figure 5. Configure option 66 on the Tftpd64's DHCP server

Tftpd64: Settings

GLOBAL | TFTP | **DHCP** | SYSLOG | DNS

DHCP Pool definition

IP pool start address: 192.168.28.204

Size of pool: 4

Lease (minutes): 2880

Boot File:

DHCP Options

Def. router (Opt 3): 192.168.28.1

Mask (Opt 1): 255.255.255.0

DNS Servers (Opt 6): 192.168.28.1

WINS server (Opt 44): 192.168.28.1

NTP server (Opt 42):

SIP server (Opt 120):

Domain Name (15):

Additional Option: 66 192.168.28.41

DHCP Settings

☒ Ping address before assignation

☒ Persistent leases

☐ Double answer if relay detected

☒ Bind DHCP to this address: 192.168.28.25

OK Default Help Cancel

Figure 6. Configure option 66 on a router's DHCP server

Interfaces » LAN

General Settings | Advanced Settings | Firewall Settings | **DHCP Server**

General Setup | **Advanced Settings** | IPv6 Settings | IPv6 RA Settings

Dynamic DHCP: ☒  
 ⓘ Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force: ☐  
 ⓘ Force DHCP on this network even if another server is detected.


IPv4-Netmask: 255.255.255.0  
 ⓘ Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options: 6,223.5.5.5  
 66,192.168.28.41  
 ⓘ Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save






## Step 4. (Optional) Reset the Cisco IP phone

If the IP phone is to be deployed for a new user, you need to reset the phone to its default settings to ensure that the configurations from the previous user are removed from the phone.

1. On the IP phone, press the  button.
2. On the IP phone screen, go to **Admin settings > Reset settings > All settings**.
3. Select **Reset** when the phone prompts for confirmation.

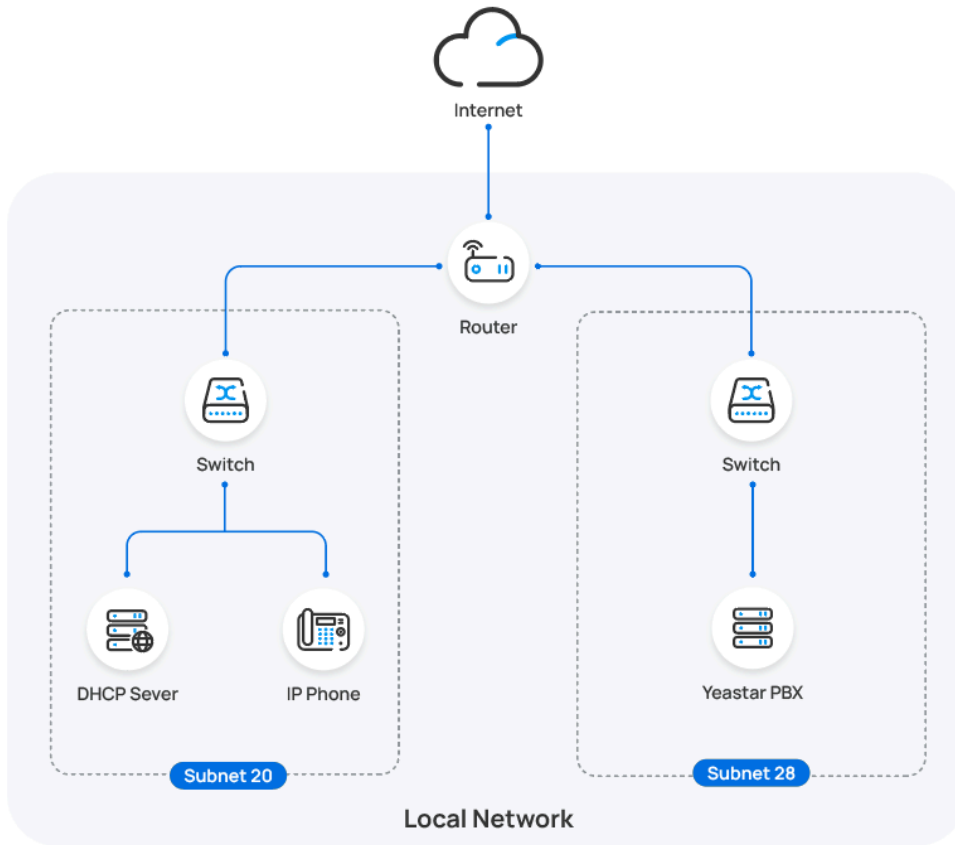
## Result

- After boot-up, the IP phone gets an IP address from the DHCP server, downloads configurations from the PBX via TFTP protocol, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
<input type="checkbox"/>		3000	Leo Ball	Cisco	Cisco8845	-	-	   

## Auto provision a Cisco IP phone in different subnets

In this example, the Cisco IP phone and DHCP server are deployed in subnet 20, while the Yeastar PBX (IP address: 192.168.28.41) is deployed in subnet 28.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Gather information of IP phone, including Vendor, Model, and MAC address.
- (Optional) Download your desired language files from Cisco website and [upload the language files to the folder `tftpboot` in the PBX via FTP](#).

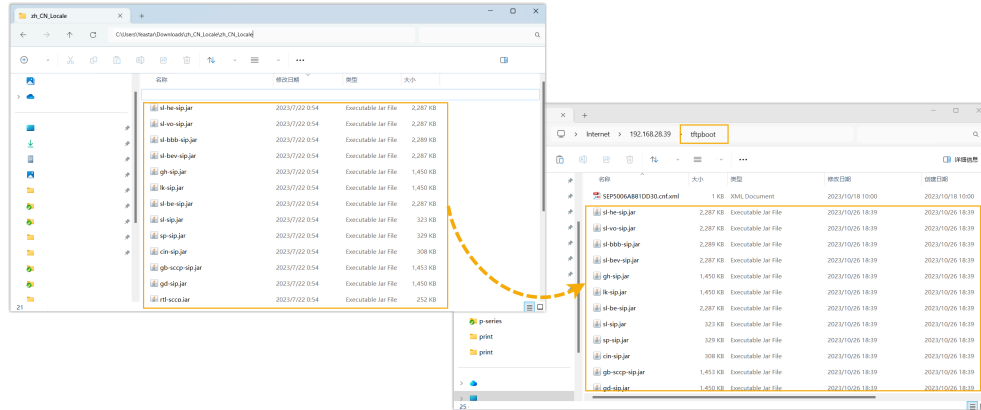


### Note:

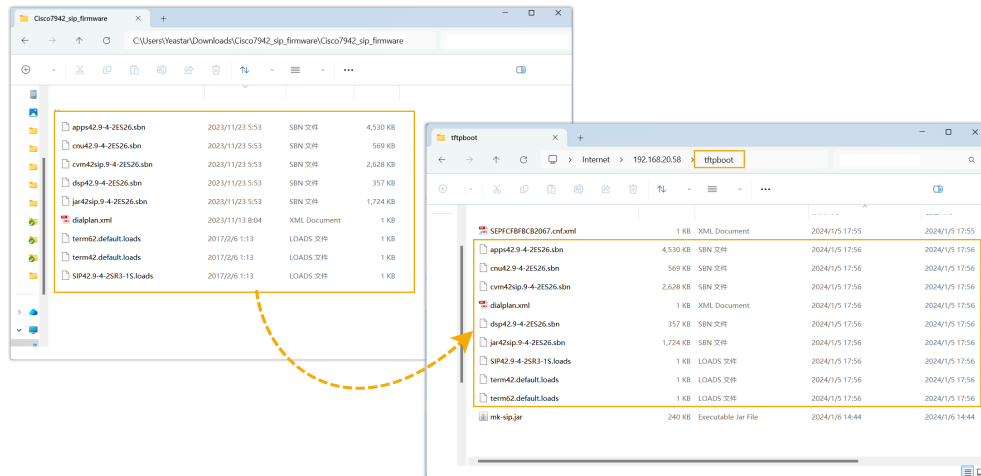




By default, Cisco IP phone displays in **English**. If you want it to display in another language after auto provisioning, you can manually upload your language files to PBX.



- If you want to provision **Cisco 7942**, you will also need to download and extract the [Cisco7942 provisioning package](#), and put the extracted files into the folder `tftpboot` of the PBX.



## Procedure

- [Step 1. Enable the TFTP feature on PBX](#)
- [Step 2. Enable the Remote Registration feature for the extension on PBX](#)
- [Step 3. Add the Cisco IP phone on PBX](#)
- [Step 4. Configure DHCP option 66 on DHCP server](#)
- [Step 5. \(Optional\) Reset the Cisco IP phone](#)

### Step 1. Enable the TFTP feature on PBX

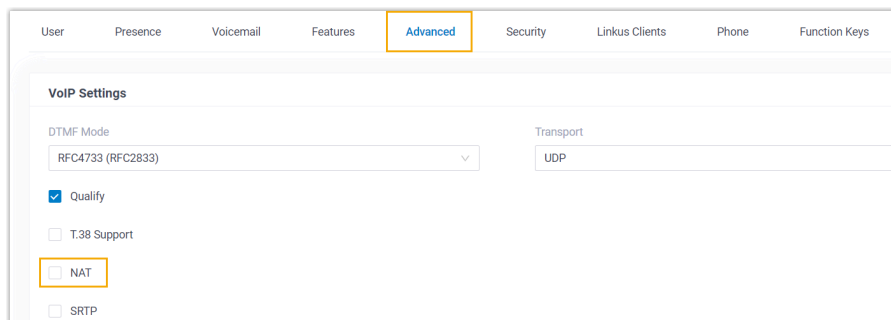
When provisioning a Cisco IP phone, the PBX works as a TFTP server to host the phone's configuration file. You need to enable the TFTP feature on PBX, so that the IP phone can download configurations from the PBX via TFTP.

1. Log in to PBX web portal, go to **System > Storage > File Sharing**.
2. Scroll down to the bottom, turn on the switch of **TFTP**, then click **OK** in the pop-up window.
3. Click **Save**.

## Step 2. Enable the Remote Registration feature for the extension on PBX

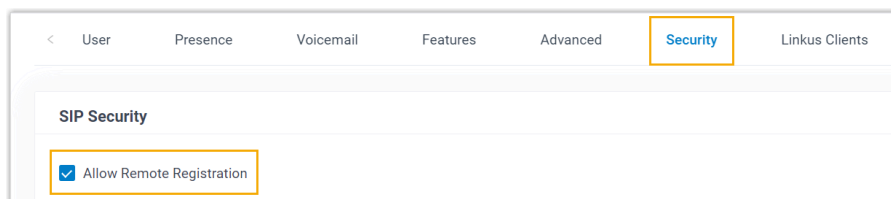
Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. If you want to provision **Cisco 7942**, click the **Advanced** tab, then unselect the checkbox of **NAT** in the **VoIP Settings** section.



The screenshot shows the PBX web portal interface. At the top, there are tabs: User, Presence, Voicemail, Features, **Advanced** (highlighted with a yellow box), Security, Linkus Clients, Phone, and Function Keys. Below the tabs, the 'VoIP Settings' section is displayed. It includes a 'DTMF Mode' dropdown set to 'RFC4733 (RFC2833)', a 'Transport' dropdown set to 'UDP', and several checkboxes: 'Qualify' (checked), 'T.38 Support' (unchecked), **'NAT' (unchecked and highlighted with a yellow box)**, and 'SRTP' (unchecked).

3. Click the **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



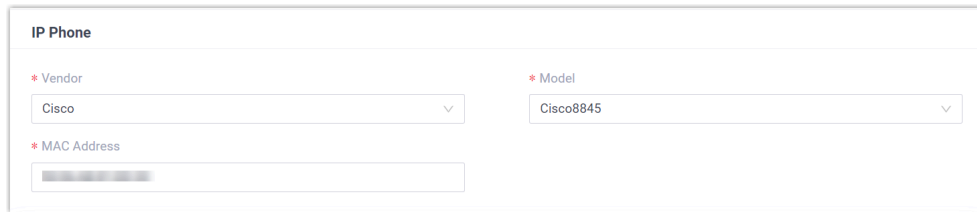
The screenshot shows the PBX web portal interface with the 'Security' tab selected (highlighted with a yellow box). Below the tabs, the 'SIP Security' section is displayed. It contains a single checkbox labeled **'Allow Remote Registration' (checked and highlighted with a yellow box)**.

4. Click **Save** and **Apply**.

## Step 3. Add the Cisco IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.



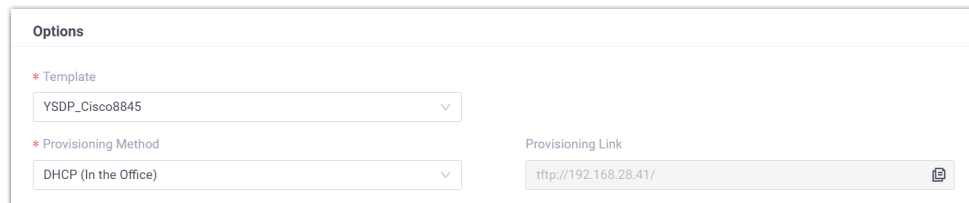
**IP Phone**

\* Vendor: Cisco

\* Model: Cisco8845

\* MAC Address: [Greyed out]

- **Vendor:** Select **Cisco**.
  - **Model:** Select the phone model.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.



**Options**

\* Template: YSDP\_Cisco8845

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: tftp://192.168.28.41/

- **Template:** Select a desired template from the drop-down list.



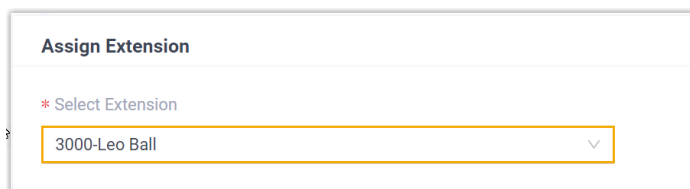
**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Assign Extension**

\* Select Extension: 3000-Leo Ball

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

#### Step 4. Configure DHCP option 66 on DHCP server

Configure the DHCP option 66 on the DHCP server to deliver the PBX's IP address.

The configuration examples are shown below:

Figure 7. Configure option 66 on the Tftpd64's DHCP server

**Tftpd64: Settings**

GLOBAL | TFTP | **DHCP** | SYSLOG | DNS

**DHCP Pool definition**

IP pool start address: 192.168.28.204  
 Size of pool: 4  
 Lease (minutes): 2880  
 Boot File:

**DHCP Options**

Def. router (Opt 3): 192.168.28.1  
 Mask (Opt 1): 255.255.255.0  
 DNS Servers (Opt 6): 192.168.28.1  
 WINS server (Opt 44): 192.168.28.1  
 NTP server (Opt 42):  
 SIP server (Opt 120):  
 Domain Name (15):  
 Additional Option: 66 192.168.28.41

**DHCP Settings**

☒ Ping address before assignation  
☒ Persistent leases  
☐ Double answer if relay detected  
☒ Bind DHCP to this address: 192.168.28.25

OK Default Help Cancel

Figure 8. Configure option 66 on a Router's DHCP server

**Interfaces » LAN**

General Settings | Advanced Settings | Firewall Settings | **DHCP Server**

General Setup | **Advanced Settings** | IPv6 Settings | IPv6 RA Settings

Dynamic DHCP: ☒  
 ⓘ Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force: ☐  
 ⓘ Force DHCP on this network even if another server is detected.

IPv4-Netmask: 255.255.255.0  
 ⓘ Override the netmask sent to clients. Normally it is calculated from the subnet that is served.


DHCP-Options: 6,223.5.5.5  
 66,192.168.28.41

ⓘ Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save









## Step 5. (Optional) Reset the Cisco IP phone

If the IP phone is to be deployed for a new user, you need to reset the phone to its default settings to ensure that the configurations from the previous user are removed from the phone.

1. On the IP phone, press the  button.
2. On the IP phone screen, go to **Admin settings > Reset settings > All settings**.
3. Select **Reset** when the phone prompts for confirmation.

## Result

- After boot-up, the IP phone gets an IP address from the DHCP server, downloads configurations from the PBX via TFTP protocol, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor 	Model 	IP Address 	Phone Password	Operations
<input type="checkbox"/>		3000	Leo Ball	Cisco	Cisco8845	-	-	   

# Snom

## Auto Provision Snom IP Phone with Yeastar P-Series PBX System

This topic takes Snom D865 (firmware: 10.1.137.15) as an example to introduce how to provision a Snom IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Snom IP phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
D120	10.1.54.13 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D140	10.1.148.1 or later	37.12.0.33 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D150	10.1.148.1 or later	37.12.0.33 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D315	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D335	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D385	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D713	10.1.73.16 or later	37.6.0.46 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
D717	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
D735	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
D785	10.1.73.16 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
D862	10.1.137.15 or later	37.9.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
D865	10.1.137.15 or later	37.9.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
M100 KLE	1.0.5.7 or later	37.14.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
M500	1.12.2 or later	37.14.0.24 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
M300	BSV530B2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
M400	BSV610B5 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
M900	BSV530B7 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

## Scenarios

The provisioning process can be different depending on the network environment of **Snom IP phone** and **Yeastar PBX**, as the following table shows:

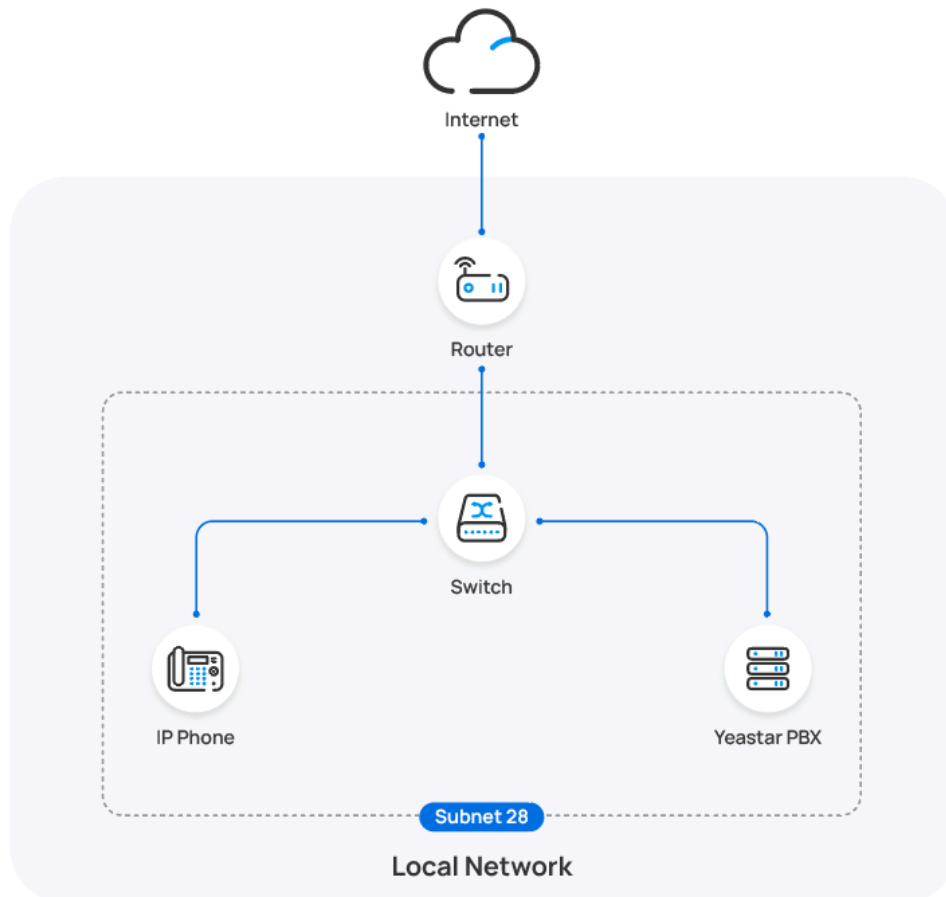
Scenario	Description
IP phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can directly provision the Snom IP phone via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Snom IP phone in the same subnet (PnP)</a>.</p>



Scenario	Description
IP phone and PBX are in DIFFERENT subnets (LAN)	In this scenario, you can provision the Snom IP phone using a third-party DHCP server via <a href="#">DHCP method</a> . For more information, see <a href="#">Auto provision a Snom IP phone in different subnets (DHCP)</a> .
IP phone and PBX are in DIFFERENT network	In this scenario, you can provision the Snom IP phone remotely via <a href="#">RPS method</a> . For more information, see <a href="#">Auto provision a Snom IP phone in remote network (RPS)</a> .

## Auto provision a Snom IP phone in the same subnet (PnP)

In this example, the Snom IP phone (IP: 192.168.28.205) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.




## Prerequisites





- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Snom IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>	🔌	Unassigned	Unassigned	Snom	snomD865	192.168.28.205	-	   

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



### Note:

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

### Assign Extension

\* Select Extension

3000-Leo Ball



### Note:

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).



- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.

## Result



### Note:

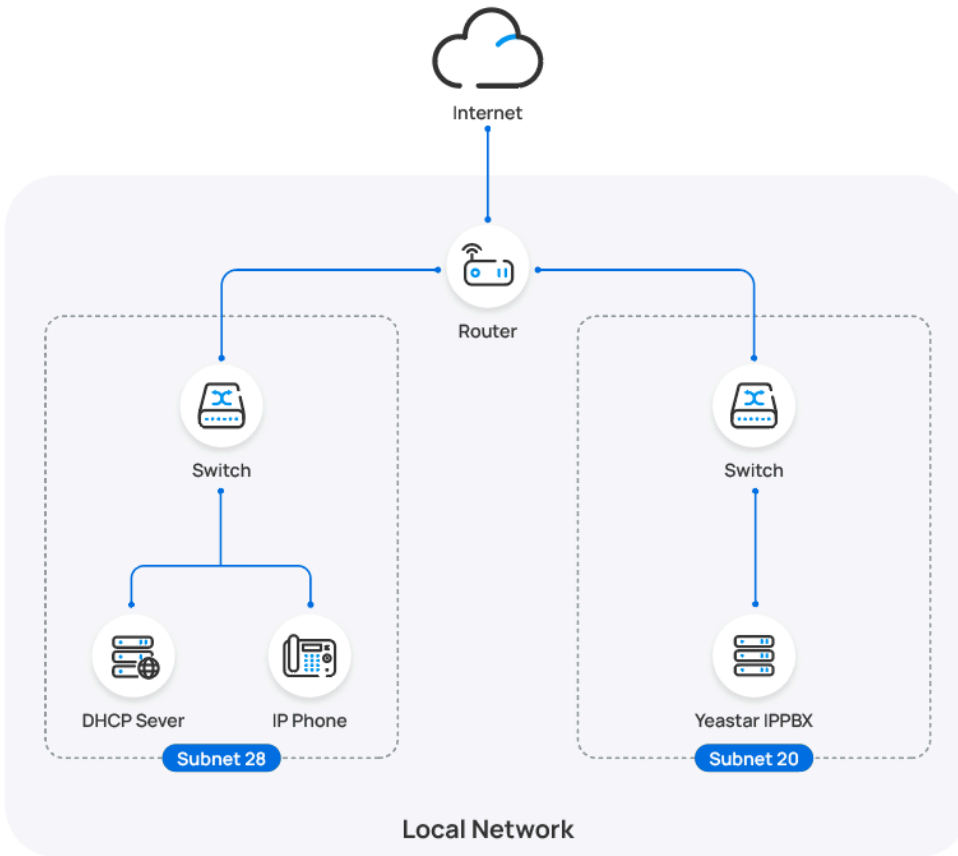
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone, you can check the registration status on **Auto Provisioning > Phone**.

<input type="checkbox"/>	Status	Extension	Name	Vendor ↕	Model ↕	IP Address ↕	Phone Passw	Operations	▼
<input type="checkbox"/>		3000	Leo Ball	Snom	snomD865	192.168.28.205	*****@		

## Auto provision a Snom IP phone in different subnets (DHCP)

In this example, the Snom IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

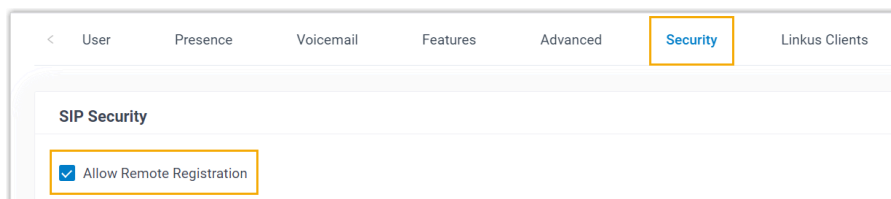
- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Snom IP phone on PBX](#)

- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Snom IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

 A screenshot of the 'IP Phone' configuration form. It contains three fields: 'Vendor' (a dropdown menu with 'Snom' selected), 'Model' (a dropdown menu with 'snomD865' selected), and 'MAC Address' (a text input field with a blurred value). Each field is preceded by a red asterisk indicating it is a required field.

- **Vendor:** Select **Snom**.
  - **Model:** Select the phone model. In this example, select **snomD865**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

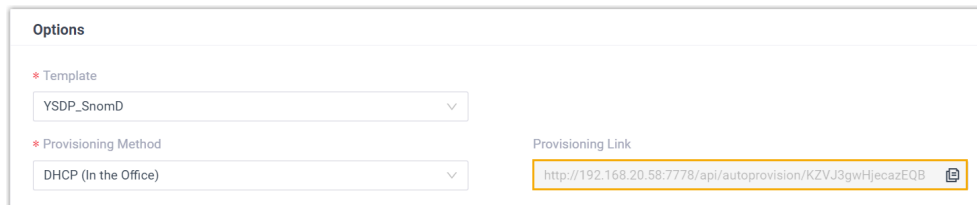
- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.



The screenshot shows a web interface titled 'Options'. It contains two dropdown menus: 'Template' with the value 'YSDP\_SnomD' and 'Provisioning Method' with the value 'DHCP (In the Office)'. To the right of these is a 'Provisioning Link' field containing the URL 'http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB' and a copy icon.

2. On the DHCP server, set up option 66 by entering the [provisioning link](#) followed by the configuration file name of the phone (*mac.xml*), as the following example shows:

```
http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB/00abxxxxxxc2.xml
```



#### Note:

- The letters in the MAC address must be in lowercase.
- If you need to provision multiple Snom IP phones, you can directly use a placeholder `{mac}` in the configuration file name. For example:

```
http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB/{mac}.xml
```

In this example, the configuration on a router's DHCP server for provisioning a single Snom IP phone is shown below.

**Interfaces » LAN**

General Settings Advanced Settings Firewall Settings **DHCP Server**

General Setup **Advanced Settings** IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒   
 ? Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐   
 ? Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0   
 ? Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5   
 66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB/00abxxxxxc2.xml   
 ? Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

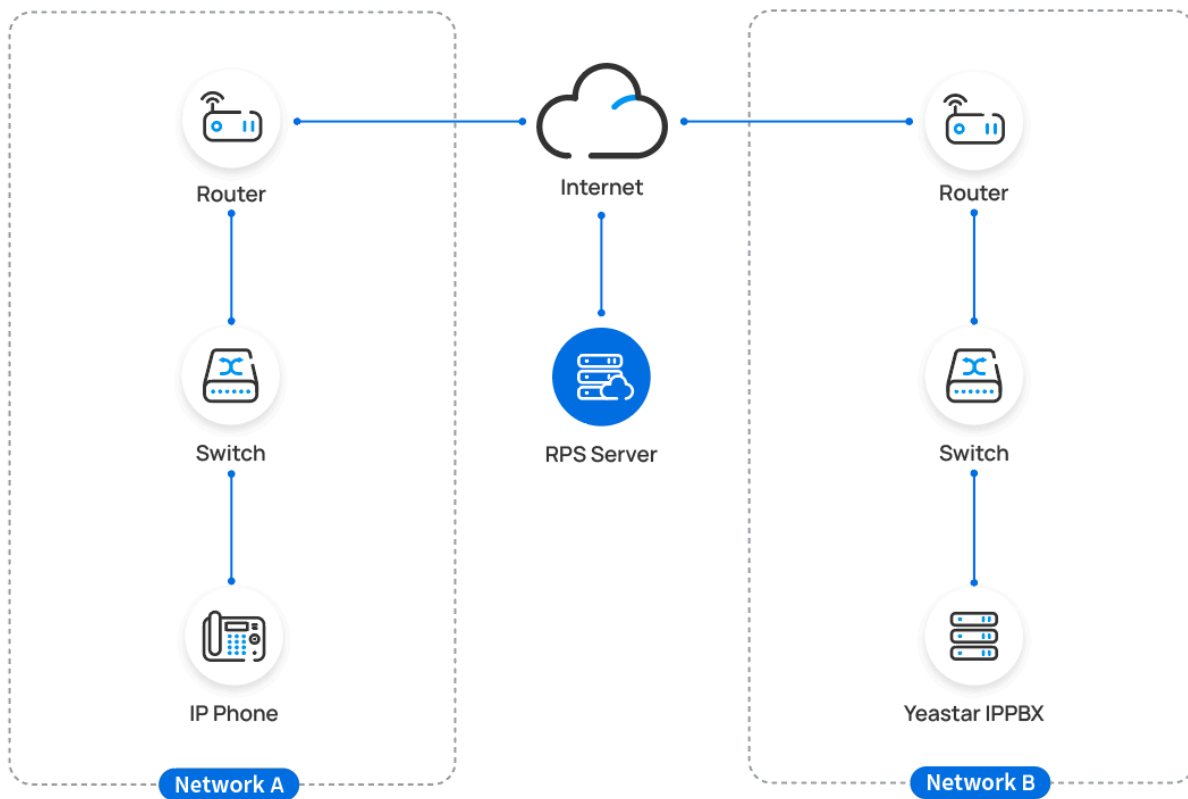
- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Snom	snomD865	-	-	

## Auto provision a Snom IP phone in remote network (RPS)

In this example, the Snom IP phone and the Yeastar PBX are deployed in different network.




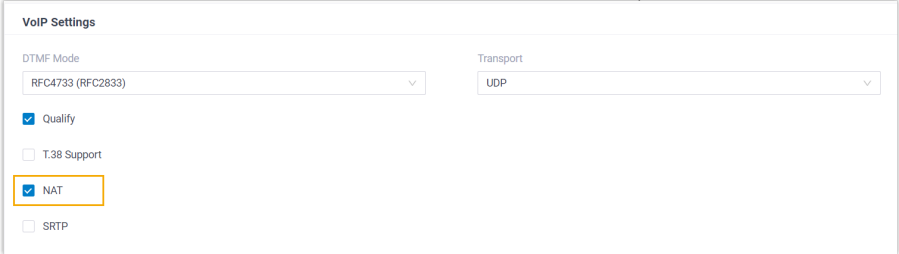

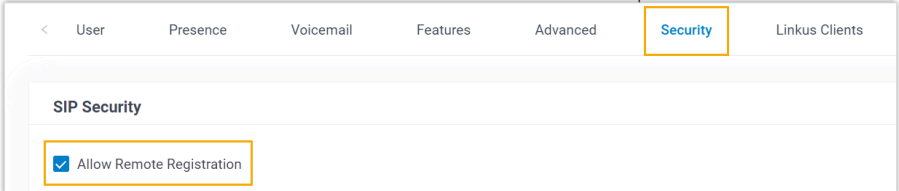


## Prerequisites

Yeastar P-Series PBX System supports to auto provision a Snom phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• Grant remote access permission for extension to be registered and the remote IP phones: <ul style="list-style-type: none"> <li>◦ <a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>

Method	Setting
	<div><div><div><div>Access Type</div><div>Allowed Account</div></div><div><div>14 items</div><div>Available</div><div><div>Search here</div><div><div><div><div><input type="checkbox"/></div><div>Extension Number</div></div><div><div>2000</div><div>2000</div></div><div><div><input type="checkbox"/></div><div>2001</div></div><div><div>Phillip Huff</div></div><div><div><input type="checkbox"/></div><div>2002</div></div><div><div>Terrell Smith</div></div><div><div><input type="checkbox"/></div><div>2003</div></div><div><div>Dave Harris</div></div></div></div><div><div>&gt;</div><div>&lt;</div></div></div><div><div>1 item</div><div>Selected</div><div><div>Search here</div><div><div><div><div><input type="checkbox"/></div><div>3000</div></div><div><div>Leo Ball</div></div></div></div></div></div><div><div>⬆</div><div>⬆</div><div>⬆</div><div>⬆</div></div></div></div><div><div>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</div><div><div><div><div><input checked="" type="checkbox"/> Enable IP Restriction</div><div><div><div><div>* Permitted IP</div><div>Public IP of the network where the phone is deployed</div></div><div><div>* Subnet Mask</div><div>Subnet mask</div></div><div><div>Operations</div><div><div>🗑</div></div></div></div><div><div>+ Add</div></div></div></div></div><div><div>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</div><div>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</div><div>• RESET the IP phone if it is previously used.</div><div>• Gather information of IP phone, including Vendor, Model, and MAC address.</div></div></div></div></div>
Using Public IP address / External Host domain name	<div><div>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</div><div><div><div>!</div><div><div>Important:</div><div>The following PBX ports MUST be forwarded for RPS provisioning.</div><div><div>◦ RTP ports</div><div>◦ SIP port</div><div>◦ Web Server port</div></div></div></div></div><div><div>• Set up the extension for remote registration.</div></div></div>

Method	Setting
	<ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul>  <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>

## Procedure

- [Step 1. Add the Snom IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Snom IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.

3. In the **IP Phone** section, enter the following phone information.

- **Vendor:** Select **Snom**.
- **Model:** Select the phone model. In this example, select **snomD865**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Option** section, configure the following settings.

Figure 9. **RPS using Yeastar FQDN**

Figure 10. **RPS using Public IP Address / External Host domain name**

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.



**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

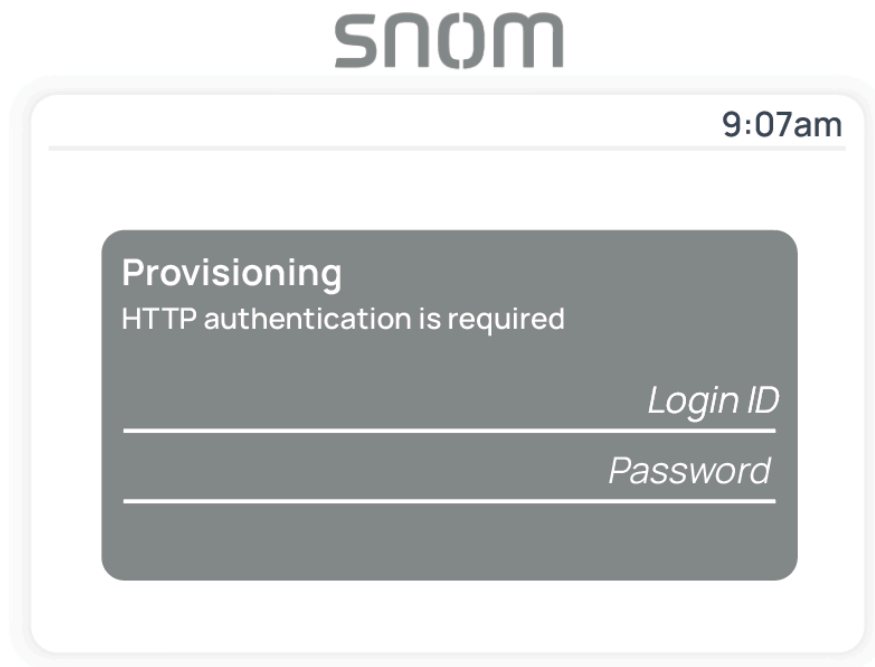
- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

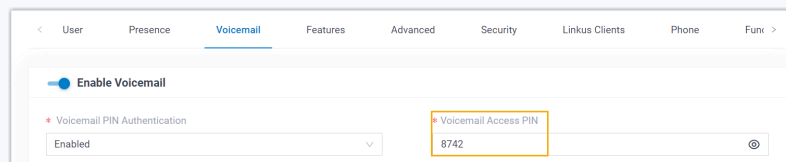
1. Reboot the IP phone.
2. If you have enabled **Authentication for the First-time Auto Provisioning** on the PBX, enter the authentication credential on the IP phone.







- **Login ID:** Enter the extension number that is assigned to the phone.
- **Password:** Enter the extension's Voicemail Access PIN.

**Tip:**

You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.

**Result**

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Snom	snomD865	-	*****@	  

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Snom IP Phone with Yeastar P-Series PBX System


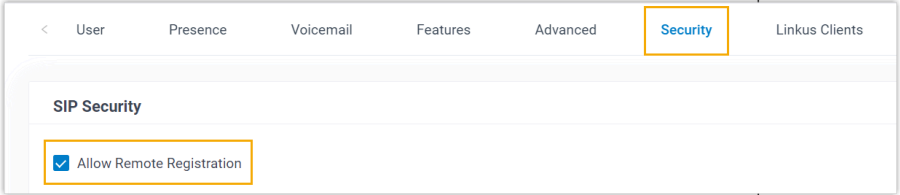
This topic takes Snom D865 (firmware: 10.1.137.15) as an example to introduce how to manually register an extension on a Snom IP phone.







## Supported devices

The Snom IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings according to the network environment of **Snom IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> </ul>

Network Environment		Setting		
		<ul style="list-style-type: none"><li>• <a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li></ul> <div><div>Access Type</div><div>Allowed Account</div><div><div>14 items</div><div>Available</div><div>Search here</div><div><div><div></div><div>Extension Number</div><div>Caller ID Name</div></div><div><div></div><div>2000</div><div>2000</div></div><div><div></div><div>2001</div><div>Phillip Huff</div></div><div><div></div><div>2002</div><div>Terrell Smith</div></div><div><div></div><div>2003</div><div>Dave Haris</div></div></div><div><div></div><div></div><div></div></div><div><div>1 item</div><div>Selected</div><div>Search here</div><div><div><div></div><div>Extension Number</div><div>Caller ID Name</div></div><div><div></div><div>3000</div><div>Leo Ball</div></div></div><div><div></div><div></div><div></div></div></div></div></div> <tr><td>Register extension using Public IP address / External Host domain name</td><td><ul style="list-style-type: none"><li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li><li>• Set up the extension for remote registration.<ul style="list-style-type: none"><li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li><li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li></ul></li></ul><div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833)</div><div>Transport</div><div>UDP</div></div><div><div><div><input checked="" type="checkbox"/> Qualify</div><div><input type="checkbox"/> T.38 Support</div><div><input checked="" type="checkbox"/> NAT</div><div><input type="checkbox"/> SRTP</div></div></div></div><div><div><div>User</div><div>Presence</div><div>Voicemail</div><div>Features</div><div>Advanced</div><div>Security</div><div>Linkus</div></div><div><div>SIP Security</div><div><div><input checked="" type="checkbox"/> Allow Remote Registration</div></div></div></div></td></tr>	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"><li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li><li>• Set up the extension for remote registration.<ul style="list-style-type: none"><li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li><li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li></ul></li></ul> <div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833)</div><div>Transport</div><div>UDP</div></div><div><div><div><input checked="" type="checkbox"/> Qualify</div><div><input type="checkbox"/> T.38 Support</div><div><input checked="" type="checkbox"/> NAT</div><div><input type="checkbox"/> SRTP</div></div></div></div> <div><div><div>User</div><div>Presence</div><div>Voicemail</div><div>Features</div><div>Advanced</div><div>Security</div><div>Linkus</div></div><div><div>SIP Security</div><div><div><input checked="" type="checkbox"/> Allow Remote Registration</div></div></div></div>
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"><li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li><li>• Set up the extension for remote registration.<ul style="list-style-type: none"><li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li><li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li></ul></li></ul> <div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833)</div><div>Transport</div><div>UDP</div></div><div><div><div><input checked="" type="checkbox"/> Qualify</div><div><input type="checkbox"/> T.38 Support</div><div><input checked="" type="checkbox"/> NAT</div><div><input type="checkbox"/> SRTP</div></div></div></div> <div><div><div>User</div><div>Presence</div><div>Voicemail</div><div>Features</div><div>Advanced</div><div>Security</div><div>Linkus</div></div><div><div>SIP Security</div><div><div><input checked="" type="checkbox"/> Allow Remote Registration</div></div></div></div>		

Procedure


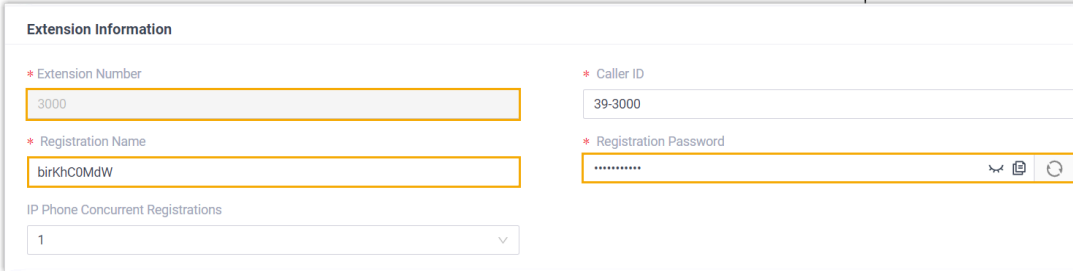

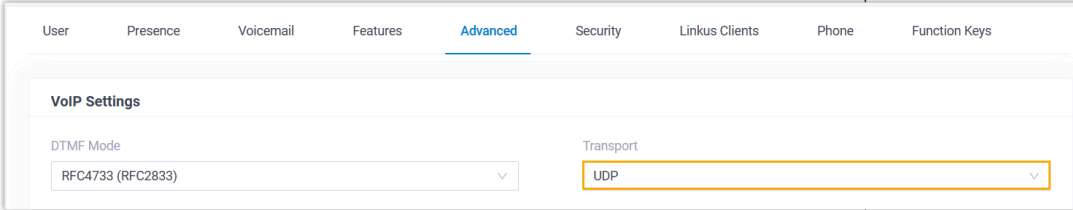

- [Step 1. Gather registration information on Yeastar PBX](#)




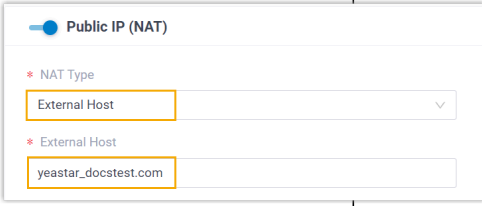
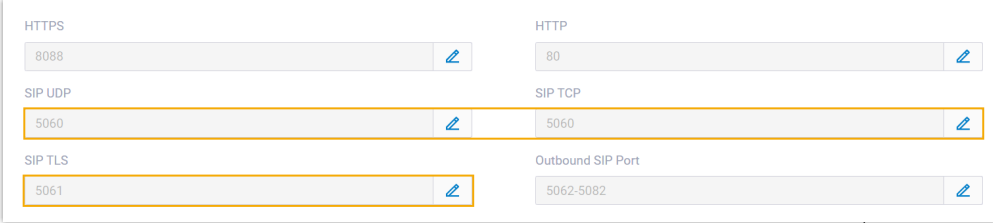
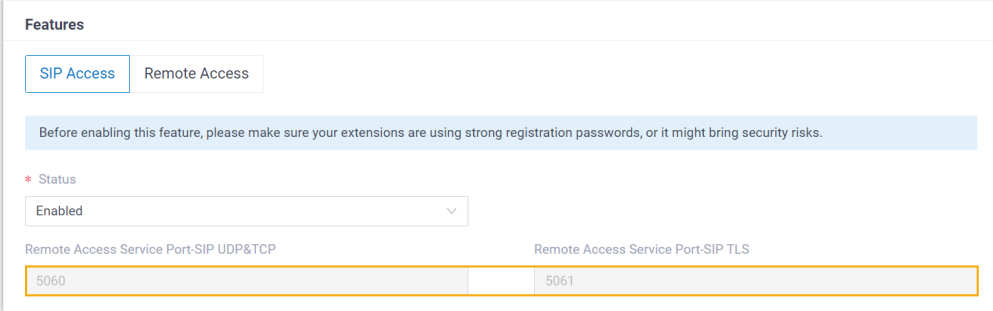
- [Step 2. Register extension on Snom IP phone](#)

## Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul>
	
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>
	 <div>  <b>Note:</b> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div>

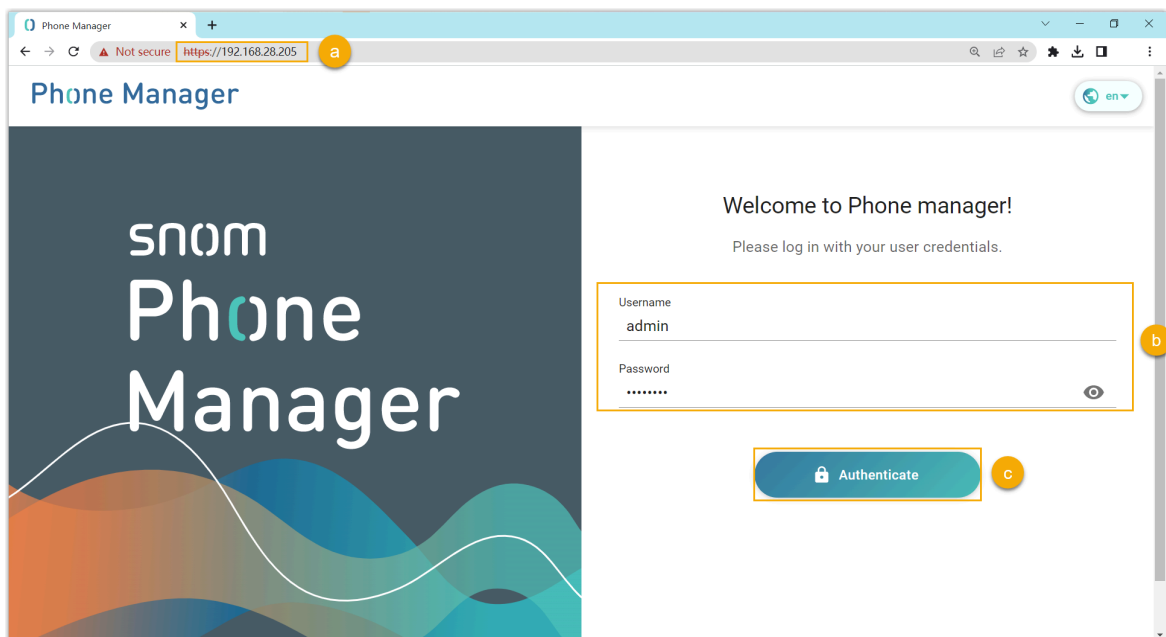
Information	Instruction
	<div data-bbox="560 268 609 321"></div> <div data-bbox="703 268 1596 478"> <p><b>Basic</b></p> <p>* SIP UDP Port 5060</p> <p>* SIP TCP Port <input checked="" type="checkbox"/> 5060</p> <p>* RTP Port Range 18256 : 18356</p> <p>* Outbound SIP Port Range <input type="checkbox"/> 5062 : 5082</p> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="703 625 1198 766"> <p><input checked="" type="checkbox"/> <b>TLS</b></p> <p>* SIP TLS Port 5061</p> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 1024 609 1077"></div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="540 1333 1531 1465"> <p>Status ● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN) yeastardocs.ras.yeastar.com</p> <p>* Expiration Date 11/26/2023</p> <p><small>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</small></p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p>

Information	Instruction
	<div data-bbox="540 260 1019 464">  </div> <div data-bbox="1049 260 1528 464">  </div>
SIP registration port	<p data-bbox="540 495 1097 527"><b>Scenario: Register extension in local network</b></p> <p data-bbox="540 548 1312 615">Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 642 1528 863">  </div> <p data-bbox="540 890 1084 921">In this example, we use the SIP UDP port 5060.</p> <p data-bbox="540 957 1268 989"><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p data-bbox="540 1010 1357 1115">Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1142 1528 1451">  </div> <p data-bbox="540 1499 1325 1566"><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p data-bbox="540 1587 1369 1692">Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>

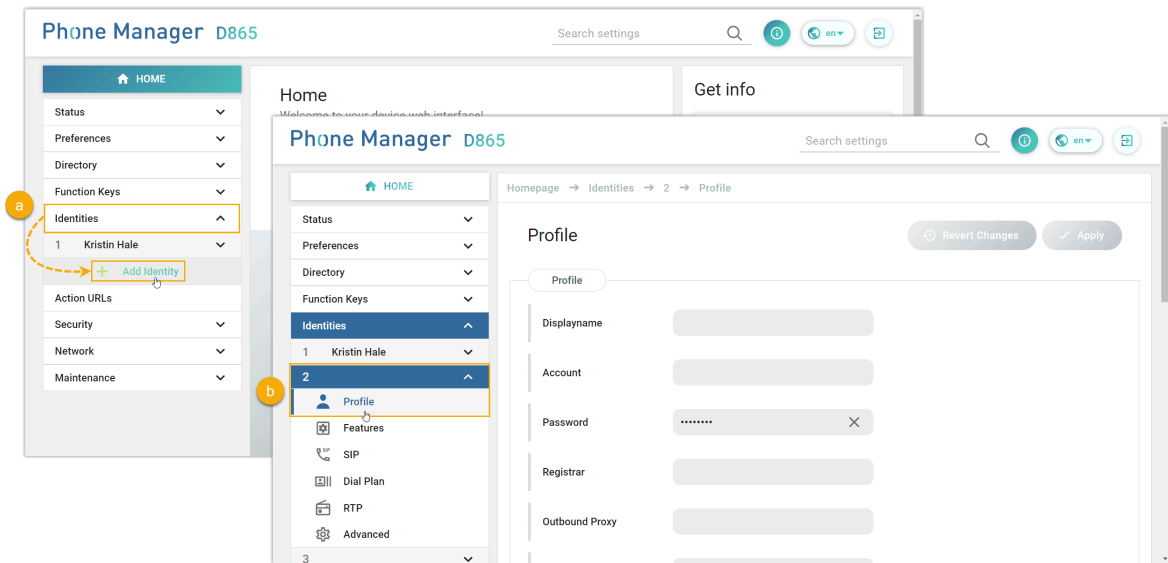
Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> </div> <div> <div>External SIP TCP Port</div> <div>18205</div> </div> <div> <div>External SIP TLS Port</div> <div>18208</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Snom IP phone

1. Log in to the web interface of the Snom IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
  - b. Enter the username `admin` and the associated password.
  - c. Click **Authenticate**.
2. Add an identity for the extension.



- a. On the left navigation bar, go to **Identities**, and click **Add Identity**.
- b. Select an available identity, and go to the **Profile** page.
3. Complete the registration configurations.

Homepage → Identities → 2 → Profile

## Profile

Profile

Displayname	Leo Ball
Account	3000
Password	..... X
Registrar	192.168.28.39:5060
Outbound Proxy	192.168.28.39:5060;transport=udp
Failover Identity	None
Hidden Identity	Off <input checked="" type="checkbox"/> On
Authentication Username	birKhC0MdW

- **Displayname:** Enter the name associated with the account, which will be displayed on the phone screen.
- **Account:** Enter the extension number.
- **Password:** Enter the registration password of the extension.
- **Registrar:** Enter the IP address / domain name of the PBX along with the SIP registration port.
- **Outbound Proxy:** Enter the IP address / domain name of the PBX, along with the SIP registration port and the transport protocol of the extension.



### Note:

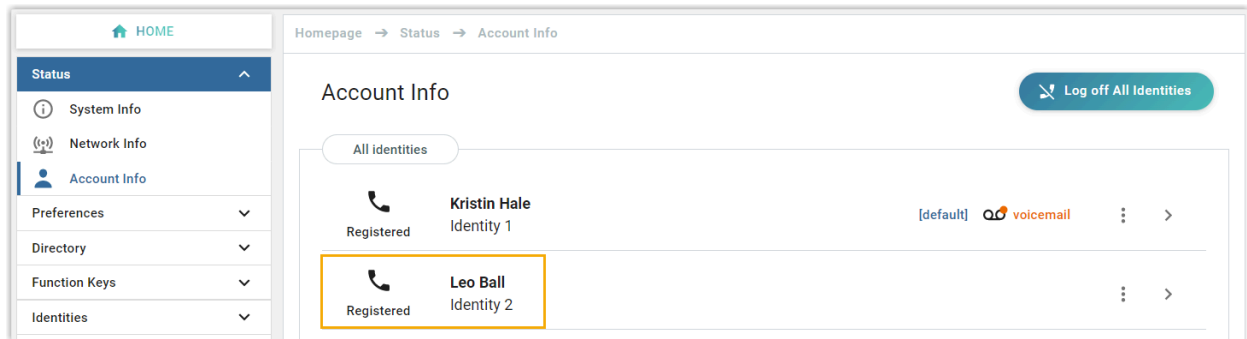
The format should be *PBX IP address / domain name:sip registration port;transport=udp/tcp/tls*.

- **Authentication Username:** Enter the registration name of the extension.

4. At the top-right corner of the **Profile** page, click **Apply**.

## Result

The extension is registered successfully. You can check the registration status on **Status > Account Info** on the phone's web interface.



# Gigaset

## Auto Provision Gigaset DECT System with Yeastar P-Series PBX System

A DECT system consists of two parts, DECT base station and DECT handsets (namely DECT phones). This topic describes how to provision the Gigaset DECT base station with Yeastar P-Series PBX System, so that the Gigaset DECT handsets can be connected to the PBX via the base station, allowing users to utilize the handsets as PBX extensions to make and receive calls.

### Requirements

The firmwares of **Gigaset DECT base station** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
N870 IP PRO	2.38.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
N870 VI PRO	2.38.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
N670 IP PRO	2.38.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
N610 IP PRO	2.52.0 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
Maxwell Basic PRO	3.18.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
Maxwell 2 PRO	3.18.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
Maxwell 3 PRO	3.18.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
Maxwell 4 PRO	3.18.1 or later	37.3.0.42 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

The device model and firmware version of the Gigaset DECT system used in this example are shown in the table below.

Device Model	Firmware Version
<b>Gigaset DECT base station</b>	
N870 IP PRO	v2.38.1
<b>Gigaset DECT handset</b>	
S650H PRO	v114.074.04
SL750H PRO	v116.074.04

## Scenarios

The provisioning method and operations vary depending on the network environment of **Gigaset DECT system** and **Yeastar PBX**, as the following table shows.

Scenario	Description
DECT system and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Gigaset DECT system with Yeastar PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision Gigaset DECT system in the same subnet (PnP)</a>.</p>
DECT system and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Gigaset DECT system with Yeastar PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision Gigaset DECT system in different subnets (DHCP)</a>.</p>
DECT system and PBX are in DIFFERENT networks	<p>In this scenario, you can provision the Gigaset DECT system with Yeastar PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision Gigaset DECT system in remote network (RPS)</a>.</p>

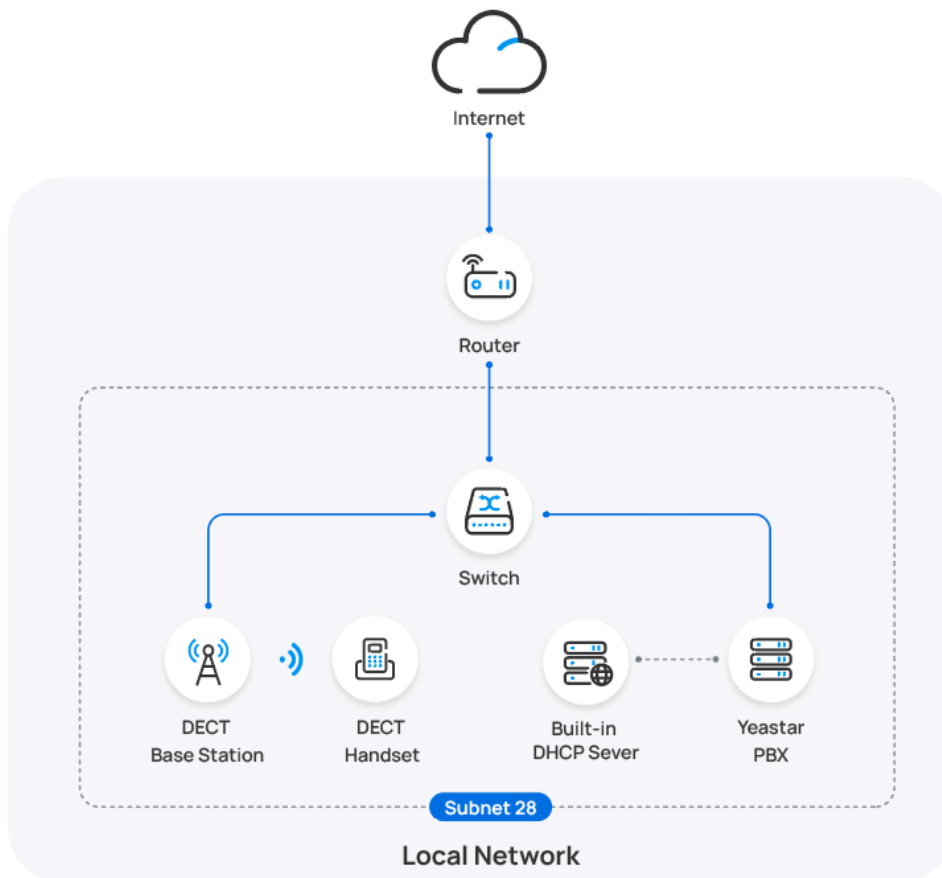
## Auto provision Gigaset DECT system in the same subnet (PnP)

In this example, the Gigaset DECT system (base station and handset) and the Yeastar PBX (IP: 192.168.28.39) are deployed in subnet 28.



### Note:

This example uses the PBX's built-in DHCP server to assign an IP address to the DECT base station. If there is already a third-party DHCP server running in the subnet, you can use the existing DHCP server for the IP address assignment.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet, or the DECT base station would fail to obtain an IP address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).

## Procedure

- [Step 1. Set the PBX as a DHCP Server](#)
- [Step 2. Enable dynamic IP setting for Gigaset DECT base station](#)
- [Step 3. Configure Gigaset DECT base station on PBX](#)
- [Step 4. Register the Gigaset DECT handsets to DECT base station](#)

### Step 1. Set the PBX as a DHCP Server

Configure the built-in DHCP server in the PBX, so that the PBX can act as a DHCP server to assign an IP address to the DECT base station.

1. Log in to PBX web portal, go to **System > Network**, click **DHCP Server** tab.
2. Turn on the **DHCP Server**, and complete the following network configurations.

The screenshot shows the 'DHCP Server' configuration page in the PBX web portal. The 'DHCP Server' toggle is turned on. The status is 'Stopped'. The configuration fields are as follows:

Field	Value
Gateway	192.168.28.1
Subnet Mask	255.255.255.0
Preferred DNS Server	223.5.5.5
Alternative DNS Server	114.114.114.114
DHCP Address Range	192.168.28.204 - 192.168.28.206
NTP Server	192.168.28.39

- **Gateway:** Specify the IP address of the default gateway for the DHCP server.
- **Subnet Mask:** Specify the subnet mask used to subdivide your IP address.
- **Preferred DNS Server:** Specify a DNS server for the DHCP server.
- **Alternative DNS Server:** Optional. Specify a secondary DNS server for the DHCP server.
- **DHCP Address Range:** Specify the IP address range that will be allocated to DHCP clients.
- **NTP Server:** Enter the IP address of an NTP server.



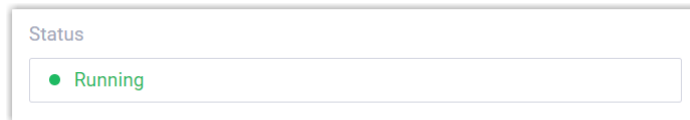
**Note:**



The default value is the IP address of the PBX, which can synchronize the network time of the client devices with the PBX.

3. Click **Save**.

The **Status** field displays **Running**, indicating the DHCP server is running.



## Step 2. Enable dynamic IP setting for Gigaset DECT base station

On the DECT base station, use the device button to change the device role, so that the base station can obtain an IP address from a DHCP server in the sub-net.

1. Press and hold the device button for at least 10 seconds until both LEDs turn off, then release the button.

The device is now in programming mode.

2. Short press the device button until both LEDs become blue, then release the button.

The device role is switched to **Integrator/DECT Manager** with dynamic IP setting enabled.

3. Press and hold the device button until both LEDs turn red, then release the button.


The base station is reset, and it takes several minutes for the device to boot up with the selected device role; After booted up, the device gets an IP address from the DHCP server.



## Step 3. Configure Gigaset DECT base station on PBX

On PBX web portal, configure the provisioning settings for the DECT base station, and assign extensions to the DECT handsets.

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The DECT base station detected by the PBX via PnP is displayed in the phone list.

2. Click  to edit the DECT base station.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>	+	...	...	Gigaset	Gigaset N870 IP PRO	192.168.28.206	-	   

3. In the **Assign Extension** section, assign extensions for the DECT handsets.

- To assign extensions one by one, select the checkbox of corresponding handset, then select the desired extension in the **Extension** drop-down list.



**Assign Extension**

Handset ID Range: 1 - 250

Start Extension: 1000-Kristin Hale

End Extension: 3000-Leo Ball

[Assign Extension](#)

Handset	Extension
<input checked="" type="checkbox"/> Handset 1	  1000-Kristin Hale
<input checked="" type="checkbox"/> Handset 2	3000-Leo Ball

- To assign extensions in bulk, set the extension range in the **Start Extension** and **End Extension** drop-down lists, then click **Assign Extension**.

**Assign Extension**

Handset ID Range: 1 - 250

Start Extension: 1000-Kristin Hale

End Extension: 3000-Leo Ball

[Assign Extension](#)

Handset	Extension
<input type="checkbox"/> Handset 1	
<input type="checkbox"/> Handset 2	

In this example, assign extension 1000 to Handset 1 and extension 3000 to Handset 2.




**Note:**





If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).



- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.


4. **Optional:** Configure other settings according to your needs.
5. Click **Save**.
6. In the phone list, click  beside the Gigaset DECT base station to re-provision the device.












<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>	+	...	...	Gigaset	Gigaset N870 IP PRO	192.168.28.206	-	   

The DECT base station automatically downloads the configurations from the PBX and applies the settings.



#### Tip:

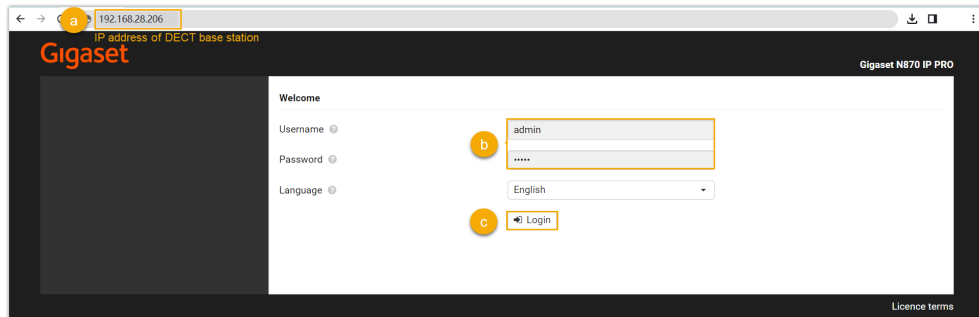
You can click  in front of the DECT base station to see the extensions assigned to the DECT handsets.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations												
<input type="checkbox"/>		...	...	Gigaset	Gigaset N870 IP PRO	192.168.28.206	-	   												
<table><tr><th>Status</th><th>Handset</th><th>Extension</th><th>Name</th></tr><tr><td></td><td>Handset 1</td><td>1000</td><td>Kristin Hale</td></tr><tr><td></td><td>Handset 2</td><td>3000</td><td>Leo Ball</td></tr></table>									Status	Handset	Extension	Name		Handset 1	1000	Kristin Hale		Handset 2	3000	Leo Ball
Status	Handset	Extension	Name																	
	Handset 1	1000	Kristin Hale																	
	Handset 2	3000	Leo Ball																	

## Step 4. Register the Gigaset DECT handsets to DECT base station

Enable the registration mode of DECT base station and confirm the registration on DECT handsets, so that the Gigaset DECT handsets can be registered to the DECT base station.

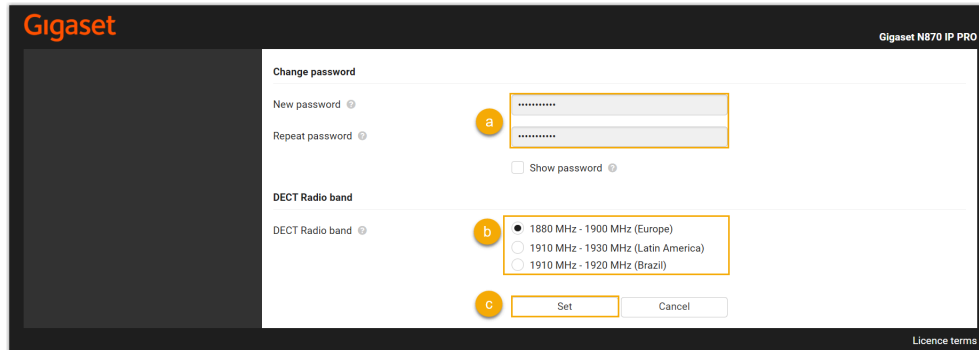
1. Log in to the web interface of DECT base station.




- a. In the browser's address bar, enter the IP address of the base station.
  - b. Enter the username `admin` and the default password `admin`.
  - c. Click **Login**.
2. Change the default password, select a radio frequency band, then click **Set**.

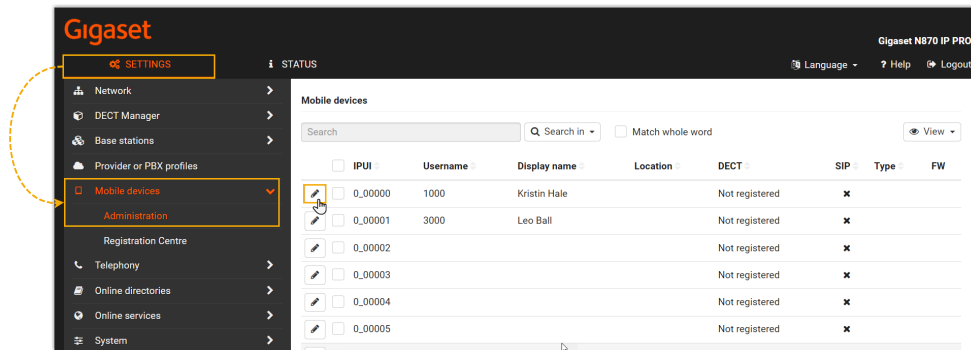
**Note:**

For the DECT radio band, select the radio frequency band used in your region.



You are redirected to the web interface of the DECT base station.

3. Under the **SETTINGS** tab, go to **Mobile devices > Administration**, click  to edit a handset with an extension assigned.



a. In the **RegStatus** drop-down list, select **To register**.

**Mobile device**

IPUI ? 0\_00002

RegStatus ? **To register**

Authentication Code (PIN) ? 0000

[Generate random PIN](#)

b. In the **Authentication Code (PIN)** field, set and note down a PIN code, which will be used on handset later for registration.

In this example, use the default PIN code 0000.

**Mobile device**

IPUI ? 0\_00002

RegStatus ? To register

Authentication Code (PIN) ? **0000**

[Generate random PIN](#)

c. Scroll down to the bottom, click **Register now**.

**Feature key synchronization**

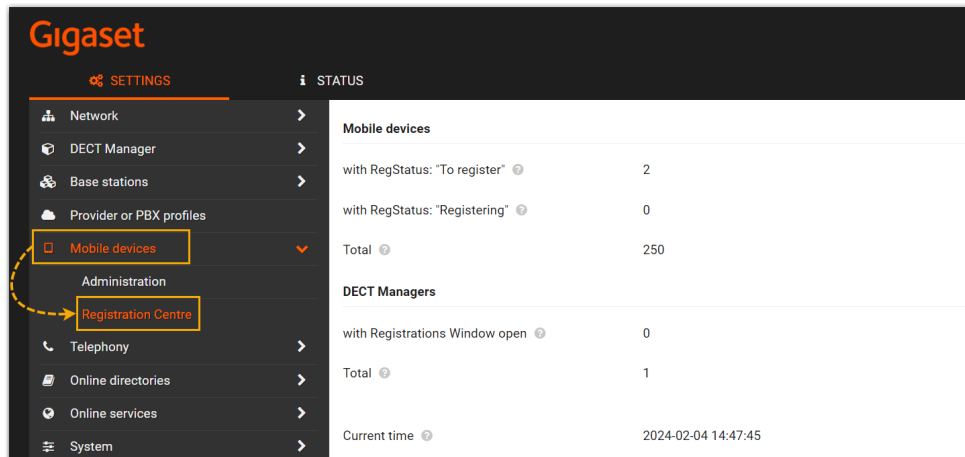
Feature key synchronization ? ☐ Yes ☒ No

**Register now**

[Set](#) [Cancel](#)



4. Repeat [the above steps](#) to edit other handsets with extensions assigned until all the handsets are in **To register** status.
5. Go to **Mobile devices > Registration Centre > DECT Managers**, complete the following settings.



- a. In the **Registration duration** section, set how long the DECT base station should stay in registration mode.

In this example, keep the default value (3 minutes).

The screenshot shows the 'Registration duration' form. It has four input fields for time units: 'd' (days), 'h' (hours), 'min' (minutes), and 's' (seconds). The 'min' field is highlighted with an orange box and contains the value '3'.

- b. In the **Registration start time** section, enable the registration mode of DECT base station.

- To start registration right now, click **Start now**.

The screenshot shows the 'Registration start time' form. It has a text input field for the time, a 'Start now' button, and a 'Close' button. The 'Start now' button is highlighted with an orange box and a hand cursor.

- To schedule a time to start registration, set a time in the time field, then click **Set** at the bottom of the page.


The screenshot shows the 'Registration start time' form. The text input field contains the scheduled time '2024-02-04 13:00'. The 'Start now' and 'Close' buttons are visible at the bottom.

In this example, click **Start now**.

DECT Managers	
with Registrations Window open ?	1
Total ?	1

- The DECT handset starts to search for a base station that is in registration mode. When it finds the base station, there is a prompt asking you to enter a system PIN.
- Enter the [PIN code obtained from the DECT base station](#), and press **OK**.

- The handsets are successfully registered to the DECT base station, and associated with the assigned PBX extensions via the base station.
  - On the web interface of DECT base station, you can check the registration status of the handsets on **SETTINGS > Mobile devices > Administration**.



[SETTINGS](#)

[STATUS](#)

Gigaset N870 IP PRO

[Language](#)
[Help](#)
[Logout](#)

[Network](#)

[DECT Manager](#)

[Base stations](#)

[Provider or PBX profiles](#)

[Mobile devices](#)

[Administration](#)

Mobile devices

☐ Match whole word

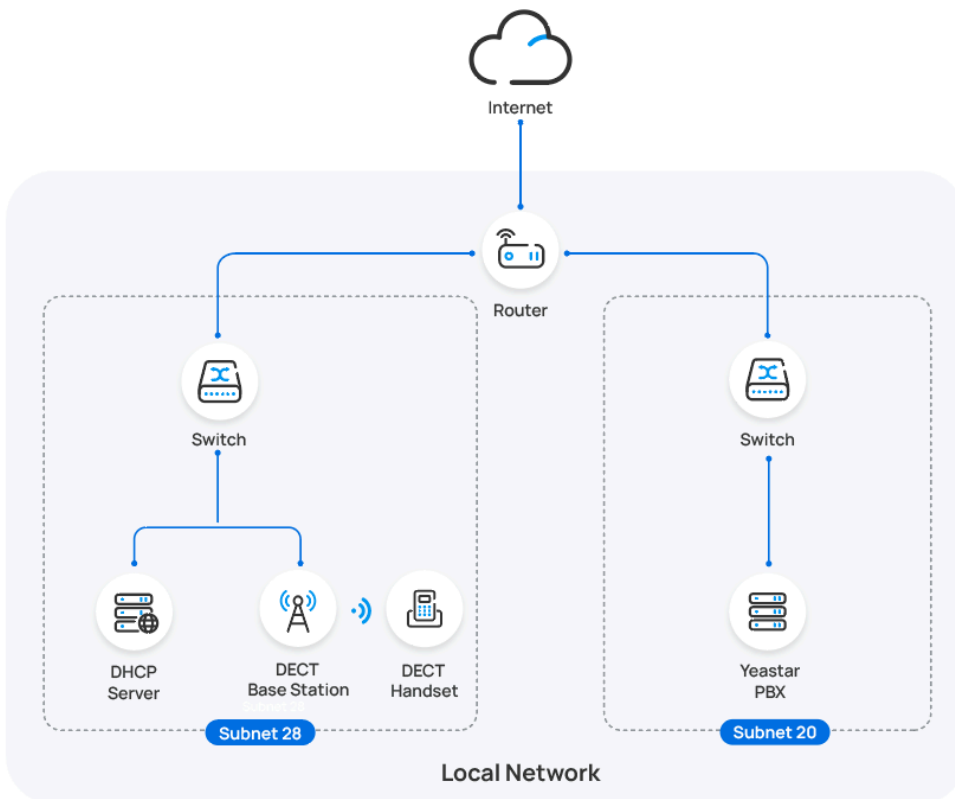
<input type="checkbox"/>	IPUI	Username	Display name	Location	DECT	SIP	Type	FW
	033e3cb235	1000	Kristin Hale	local	Registered	<input checked="" type="checkbox"/>	"SL750H PRO"	74.04
	034718af9f	3000	Leo Ball	local	Registered	<input checked="" type="checkbox"/>	"S650H PRO"	74.04

- | Status                            | Extension | Name | Vendor    | Model                  | IP Address     | Phone Password | Template         | Firmware Version | MAC Address  | Operations   |
|-----------------------------------|-----------|------|-----------|------------------------|----------------|----------------|------------------|------------------|--------------|--|
| <div><div></div><div></div></div> | ...       | ...  | Gigaset   | Gigaset N870<br>IP PRO | 192.168.28.206 | -              | YSDP_GigasetN870 | -                | 58:9e:c6:0f  | <div><div></div><div></div><div></div><div></div></div> IP |
| Status                            |           |      | Handset   |                        |                | Extension      |                  |                  | Name         |  |
| <div></div>                       |           |      | Handset 1 |                        |                | 1000           |                  |                  | Kristin Hale |  |
| <div></div>                       |           |      | Handset 2 |                        |                | 3000           |                  |                  | Leo Ball     |  |

- The registered DECT handsets can be used as extensions to make and receive calls.

## Auto provision Gigaset DECT system in different subnets (DHCP)

In this example, the DECT system (base station and handset) and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the DECT system is deployed, or the base station would fail to obtain an IP address.
- Make sure that the DECT system and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Gather information of the DECT base station, including Vendor, Model, and MAC address.

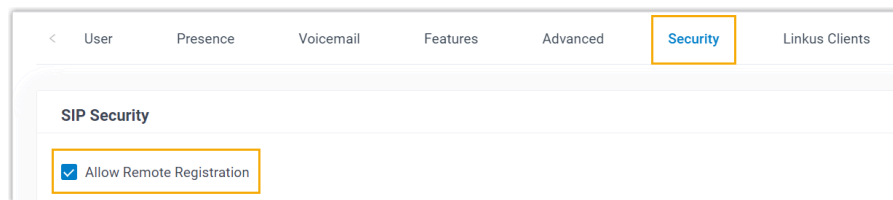
## Procedure

- [Step 1. Enable Remote Registration feature for extensions on PBX](#)
- [Step 2. Add the Gigaset DECT base station on PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)
- [Step 4. Enable dynamic IP setting for Gigaset DECT base station](#)
- [Step 5. Register the Gigaset DECT handsets to DECT base station](#)

### Step 1. Enable Remote Registration feature for extensions on PBX

Enable the Remote Registration feature for the extension to be assigned to DECT handsets, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



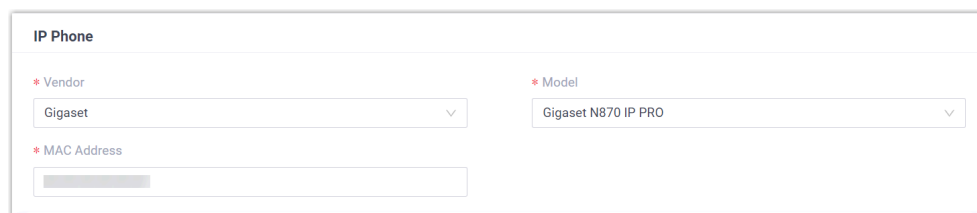
The screenshot shows the 'Security' tab selected in the PBX web portal. Under the 'SIP Security' section, the 'Allow Remote Registration' checkbox is checked and highlighted with an orange box.

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

### Step 2. Add the Gigaset DECT base station on PBX

Add the DECT base station on PBX. The PBX will generate a configuration file based on the device's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following information.



The screenshot shows the 'IP Phone' configuration form. It has three fields: 'Vendor' (dropdown menu with 'Gigaset' selected), 'Model' (dropdown menu with 'Gigaset N870 IP PRO' selected), and 'MAC Address' (text input field with a greyed-out placeholder).

- **Vendor:** Select **Gigaset**.

- **Model:** Select the device model. In this example, select **Gigaset N870 IP PRO**.
- **MAC Address:** Enter the MAC address of the DECT base station.

4. In the **Options** section, configure the following settings.

The screenshot shows the 'Options' configuration panel. It includes a 'Template' dropdown menu with 'YSDP\_GigasetN870' selected, a 'Provisioning Method' dropdown menu with 'DHCP (In the Office)' selected, and a 'Provisioning Link' text field containing the URL 'http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB'.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

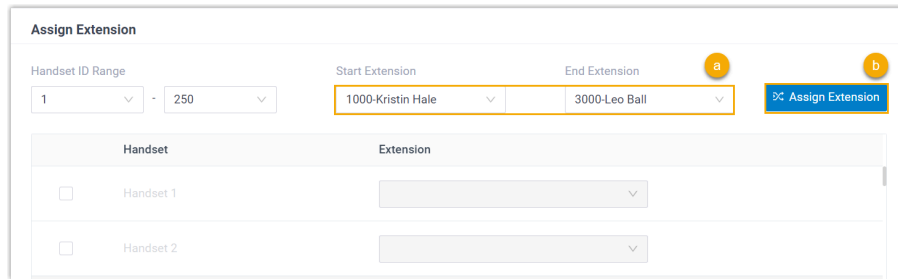
A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign extensions for the DECT handsets.

- To assign extensions one by one, select the checkbox of corresponding handset, then select the desired extension in the **Extension** drop-down list.

The screenshot shows the 'Assign Extension' configuration panel. At the top, there are three dropdown menus: 'Handset ID Range' (set to 1 to 250), 'Start Extension' (set to 1000-Kristin Hale), and 'End Extension' (set to 3000-Leo Ball). To the right of these is a blue button labeled 'Assign Extension'. Below these fields is a table with two columns: 'Handset' and 'Extension'. The table has two rows. The first row shows 'Handset 1' with a checked checkbox and '1000-Kristin Hale' in the extension dropdown. The second row shows 'Handset 2' with a checked checkbox and '3000-Leo Ball' in the extension dropdown.

- To assign extensions in bulk, set the extension range in the **Start Extension** and **End Extension** drop-down lists, then click **Assign Extension**.



The 'Assign Extension' dialog box shows the 'Handset ID Range' set to 1 to 250. The 'Start Extension' is 1000-Kristin Hale and the 'End Extension' is 3000-Leo Ball. An 'Assign Extension' button is on the right. Below, a table lists Handset 1 and Handset 2, each with a dropdown menu for extension assignment.

Handset	Extension
<input type="checkbox"/> Handset 1	<input type="text"/>
<input type="checkbox"/> Handset 2	<input type="text"/>

In this example, assign extension 1000 to Handset 1 and extension 3000 to Handset 2.



#### Note:

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.


- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

#### 6. Click **Save**.

The DECT base station is added to the PBX, and displayed in the Auto Provisioning phone list.



#### Tip:

You can click  in front of the DECT base station to see the extensions assigned to the DECT handsets.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations												
<input type="checkbox"/>	<div><div></div><div></div></div>	...	...	Gigaset	Gigaset N870 IP PRO	-	-	<div><div></div><div></div><div></div></div>												
<table><tr><th>Status</th><th>Handset</th><th>Extension</th><th>Name</th></tr><tr><td><div><div></div><div></div></div></td><td>Handset 1</td><td>1000</td><td>Kristin Hale</td></tr><tr><td><div><div></div><div></div></div></td><td>Handset 2</td><td>3000</td><td>Leo Ball</td></tr></table>									Status	Handset	Extension	Name	<div><div></div><div></div></div>	Handset 1	1000	Kristin Hale	<div><div></div><div></div></div>	Handset 2	3000	Leo Ball
Status	Handset	Extension	Name																	
<div><div></div><div></div></div>	Handset 1	1000	Kristin Hale																	
<div><div></div><div></div></div>	Handset 2	3000	Leo Ball																	

### Step 3. Configure DHCP option 66 on DHCP server

Use the generated provisioning link to configure option 66 on the DHCP server in the subnet where the DECT system is deployed.

1. On PBX web portal, copy the provisioning link from the device's detail page.

**Options**

\* Template  
YSDP\_GigasetN870

\* Provisioning Method  
DHCP (In the Office)

Provisioning Link  
http://192.168.20.58:7778/api/autoprovision/KZYJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

**Interfaces » LAN**

General Settings Advanced Settings Firewall Settings **DHCP Server**

General Setup **Advanced Settings** IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒  
Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐  
Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0  
Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5  
66,http://192.168.20.58:7778/api/autoprovision/KZYJ3gwHjecazEQB  
Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Step 4. Enable dynamic IP setting for Gigaset DECT base station

On the DECT base station, use the device button to change the device role, so that the base station can obtain an IP address from a DHCP server in the subnet.

1. Press and hold the device button for at least 10 seconds until both LEDs turn off, then release the button.

The device is now in programming mode.

2. Short press the device button until both LEDs become blue, then release the button.

The device role is switched to **Integrator/DECT Manager** with dynamic IP setting enabled.

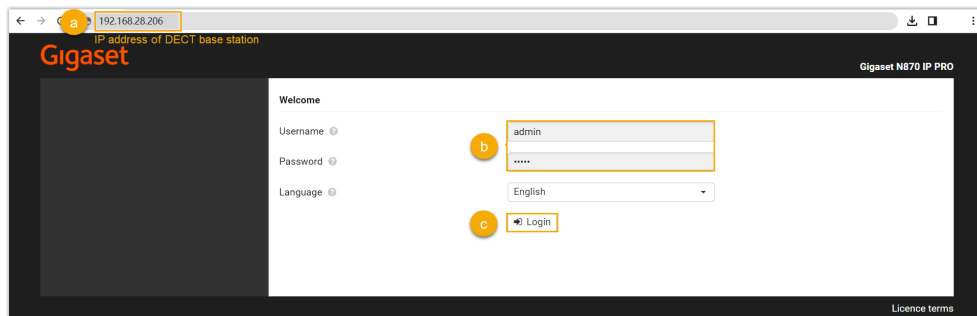
3. Press and hold the device button until both LEDs turn red, then release the button.

The base station is reset, and it takes several minutes for the device to boot up with the selected device role; After booted up, the device gets an IP address from the DHCP server, and automatically downloads configurations from the PBX.

## Step 5. Register the Gigaset DECT handsets to DECT base station

Enable the registration mode of DECT base station and confirm the registration on DECT handsets, so that the Gigaset DECT handsets can be registered to the DECT base station.

1. Log in to the web interface of DECT base station.



- a. In the browser's address bar, enter the IP address of the base station.
  - b. Enter the username `admin` and the default password `admin`.
  - c. Click **Login**.
2. Change the default password, select a radio frequency band, then click **Set**.




### Note:

For the DECT radio band, select the radio frequency band used in your region.



The screenshot shows the Gigaset N870 IP PRO web interface. On the left is a dark sidebar with the Gigaset logo. The main content area has a 'Change password' section with fields for 'New password' and 'Repeat password', each with a yellow box labeled 'a' around it. Below this is a 'DECT Radio band' section with a radio button labeled 'b' next to the '1880 MHz - 1900 MHz (Europe)' option. At the bottom of this section are 'Set' and 'Cancel' buttons, with a yellow box labeled 'c' around the 'Set' button. A 'Licence terms' link is at the bottom right.

You are redirected to the web interface of the DECT base station.

- Under the **SETTINGS** tab, go to **Mobile devices > Administration**, click  to edit a handset with an extension assigned.

The screenshot shows the Gigaset N870 IP PRO web interface. The left sidebar has the 'SETTINGS' tab selected, with a yellow box around it. Under 'Mobile devices', the 'Administration' sub-tab is selected, also with a yellow box around it. The main content area shows a table of mobile devices. The first row is highlighted with a yellow box labeled 'a' around the 'To register' option in the 'RegStatus' column.

IPUI	Username	Display name	Location	DECT	SIP	Type	FW
0_00000	1000	Kristin Hale		Not registered	x		
0_00001	3000	Leo Ball		Not registered	x		
0_00002				Not registered	x		
0_00003				Not registered	x		
0_00004				Not registered	x		
0_00005				Not registered	x		

- In the **RegStatus** drop-down list, select **To register**.

The screenshot shows the 'Mobile device' configuration form. It has fields for 'IPUI' (0\_00002), 'RegStatus' (To register), and 'Authentication Code (PIN)' (0000). A 'Generate random PIN' button is at the bottom.

- In the **Authentication Code (PIN)** field, set and note down a PIN code, which will be used on handset later for registration.


In this example, use the default PIN code 0000.

**Mobile device**

IPUI ? 0\_00002

RegStatus ? To register

Authentication Code (PIN) ? 0000

 Generate random PIN

c. Scroll down to the bottom, click **Register now**.

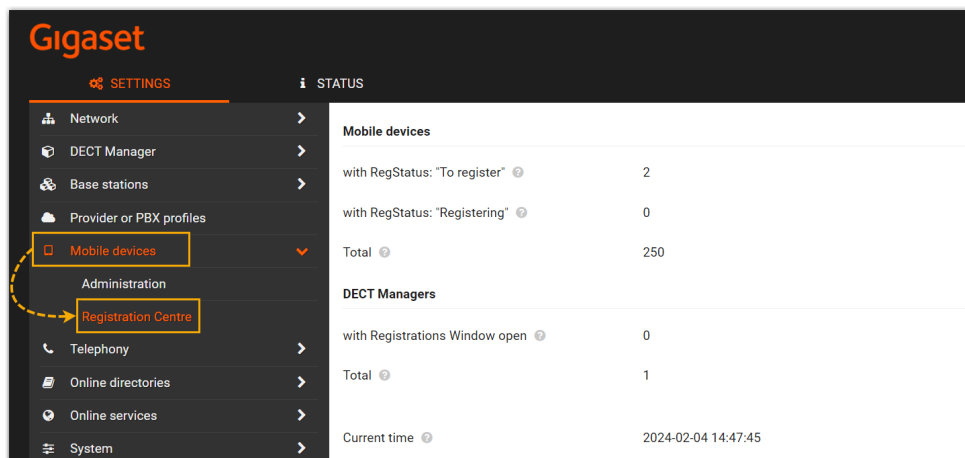
**Feature key synchronization**

Feature key synchronization ? ☐ Yes ☒ No

☐ Register now

Set Cancel

4. Repeat [the above steps](#) to edit other handsets with extensions assigned until all the handsets are in **To register** status.
5. Go to **Mobile devices > Registration Centre > DECT Managers**, complete the following settings.



**Gigaset**

**SETTINGS** **STATUS**

Network >

DECT Manager >

Base stations >

Provider or PBX profiles >

**Mobile devices** >

Administration >

**Registration Centre** >

Telephony >

Online directories >

Online services >

System >

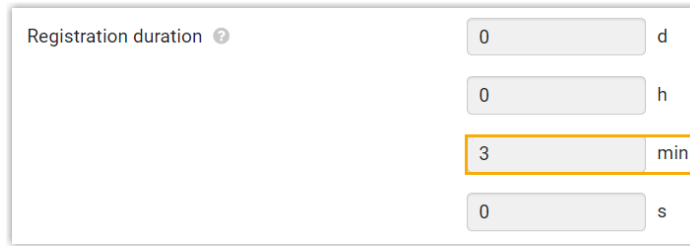
**Mobile devices**

with RegStatus: "To register" ?	2
with RegStatus: "Registering" ?	0
Total ?	250

**DECT Managers**

with Registrations Window open ?	0
Total ?	1
Current time ?	2024-02-04 14:47:45

- a. In the **Registration duration** section, set how long the DECT base station should stay in registration mode.  
In this example, keep the default value (3 minutes).



Registration duration ?

0 d

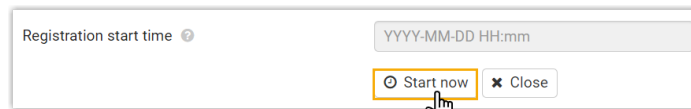
0 h

3 min

0 s

b. In the **Registration start time** section, enable the registration mode of DECT base station.

- To start registration right now, click **Start now**.

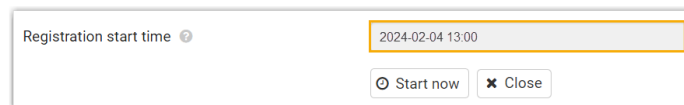


Registration start time ?

YYYY-MM-DD HH:mm

☒ Start now ☐ Close

- To schedule a time to start registration, set a time in the time field, then click **Set** at the bottom of the page.



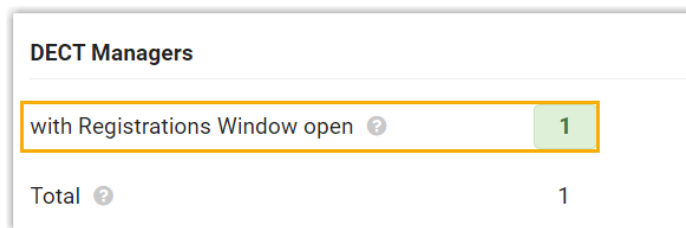
Registration start time ?

2024-02-04 13:00

☐ Start now ☐ Close

In this example, click **Start now**.

The **with Registrations Window open** field displays **1**, indicating that the DECT base station is in registration mode at the given time duration.



**DECT Managers**

with Registrations Window open ? 1

Total ? 1

6. Confirm registration on DECT handset.

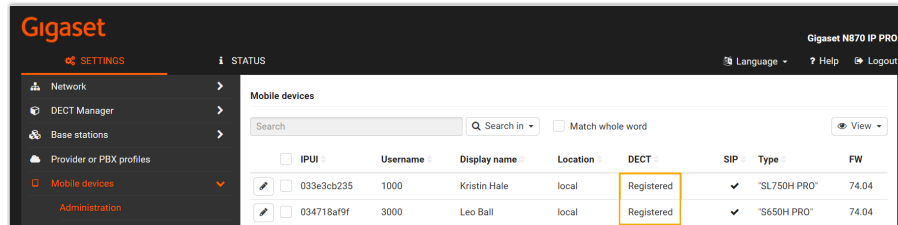
- On the handset, go to **Menu > Settings > Registration > Register Handset**.

The DECT handset starts to search for a base station that is in registration mode. When it finds the base station, there is a prompt asking you to enter a system PIN.

- Enter the [PIN code obtained from the base station](#), and press **OK**.

## Result

- The handsets are successfully registered to the DECT base station, and associated with the assigned PBX extensions via the base station.
  - On the web interface of DECT base station, you can check the registration status of the handsets on **SETTINGS > Mobile devices > Administration**.



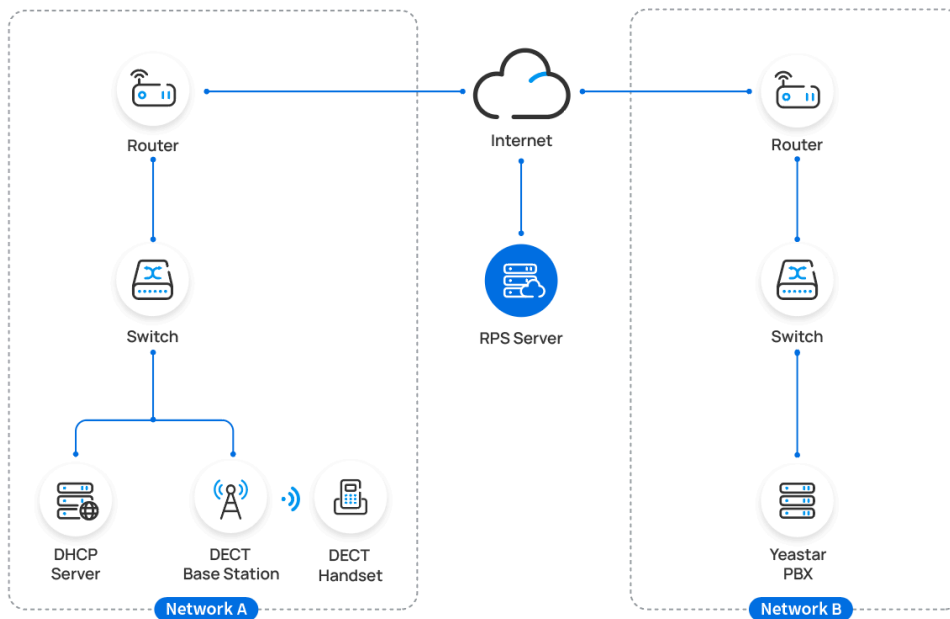
- On PBX web portal, you can check the registration status of the extensions on **Auto Provisioning > Phones**.

Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Firmware Version	MAC Address	Operations
			Gigaset	Gigaset N870 IP PRO			YSDP_GigasetN870		58:9e:c6:0f	
				Handset						
				Handset 1	1000				Kristin Hale	
				Handset 2	3000				Leo Ball	

- The registered DECT handsets can be used as extensions to make and receive calls.

## Auto provision Gigaset DECT system in remote network (RPS)

In this example, the Gigaset DECT system (base station and handset) and a DHCP server are deployed in Network A, and the Yeastar PBX is deployed in Network B.



## Prerequisites

Yeastar P-Series PBX System supports to auto provision Gigaset DECT system remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

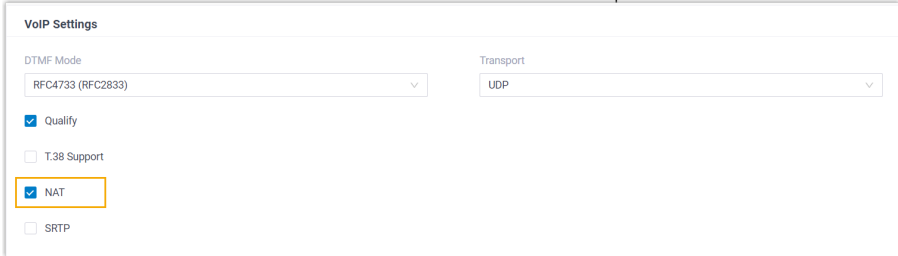

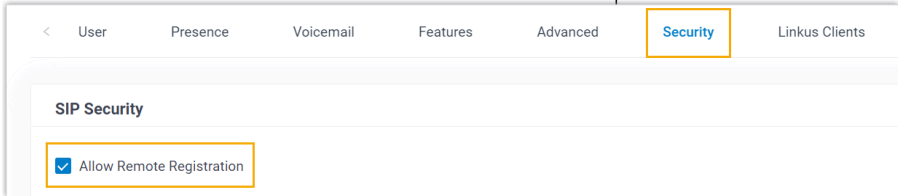
Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>Grant remote access permission for the extension to be registered and the DECT base station: <ul style="list-style-type: none"> <li><a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>

The screenshot shows the 'Access Type' configuration page. The 'Allowed Account' dropdown is selected. Below, there are two lists: 'Available' (14 items) and 'Selected' (1 item). The 'Available' list shows extensions 2000-2003 with caller IDs. The 'Selected' list shows extension 3000 with caller ID 'Leo Ball'.

Extension Number	Caller ID Name
2000	2000
2001	Phillip Huff
2002	Terrell Smith
2003	Dave Haris

Extension Number	Caller ID Name
3000	Leo Ball

Method	Setting
	<ul style="list-style-type: none"> <li>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the DECT base station's IP address to the permitted IP list, so that the device can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</li> </ul> <div data-bbox="699 537 1292 768"> </div> <ul style="list-style-type: none"> <li>• Make sure that there is only one DHCP server running in the subnet where the Gigaset DECT system (base station and handset) is deployed, or the base station would fail to obtain an IP address.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• Gather information of DECT base station, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div data-bbox="618 1234 1302 1491"> <p><b>Important:</b></p> <p>The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> </div> <ul style="list-style-type: none"> <li>• Set up the extension for remote registration. <ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul>

Method	Setting
	<div>  <p>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p>  <ul style="list-style-type: none"> <li>• Make sure that there is only one DHCP server running in the subnet where the Gigaset DECT system (base station and handset) is deployed, or the base station would fail to obtain an IP address.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• Gather information of DECT base station, including Vendor, Model, and MAC address.</li> </ul> </div>

## Procedure

- [Step 1. Add the Gigaset DECT base station on PBX](#)
- [Step 2. Enable dynamic IP setting for Gigaset DECT base station](#)
- [Step 3. Register the Gigaset DECT handsets to DECT base station](#)

### Step 1. Add the Gigaset DECT base station on PBX

Add the DECT base station on PBX. The PBX will generate a configuration file based on the device's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following information.

The form is titled "IP Phone". It contains three fields:
 

- \* Vendor:** A dropdown menu with "Gigaset" selected.
- \* Model:** A dropdown menu with "Gigaset N870 IP PRO" selected.
- \* MAC Address:** An empty text input field.

- **Vendor:** Select **Gigaset**.
- **Model:** Select the device model. In this example, select **Gigaset N870 IP PRO**.
- **MAC Address:** Enter the MAC address of the DECT base station.

4. In the **Options** section, configure the following settings.

Figure 11. RPS using Yeastar FQDN

The form is titled "Options". It contains:
 

- \* Template:** A dropdown menu with "YSDP\_GigasetN870" selected.
- \* Provisioning Method:** A dropdown menu with "RPS FQDN (Remote)" selected.
- Provisioning Link:** A text field displaying the URL "https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oi".

Figure 12. RPS using Public IP Address / External Host domain name

The form is titled "Options". It contains:
 

- \* Template:** A dropdown menu with "YSDP\_GigasetN870" selected.
- \* Provisioning Method:** A dropdown menu with "RPS (Remote)" selected.
- Provisioning Link:** A text field displaying the URL "https://110.35.77.110:18207/api/autoprovision/H70R1oiPnLJCnp6L".

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.



5. In the **Assign Extension** section, assign extensions for the DECT handsets.

- To assign extensions one by one, select the checkbox of corresponding handset, then select the desired extension in the **Extension** drop-down list.

The screenshot shows the 'Assign Extension' window. At the top, there are three dropdown menus: 'Handset ID Range' (set to 1-250), 'Start Extension' (set to 1000-Kristin Hale), and 'End Extension' (set to 3000-Leo Ball). To the right of these is a blue button labeled 'Assign Extension'. Below this is a table with two columns: 'Handset' and 'Extension'. Handset 1 has a checked checkbox and its extension dropdown is set to '1000-Kristin Hale'. Handset 2 has a checked checkbox and its extension dropdown is set to '3000-Leo Ball'.

- To assign extensions in bulk, set the extension range in the **Start Extension** and **End Extension** drop-down lists, then click **Assign Extension**.

This screenshot shows the 'Assign Extension' window with the 'Start Extension' dropdown set to '1000-Kristin Hale' and the 'End Extension' dropdown set to '3000-Leo Ball'. The 'Assign Extension' button is highlighted. In the table below, the checkboxes for Handset 1 and Handset 2 are currently unchecked.

In this example, assign extension 1000 to Handset 1 and extension 3000 to Handset 2.



#### Note:

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.


- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.








## 6. Click **Save**.

The DECT base station is added to the PBX, and displayed in the Auto Provisioning phone list; The PBX will send an event notification of **RPS Request Success**.



### Tip:

You can click  in front of the DECT base station to see the extensions assigned to the DECT handsets.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		...	...	Gigaset	Gigaset N870 IP PRO	-	-	   
	Status	Handset		Extension		Name		
		Handset 1		1000		Kristin Hale		
		Handset 2		3000		Leo Ball		

## Step 2. Enable dynamic IP setting for Gigaset DECT base station

On the DECT base station, use the device button to change the device role, so that the base station can obtain an IP address from a DHCP server in the sub-net.

1. Press and hold the device button for at least 10 seconds until both LEDs turn off, then release the button.

The device is now in programming mode.

2. Short press the device button until both LEDs become blue, then release the button.

The device role is switched to **Integrator/DECT Manager** with dynamic IP setting enabled.

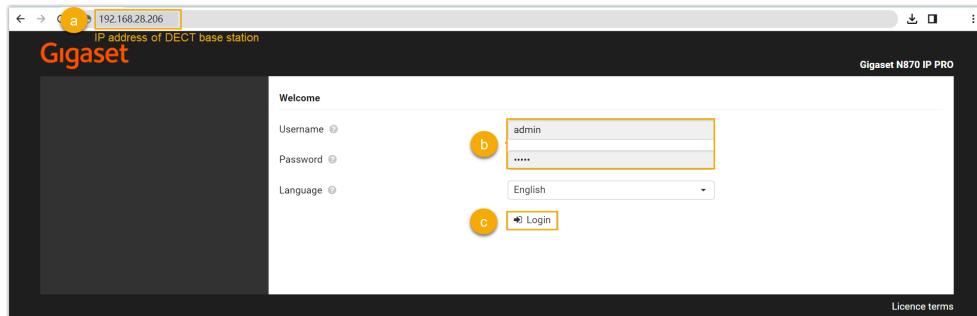
3. Press and hold the device button until both LEDs turn red, then release the button.

The base station is reset, and it takes several minutes for the device to boot up with the selected device role; After booted up, the device gets an IP address from the DHCP server, and automatically downloads configurations from the PBX.

## Step 3. Register the Gigaset DECT handsets to DECT base station

Enable the registration mode of DECT base station and confirm the registration on DECT handsets, so that the Gigaset DECT handsets can be registered to the DECT base station.

1. Log in to the web interface of DECT base station.

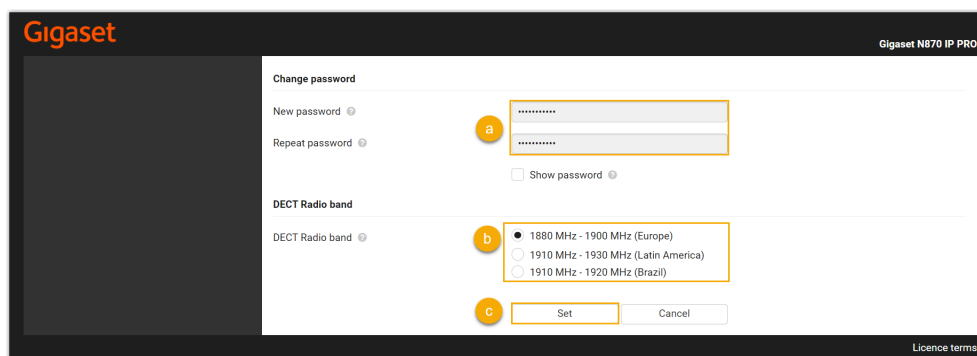


- a. In the browser's address bar, enter the IP address of the base station.
  - b. Enter the username `admin` and the default password `admin`.
  - c. Click **Login**.
2. Change the default password, select a radio frequency band, then click **Set**.




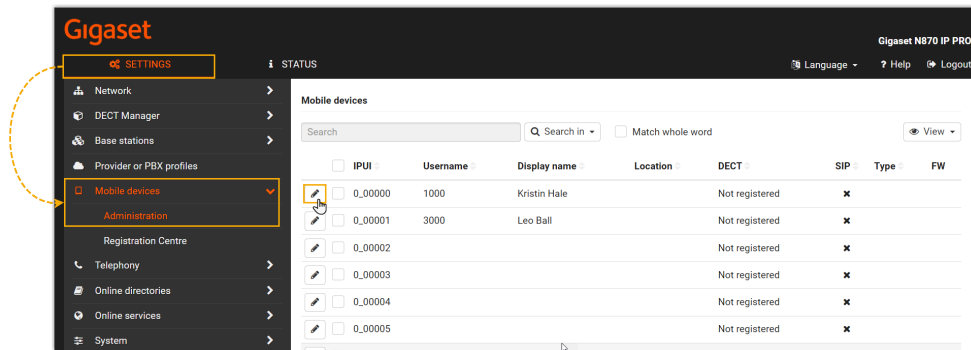
**Note:**

For the DECT radio band, select the radio frequency band used in your region.



You are redirected to the web interface of the DECT base station.

3. Under the **SETTINGS** tab, go to **Mobile devices > Administration**, click  to edit a handset with an extension assigned.



a. In the **RegStatus** drop-down list, select **To register**.

Mobile device

IPUI ?

0\_00002

RegStatus ?

To register

Authentication Code (PIN) ?

0000

Generate random PIN

b. In the **Authentication Code (PIN)** field, set and note down a PIN code, which will be used on handset later for registration.

In this example, use the default PIN code 0000.

Mobile device

IPUI ?

0\_00002

RegStatus ?

To register

Authentication Code (PIN) ?

0000

Generate random PIN

c. Scroll down to the bottom, click **Register now**.

Feature key synchronization

Feature key synchronization ?

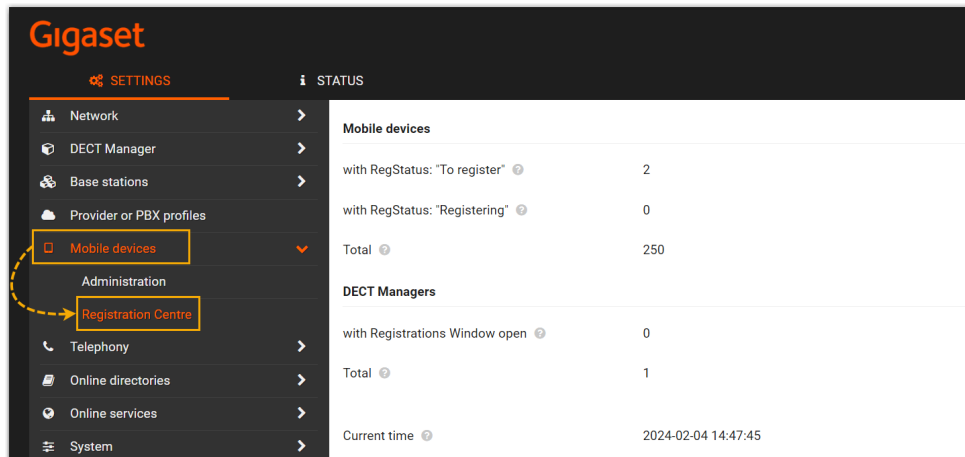
☐ Yes
 ☒ No

Register now

Set

Cancel

4. Repeat [the above steps](#) to edit other handsets with extensions assigned until all the handsets are in **To register** status.
5. Go to **Mobile devices > Registration Centre > DECT Managers**, complete the following settings.



- a. In the **Registration duration** section, set how long the DECT base station should stay in registration mode.

In this example, keep the default value (3 minutes).

The 'Registration duration' form has five input fields with units: 'd' (days), 'h' (hours), 'min' (minutes), and 's' (seconds). The 'min' field is highlighted with a yellow box and contains the value '3'.

- b. In the **Registration start time** section, enable the registration mode of DECT base station.

- To start registration right now, click **Start now**.

The 'Registration start time' form has a date/time input field with a placeholder 'YYYY-MM-DD HH:mm'. Below the field are two buttons: 'Start now' (highlighted with a yellow box and a hand cursor) and 'Close'.

- To schedule a time to start registration, set a time in the time field, then click **Set** at the bottom of the page.

The 'Registration start time' form has a date/time input field with a placeholder 'YYYY-MM-DD HH:mm'. The field is highlighted with a yellow box and contains the value '2024-02-04 13:00'. Below the field are two buttons: 'Start now' and 'Close'.

In this example, click **Start now**.

The **with Registrations Window open** field displays **1**, indicating that the DECT base station is in registration mode at the given time duration.

DECT Managers	
with Registrations Window open ?	1
Total ?	1

#### 6. Confirm registration on DECT handset.

- a. On the handset, go to **Menu > Settings > Registration > Register Handset**.

The DECT handset starts to search for a base station that is in registration mode. When it finds the base station, there is a prompt asking you to enter a system PIN.

- b. Enter the [PIN code obtained from the base station](#), and press **OK**.

## Result

- The handsets are successfully registered to the DECT base station, and associated with the assigned PBX extensions via the base station.
  - On the web interface of DECT base station, you can check the registration status of the handsets on **SETTINGS > Mobile devices > Administration**.

Gigaset

SETTINGS

STATUS

Network

DECT Manager

Base stations

Provider or PBX profiles

Mobile devices

Administration

Gigaset N870 IP PRO

Language

Help

Logout

Mobile devices

Search

Search in

Match whole word

View

<input type="checkbox"/> IPUI	Username	Display name	Location	DECT	SIP	Type	FW
<input type="checkbox"/> 033e3cb235	1000	Kristin Hale	local	Registered	✓	"SL750H PRO"	74.04
<input type="checkbox"/> 034718af9f	3000	Leo Ball	local	Registered	✓	"S650H PRO"	74.04

- On PBX web portal, you can check the registration status of the extensions on **Auto Provisioning > Phones**.

Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Firmware Version	MAC Address	Operations
			Gigaset	Gigaset N870 IP PRO			YSDP_GigasetN870		58:9e:c6:0f	<a href="#">Edit</a> <a href="#">Refresh</a> <a href="#">Delete</a>
Status		Handset				Extension			Name	
<a href="#">?</a>		Handset 1				1000			Kristin Hale	
<a href="#">?</a>		Handset 2				3000			Leo Ball	

- The registered DECT handsets can be used as extensions to make and receive calls.

# Grandstream

## Auto Provision Grandstream IP Phone with Yeastar P-Series PBX System

This topic takes Grandstream GPR2602 (firmware: 1.0.3.67) as an example to introduce how to auto provision a Grandstream IP phone with Yeastar P-Series PBX System in Local Area Network (LAN).

### Requirements

The firmwares of **Grandstream IP Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
GXP1610	1.0.7.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP1620	1.0.7.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP1625	1.0.7.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP1628	1.0.7.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP1630	1.0.7.13 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP2130	1.0.11.16 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP2135	1.0.11.16 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP2140	1.0.11.16 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP2160	1.0.11.16 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GXP2170	1.0.11.16 or later	37.3.0.42 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
GAC2500	1.0.3.45 or later	37.11.0.22 or later	<ul style="list-style-type: none"><li>• PnP</li></ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			• DHCP
GAC2570	1.0.1.36 or later	37.11.0.22 or later	• PnP • DHCP
GRP2601	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2601P	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2602	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2602P	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2602G	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2602W	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2603	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2603P	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2604	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2604P	1.0.3.63 or later	37.7.0.51 or later	• PnP • DHCP
GRP2612	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2612P	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2612G	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2612W	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2613	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2614	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2615	1.0.7.25 or later	37.7.0.51 or later	• PnP

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			• DHCP
GRP2616	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2624	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2634	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP
GRP2670	1.0.7.25 or later	37.7.0.51 or later	• PnP • DHCP

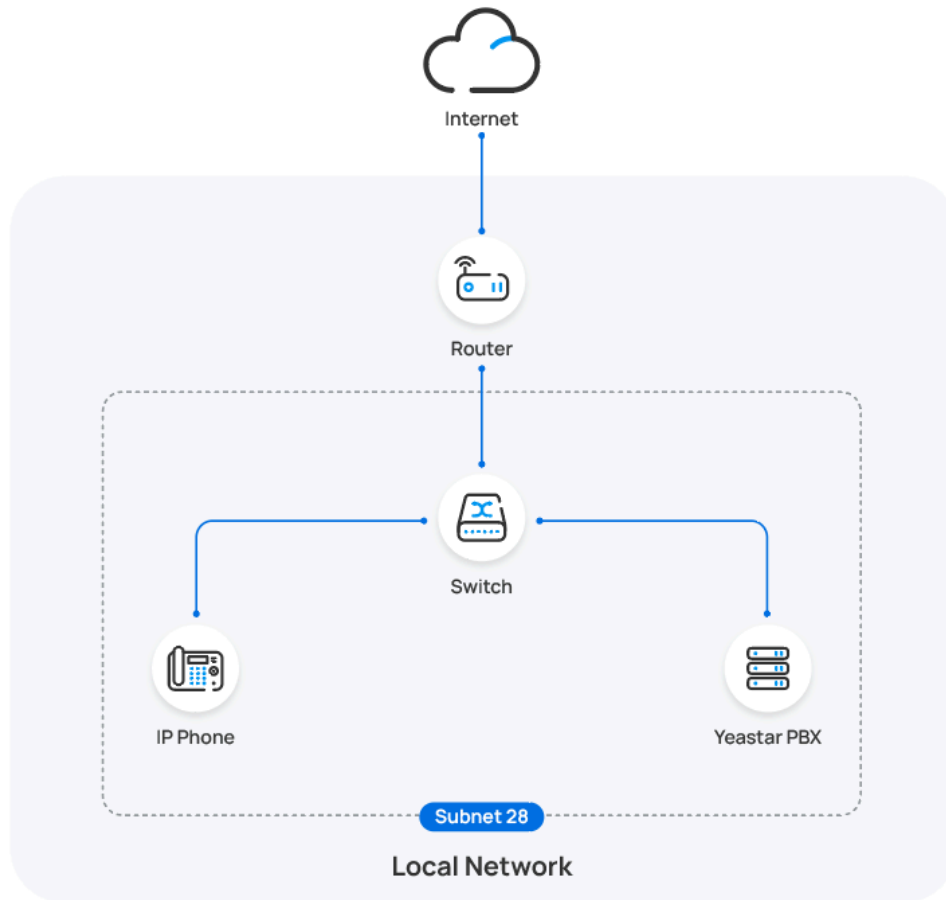
## Scenarios

The provisioning methods and operations vary depending on the network environment of **Grandstream IP phone** and **Yeastar PBX**, as the following table shows:

Scenario	Description
IP Phone and PBX are in the SAME subnet	In this scenario, you can provision the Grandstream IP phone with the PBX via <a href="#">PnP method</a> . For more information, see <a href="#">Auto provision a Grandstream IP phone in the same subnet (PnP)</a> .
IP Phone and PBX are in DIFFERENT subnets	In this scenario, you can provision the Grandstream IP phone with the PBX via <a href="#">DHCP method</a> . For more information, see <a href="#">Auto provision a Grandstream IP phone in different subnets (DHCP)</a> .

## Auto provision a Grandstream IP phone in the same subnet (PnP)

In this example, the Grandstream IP phone (IP: 192.168.28.205) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.



## Prerequisites






- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Grandstream IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Grandstream	GRP2602	192.168.28.205	-	YSDP_Grandstream GRP260X	   

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.






## Result



**Note:**

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor ↕	Model ↕	IP Address ↕	Phone Password	Operations	▼
<input type="checkbox"/>		3000	Leo Ball	Grandstream	GRP2602	192.168.28.205	*****@	   	

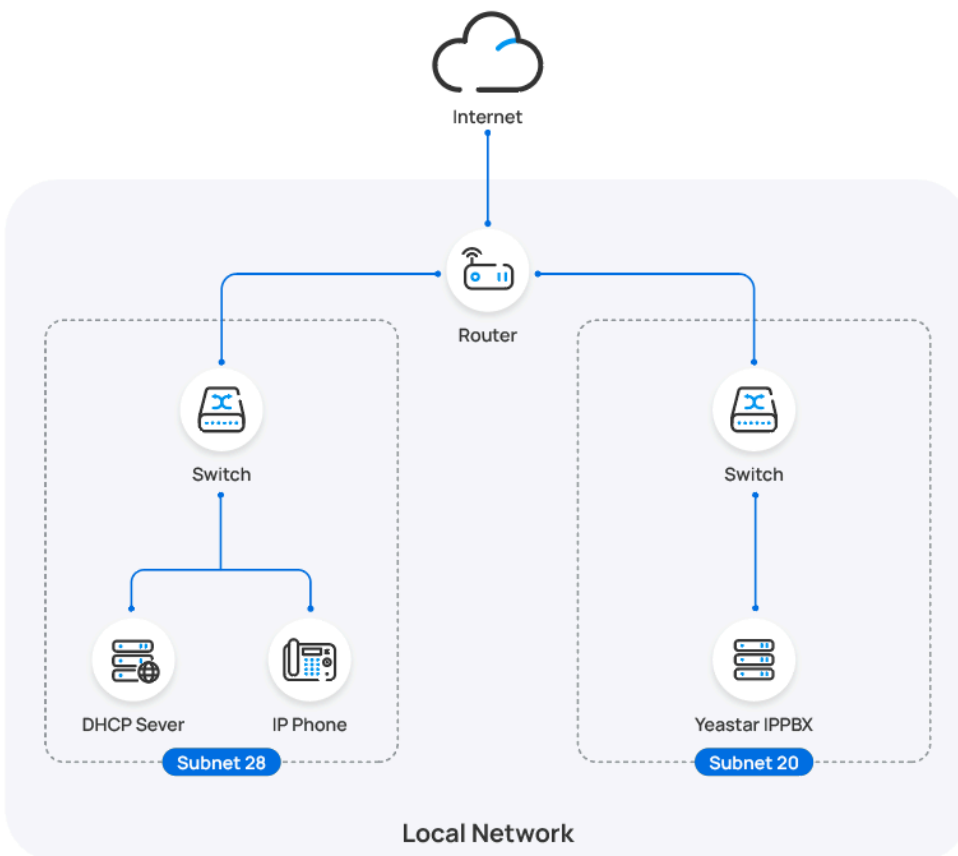
## What to do next

By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.

For more information, see [Remove Unnecessary Codecs for Grandstream IP Phone](#).

## Auto provision a Grandstream IP phone in different subnets (DHCP)

In this example, the Grandstream IP phone and DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

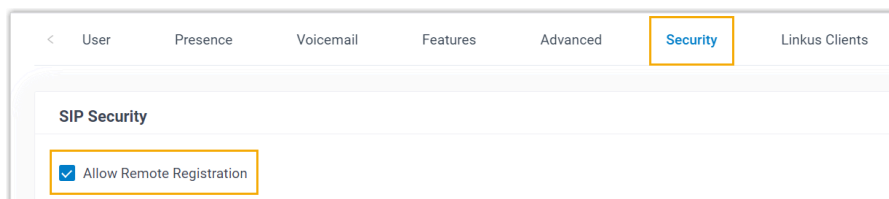
- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Grandstream IP phone on PBX](#)

- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



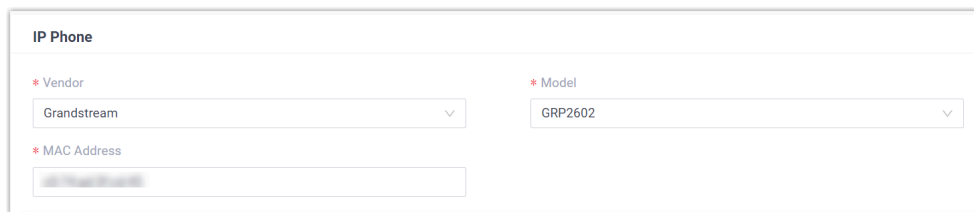
The screenshot shows the PBX web portal interface. At the top, there are tabs: User, Presence, Voicemail, Features, Advanced, Security (highlighted with an orange box), and Linkus Clients. Below the tabs, the 'SIP Security' section is visible, containing a checkbox labeled 'Allow Remote Registration' which is checked and highlighted with an orange box.

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

### Step 2. Add the Grandstream IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.



The screenshot shows the 'IP Phone' configuration form. It has three fields: '\* Vendor' with a dropdown menu showing 'Grandstream', '\* Model' with a dropdown menu showing 'GRP2602', and '\* MAC Address' with a text input field.

- **Vendor:** Select **Grandstream**.
  - **Model:** Select the phone model. In this example, select **GRP2602**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

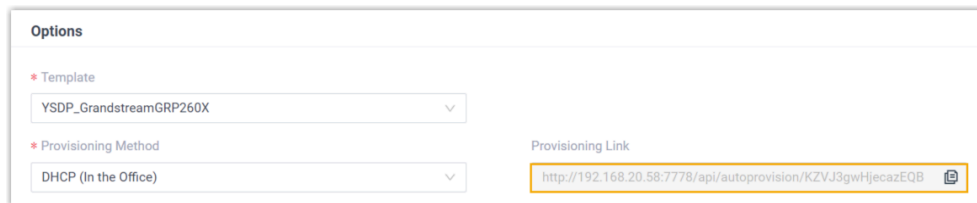
6. Click **Save**.



### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.



Options

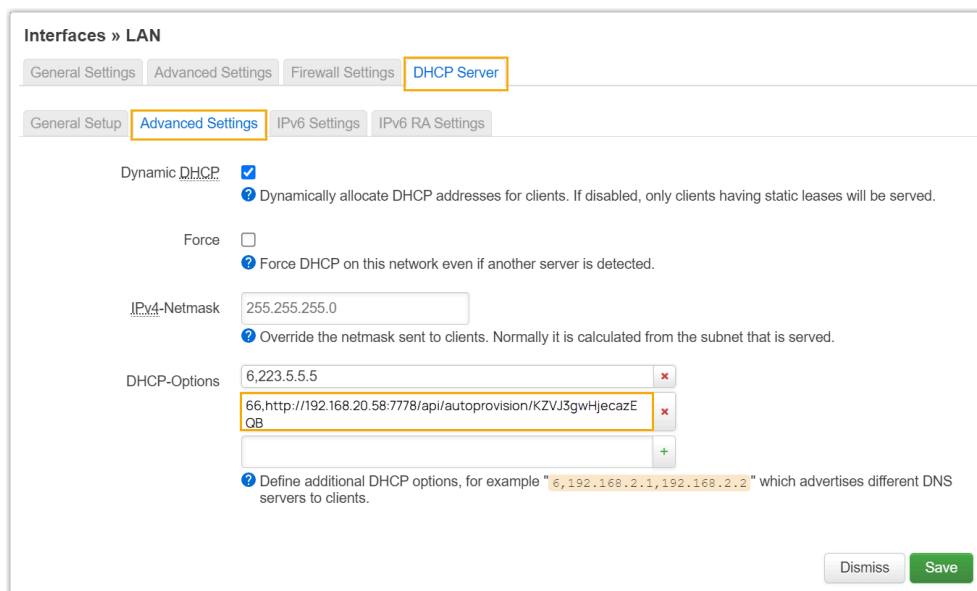
\* Template  
YSDP\_GrandstreamGRP260X

\* Provisioning Method  
DHCP (In the Office)

Provisioning Link  
http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.



Interfaces » LAN

General Settings Advanced Settings Firewall Settings DHCP Server

General Setup Advanced Settings IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒  
Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐  
Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0  
Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options

6,223.5.5.5

66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save






## Result



### Note:

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor ↕	Model ↕	IP Address ↕	Phone Passw	Operations	Y
<input type="checkbox"/>		3000	Leo Ball	Grandstream	GRP2602	-	*****@	   	

## What to do next

By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.

For more information, see [Remove Unnecessary Codecs for Grandstream IP Phone](#).

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Grandstream IP Phone with Yeastar P-Series PBX System


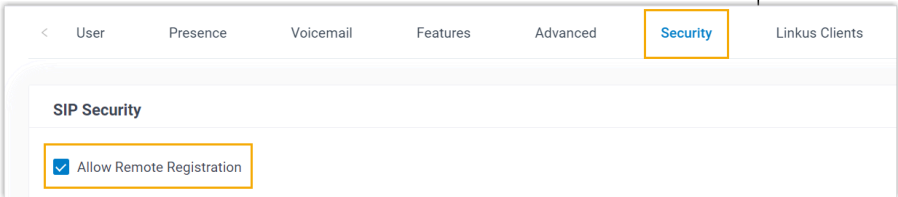
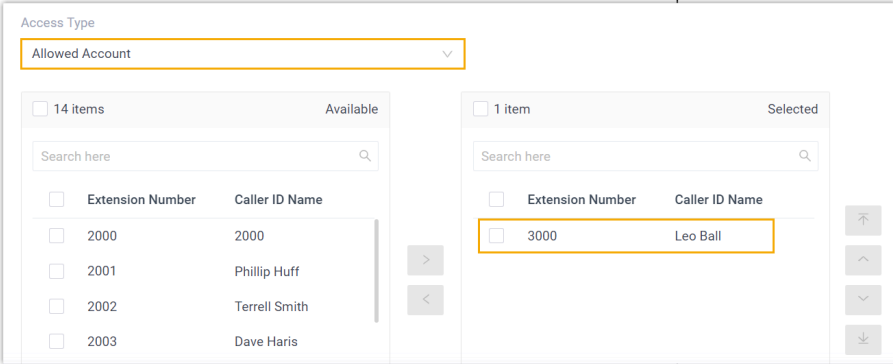

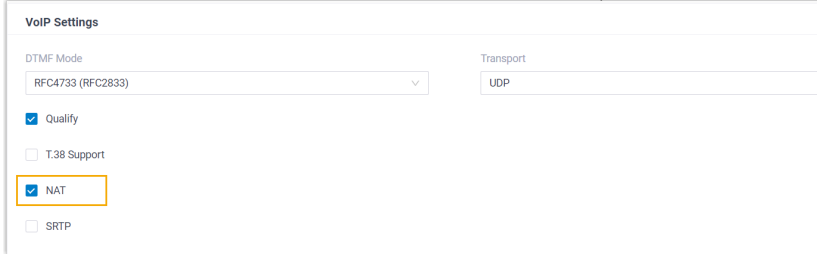
This topic takes Grandstream GPR2602 (firmware: 1.0.3.67) as an example to introduce how to manually register an extension on a Grandstream IP phone.


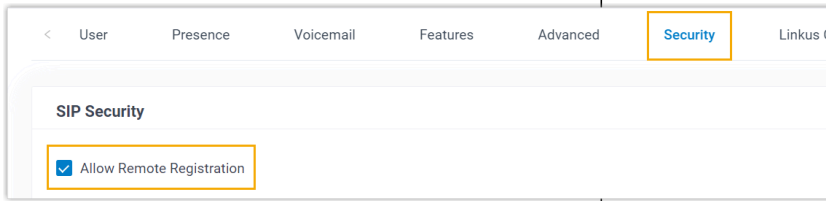
## Supported devices

The Grandstream IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Grandstream IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li><a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>Set up the extension for remote registration. <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul> 


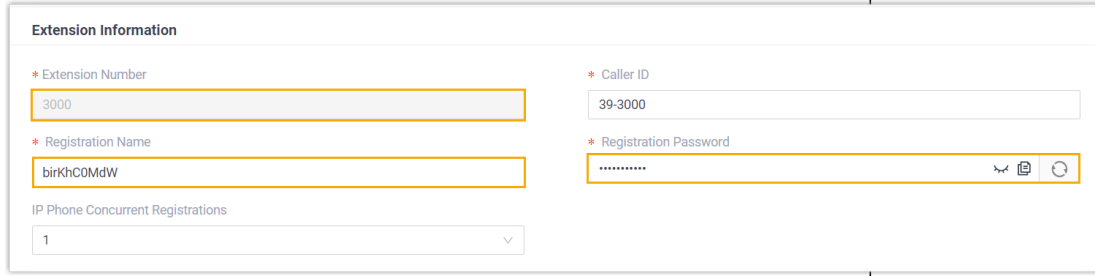

Network Environment	Setting
	<ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> 

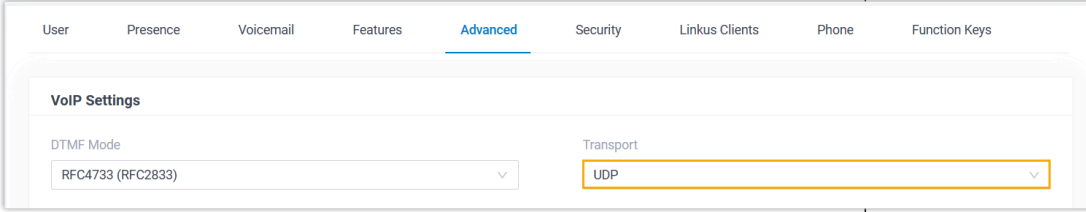

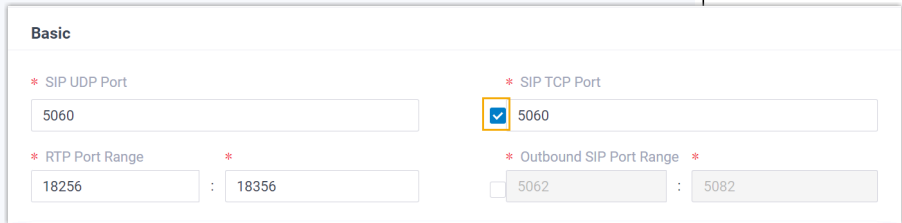
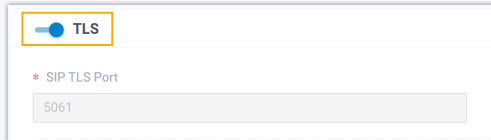

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Grandstream IP phone](#)

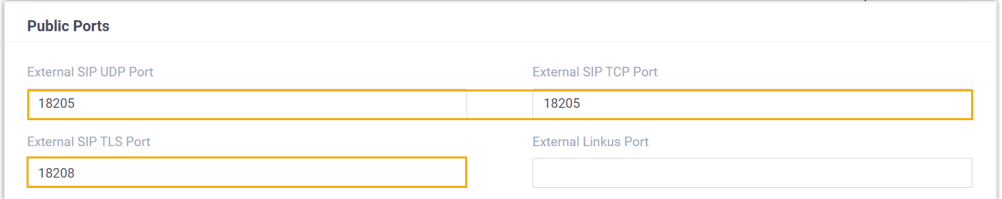
### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>

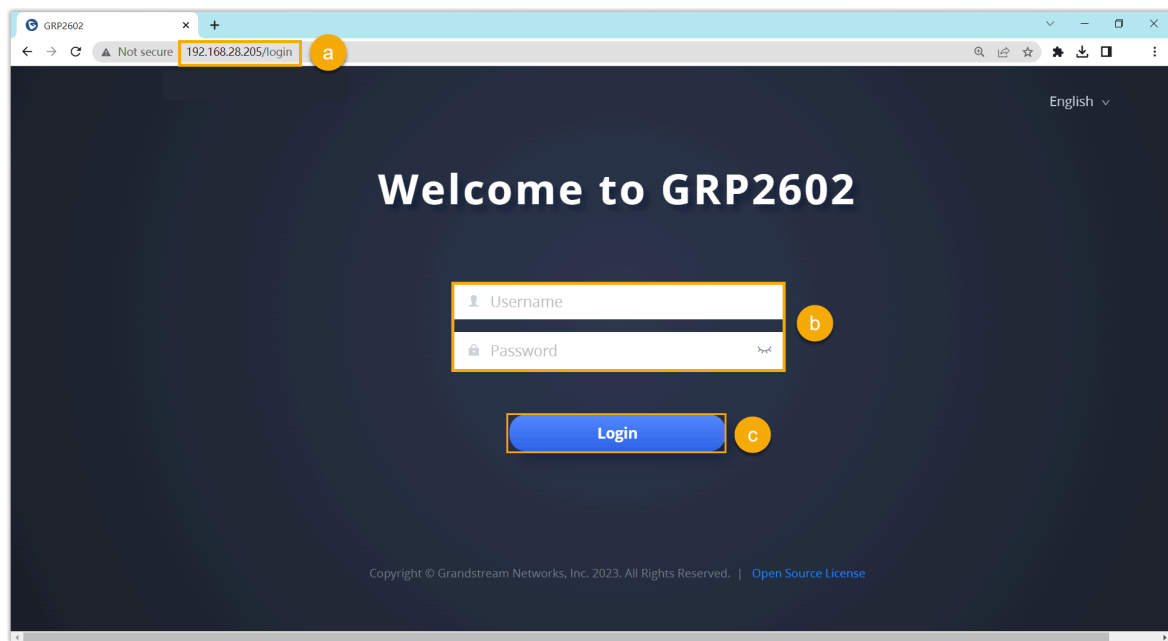
Information	Instruction
	<div data-bbox="540 260 1620 470">  </div> <div data-bbox="560 520 609 571">  </div> <div data-bbox="617 527 691 558"> <b>Note:</b> </div> <div data-bbox="678 596 1385 745"> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div> <div data-bbox="701 768 1598 989">  </div> <div data-bbox="678 1001 1344 1113"> <ul style="list-style-type: none"> <li>• If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> </div> <div data-bbox="701 1136 1188 1274">  </div>
PBX IP address or domain name	<div data-bbox="532 1352 1401 1665"> <p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 1522 609 1572">  </div> <div data-bbox="617 1528 691 1558"> <b>Note:</b> </div> <div data-bbox="617 1562 1359 1631"> <p>This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> </div> </div> <div data-bbox="532 1665 1401 1812"> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> </div>

Information	Instruction
	<div data-bbox="540 258 1529 390"> <p>Status</p> <p>● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN)</p> <p>yeastardocs.ras.yeastar.com</p> <p>* Expiration Date</p> <p>11/26/2023</p> <p>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="540 617 1018 821"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>Public IP Address</p> <p>* Public IP Address</p> <p>110.35.77.110</p> </div> <div data-bbox="1049 617 1529 821"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>External Host</p> <p>* External Host</p> <p>yeastar_docstest.com</p> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 997 1529 1220"> <p>HTTPS</p> <p>8088</p> <p>HTTP</p> <p>80</p> <p>SIP UDP</p> <p>5060</p> <p>SIP TCP</p> <p>5060</p> <p>SIP TLS</p> <p>5061</p> <p>Outbound SIP Port</p> <p>5062-5082</p> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1497 1529 1808"> <p>Features</p> <p>SIP Access Remote Access</p> <p>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</p> <p>* Status</p> <p>Enabled</p> <p>Remote Access Service Port-SIP UDP&amp;TCP</p> <p>5060</p> <p>Remote Access Service Port-SIP TLS</p> <p>5061</p> </div>

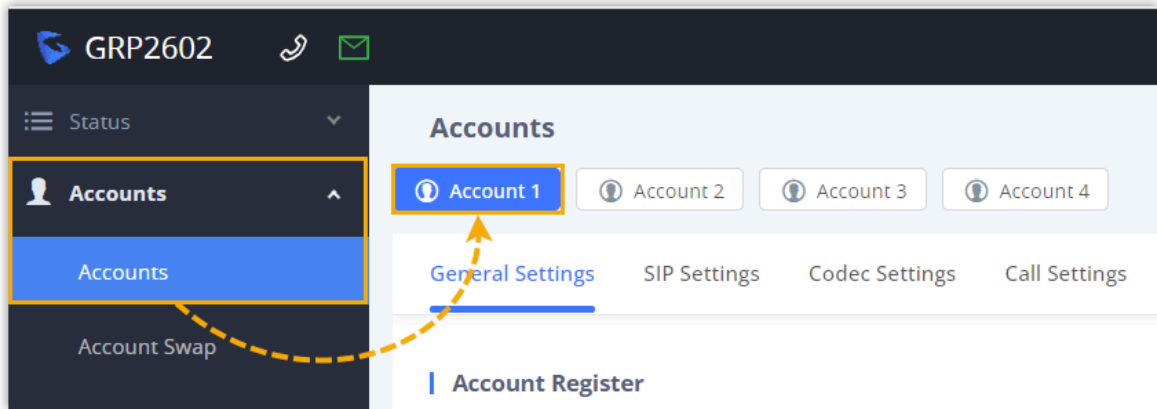
Information	Instruction
	<p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> 

## Step 2. Register extension on Grandstream IP phone

1. Log in to the web interface of the Grandstream IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
  - b. Enter the username `admin` and the associated password.
  - c. Click **Login**.
2. On the left navigation bar, go to **Accounts > Accounts**, and select an available account.



3. In the **General Settings** tab, complete the registration configurations.

Account Active ☒

Account Name

SIP Server

Secondary SIP Server

Outbound Proxy

Secondary Outbound Proxy

SIP User ID

SIP Authentication ID

SIP Authentication Password

Name

Tel URI

- **Account Active:** Select the checkbox to activate the account.
- **Account Name:** Enter the name associated with the account, which will be displayed on the phone screen.



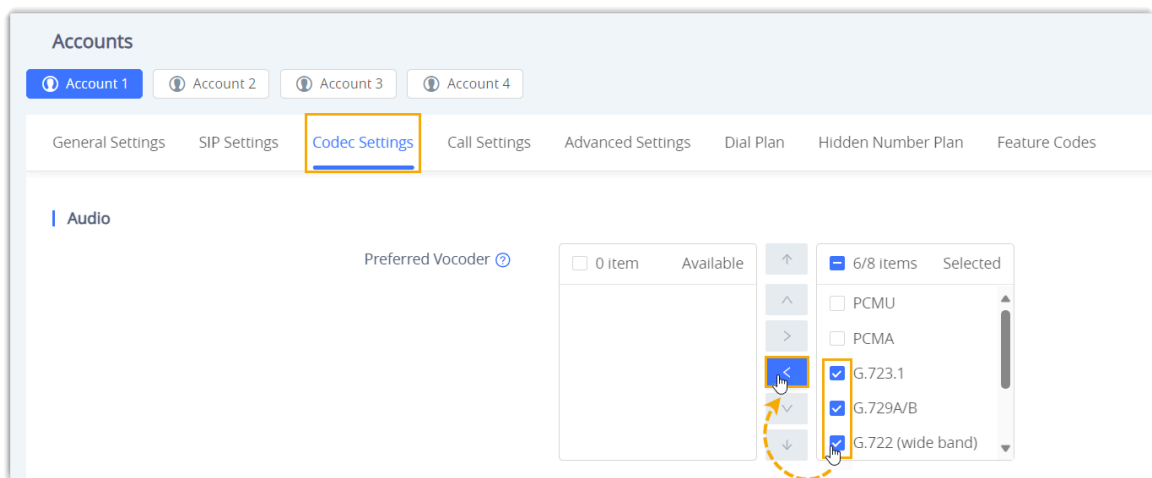
- **SIP Server:** Enter the IP address / domain name of the PBX along with the SIP registration port.
- **SIP User ID:** Enter the extension number.
- **SIP Authentication ID:** Enter the registration name of the extension.
- **SIP Authentication Password:** Enter the registration password of the extension.

4. In the **Codec Settings** tab, remove unnecessary codecs for the account.



**Note:**

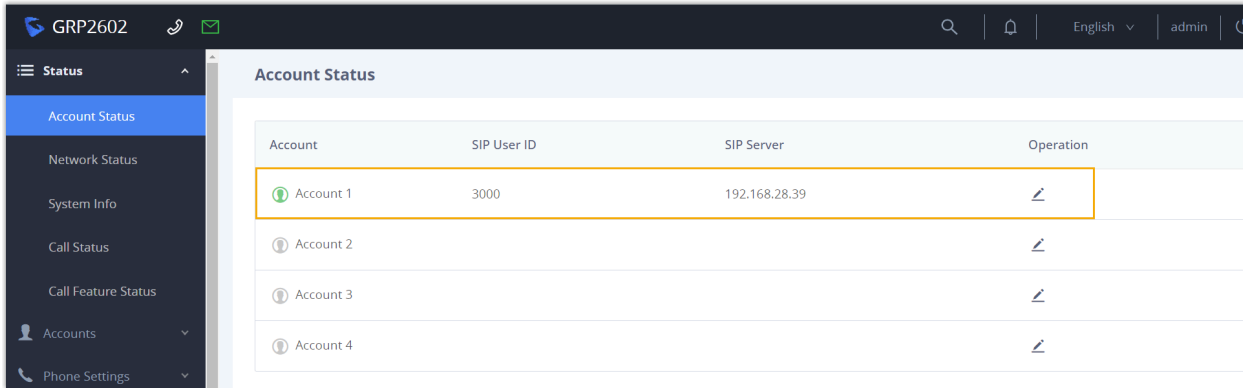
By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.



5. Click **Save and Apply**.

## Result

The extension is registered successfully. You can check the registration status on **Status > Account Status** on the phone's web interface.



Account	SIP User ID	SIP Server	Operation
Account 1	3000	192.168.28.39	
Account 2			
Account 3			
Account 4			


## Remove Unnecessary Codecs for Grandstream IP Phone

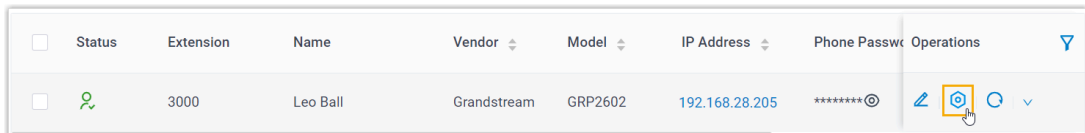
By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.

### Prerequisites

You have [Auto Provision Grandstream IP Phone with Yeastar P-Series PBX System](#).

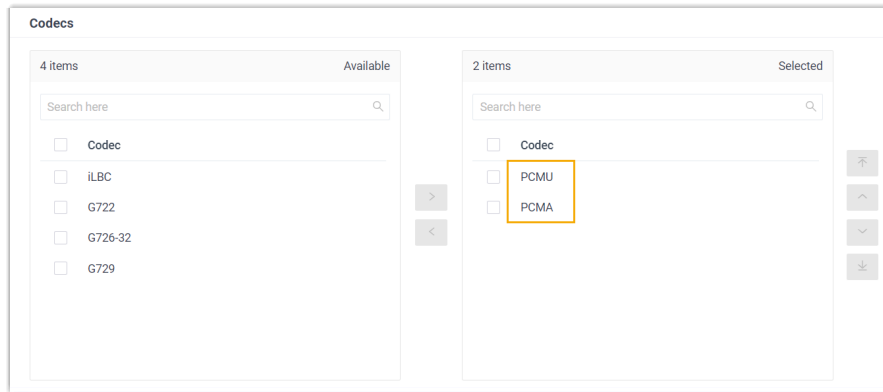
### Procedure

1. Configure the codecs settings for the IP phone on PBX.
  - a. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
  - b. Click  beside the Grandstream IP phone.



<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
<input type="checkbox"/>		3000	Leo Ball	Grandstream	GRP2602	192.168.28.205	*****@	

- c. In the phone configuration page, scroll down to the **Codecs** section.
- d. Select the necessary codecs from the **Available** box to the **Selected** box.



e. Click **Save**.

2. Configure the codec settings on the IP phone.



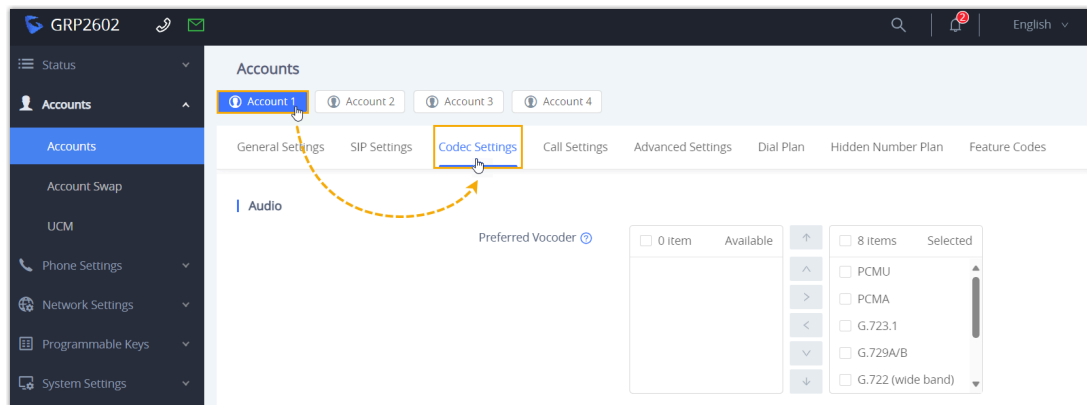
### Note:

Due to the restriction of the Grandstream IP phone, the PBX is not able to remove the codecs enabled on the IP phone via auto provisioning. Therefore, you need to manually remove unnecessary codecs via the phone's web interface to match the settings on the PBX.

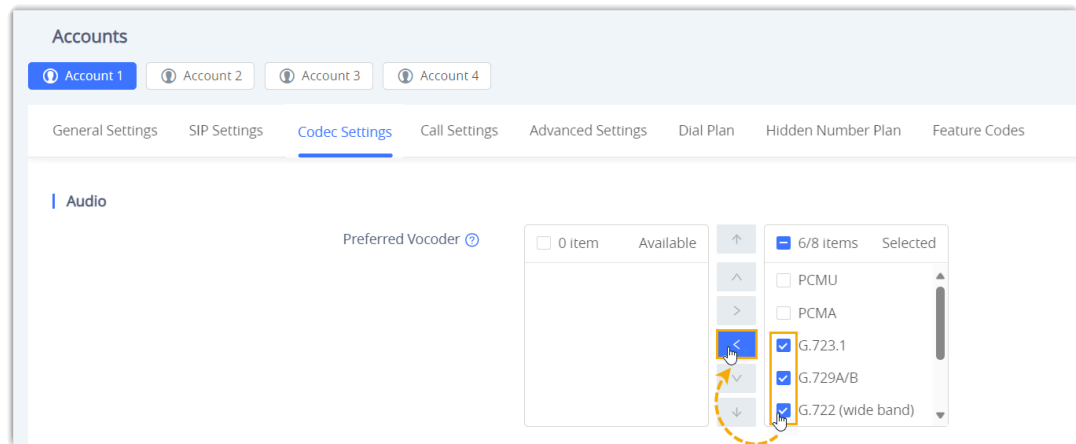
a. Log in to the phone's web interface via its IP address.

b. On the left navigation bar, go to **Accounts > Accounts**.

c. Click the desired account, then enter the **Codec Settings** tab.



d. In the **Preferred Vocoder** field, move unnecessary codecs from the **Selected** box to the **Available** box.



e. Click **Save and Apply**.

# Htek

## Auto Provision Htek IP Phone with Yeastar P-Series PBX System

This topic takes Htek UC921G (firmware: 2.0.4.8.18) as an example to introduce how to auto provision an Htek IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Htek IP Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
UC902	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC902S	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC903	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC912	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC912G	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC912E	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC921	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
UC921G	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
UC923	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC923U	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC924	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC924E	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC924U	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC924W	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC926	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC926E	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UC926U	2.0.4.8.18 or later	37.4.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UCV10	5.42.1.6.30b58 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UCV20	5.42.1.6.30b79 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UCV50	5.42.1.6.30b62 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
UCV52	5.42.1.6.30b68 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
UCV53	5.42.1.6.32R76 or later	37.12.0.23 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

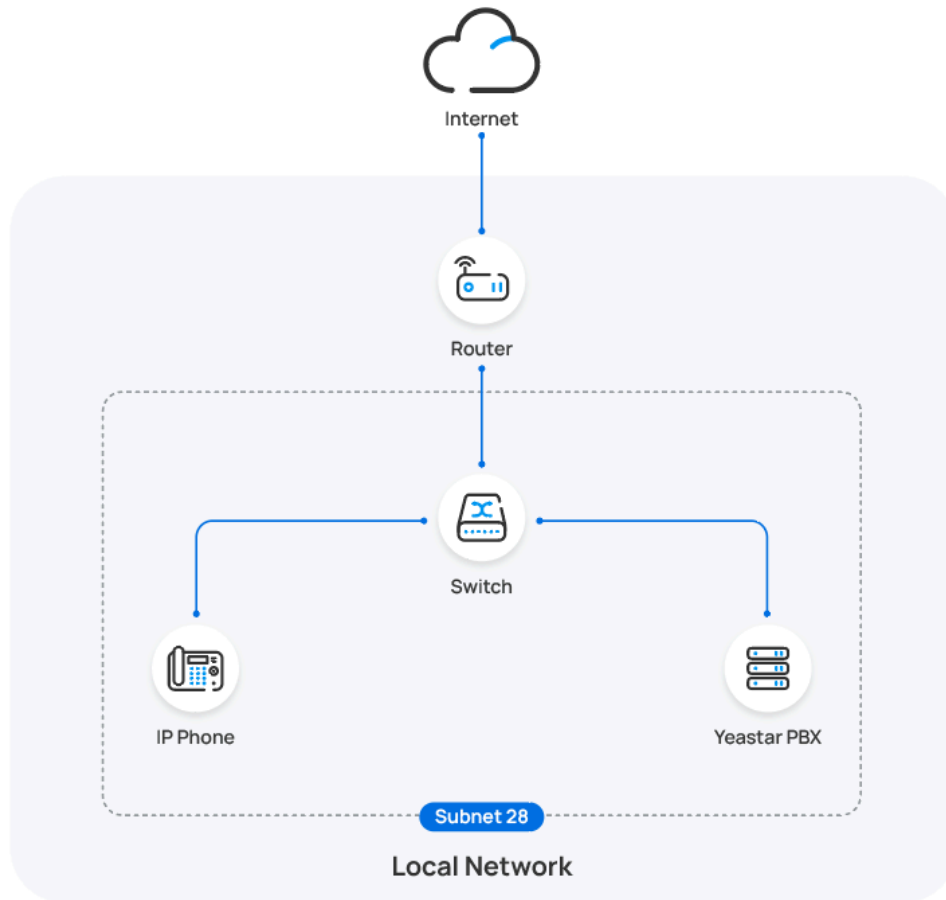
## Scenarios

The provisioning methods and operations vary depending on the network environment of **Htek IP Phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Htek IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision an Htek IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Htek IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision an Htek IP phone in the different subnets (DHCP)</a>.</p>
IP Phone and PBX are in DIFFERENT network	<p>In this scenario, you can provision the Htek IP phone with the PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision an Htek IP phone in remote network (RPS)</a>.</p>

### Auto provision an Htek IP phone in the same subnet (PnP)

In this example, the Htek IP phone (IP: 192.168.28.193) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.




## Prerequisites

- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Htek IP phone.



<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Htek	UC921G	192.168.28.193	-	

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.






## Result



**Note:**

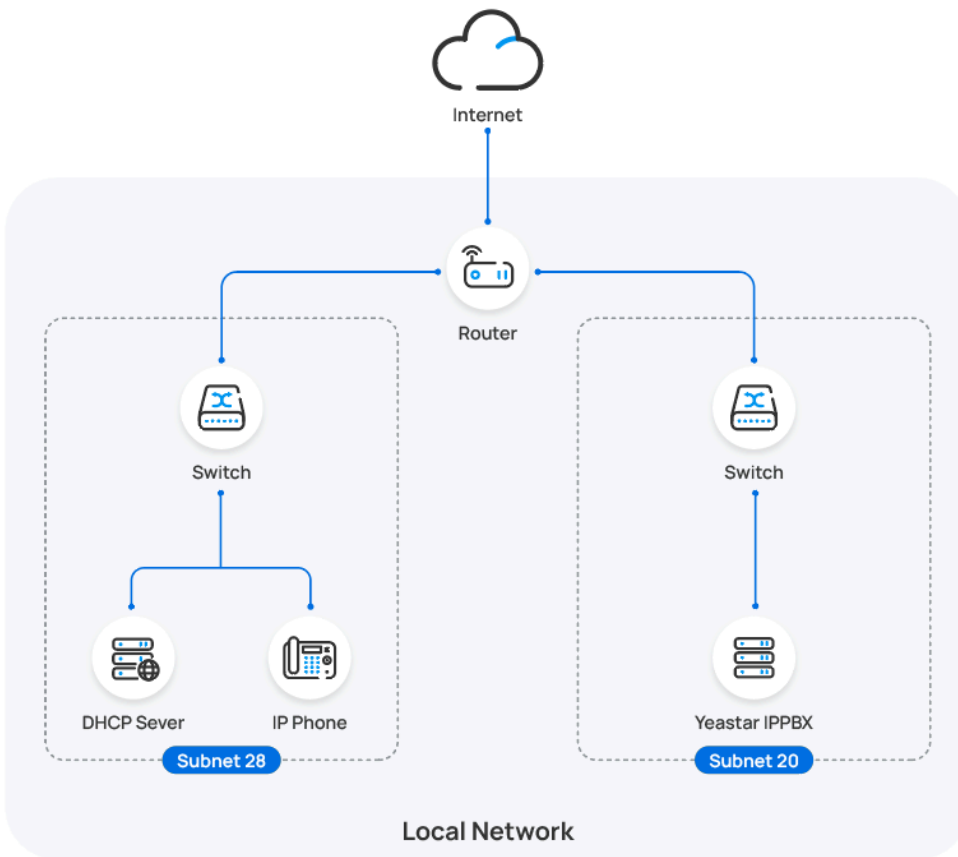
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
<input type="checkbox"/>		3000	Leo Ball	Htek	UC921G	192.168.28.193	-	   

## Auto provision an Htek IP phone in the different subnets (DHCP)

In this example, the Htek IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

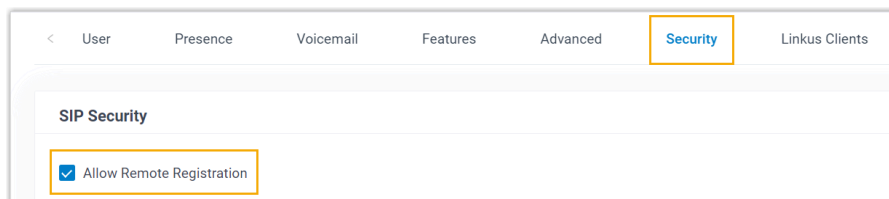
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Htek IP phone on PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Htek IP phone on PBX

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

**IP Phone**

\* Vendor: Htek

\* Model: UC921G

\* MAC Address: [Redacted]

- **Vendor:** Select **Htek**.
- **Model:** Select the phone model. In this example, select **UC921G**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template: YSDP\_HtekUC9XX

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Assign Extension**

\* Select Extension: 3000-Leo Ball



**Note:**



If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

Options	
* Template	YSDP_HtekUC9XX
* Provisioning Method	DHCP (In the Office)
Provisioning Link	http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

**Interfaces » LAN**

General Settings | Advanced Settings | Firewall Settings | **DHCP Server**

General Setup | **Advanced Settings** | IPv6 Settings | IPv6 RA Settings

Dynamic DHCP ☒   
 ? Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐   
 ? Force DHCP on this network even if another server is detected.

IPv4-Netmask    
 ? Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options     
    
   
 ? Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

## Result



### Note:

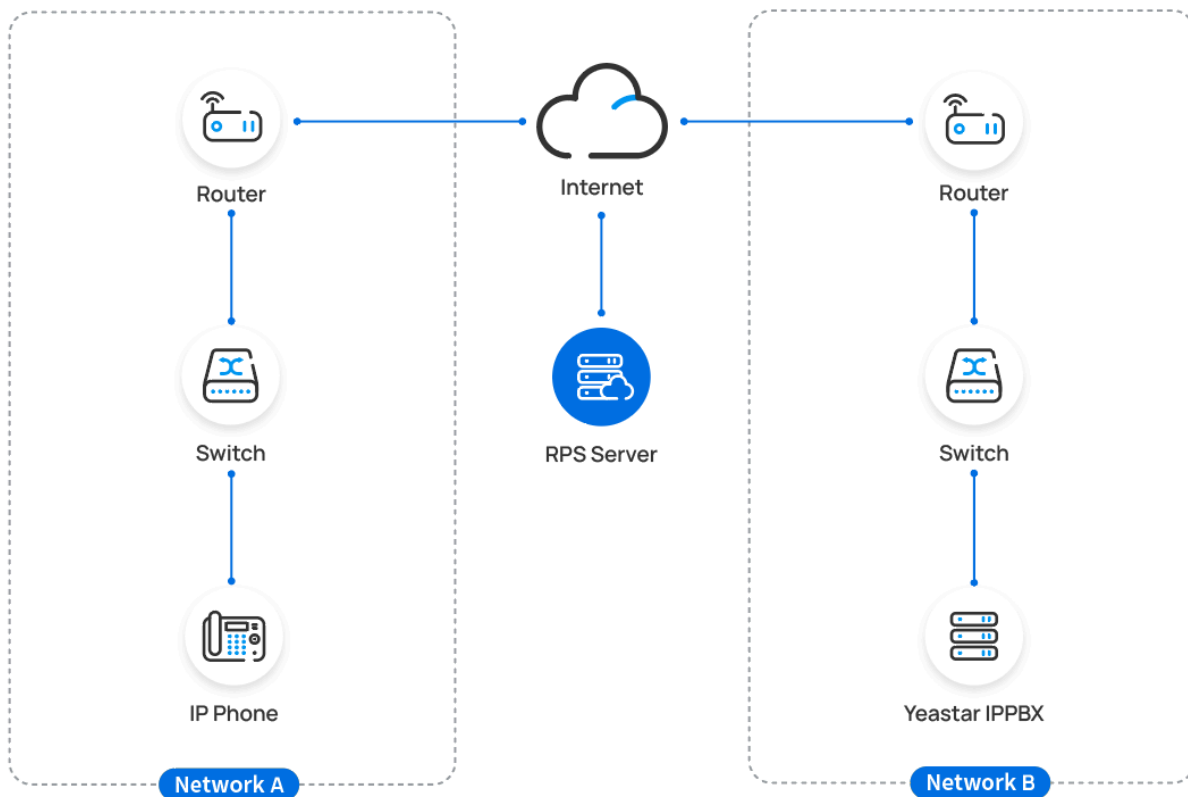
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Htek	UC921G	-	-	

## Auto provision an Htek IP phone in remote network (RPS)

In this example, the Htek IP phone and the Yeastar PBX are deployed in different network.




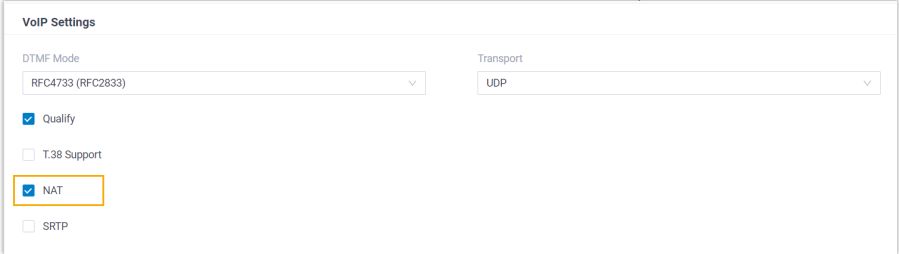

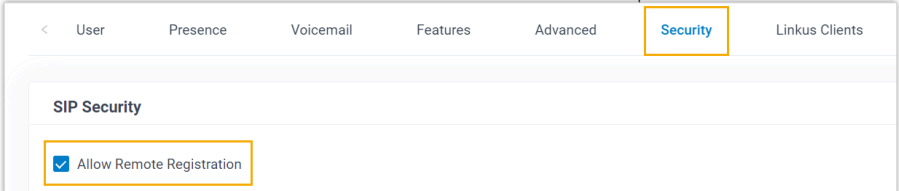
## Prerequisites

Yeastar P-Series PBX System supports to auto provision an Htek phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• Grant remote access permission for extension to be registered and the remote IP phones: <ul style="list-style-type: none"> <li>◦ <a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>

Method	Setting
	<div data-bbox="672 260 1565 621"> </div> <p>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</p> <div data-bbox="678 877 1265 1119"> </div> <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div data-bbox="591 1556 1300 1814" style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>Important:</b></p> <p>The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> </div> <ul style="list-style-type: none"> <li>• Set up the extension for remote registration.</li> </ul>



Method	Setting
	<ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul>  <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>

## Procedure

- [Step 1. Add the Htek IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Htek IP phone on PBX

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

The form is titled "IP Phone". It contains three fields:
 

- \* Vendor:** A dropdown menu with "Htek" selected.
- \* Model:** A dropdown menu with "UC921G" selected.
- \* MAC Address:** A text input field with a blurred value.

- **Vendor:** Select **Htek**.
- **Model:** Select the phone model. In this example, select **UC921G**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

Figure 13. RPS using Yeastar FQDN

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_HtekUC9XX" selected.
- \* Provisioning Method:** A dropdown menu with "RPS FQDN (Remote)" selected.
- Provisioning Link:** A text input field containing the URL "https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oi".
- ☒ **Authentication for the First-time Auto Provisioning**

Figure 14. RPS using Public IP Address / External Host domain name

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_HtekUC9XX" selected.
- \* Provisioning Method:** A dropdown menu with "RPS (Remote)" selected.
- Provisioning Link:** A text input field containing the URL "https://110.35.77.110:18207/api/autoprovision/H70R1oiPnUCnp6L".
- ☒ **Authentication for the First-time Auto Provisioning**

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.

**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.


- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

1. Reboot the IP phone.
2. If you have enabled **Authentication for the First-time Auto Provisioning** on the PBX, enter the authentication credential on the IP phone.



1. User Name:

2. Password:

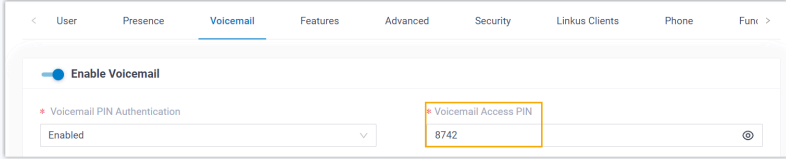
Back Save

- **User Name:** Enter the extension number that is assigned to the phone.
- **Password:** Enter the extension's Voicemail Access PIN.



**Tip:**

You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.



The screenshot shows the 'Voicemail' tab in a configuration interface. Under the 'Enable Voicemail' section, there is a 'Voicemail PIN Authentication' dropdown set to 'Enabled'. To its right, the 'Voicemail Access PIN' field is highlighted with a yellow box and contains the value '8742'.

## Result

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Htek	UC921G	-	-	

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Htek IP Phone with Yeastar P-Series PBX System

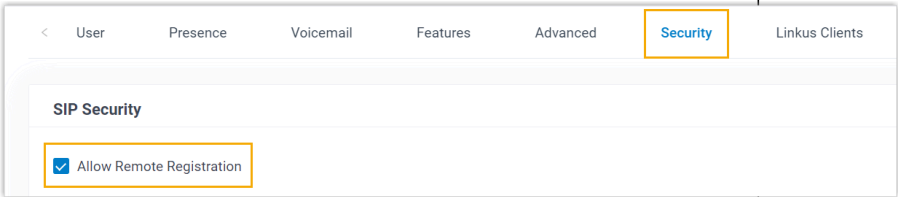
This topic takes Htek UC921G (firmware: 2.0.4.8.18) as an example to introduce how to manually register an extension on an Htek IP phone.

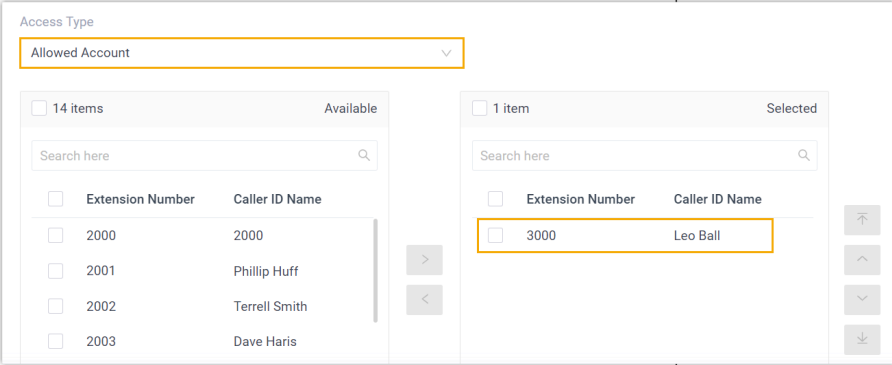


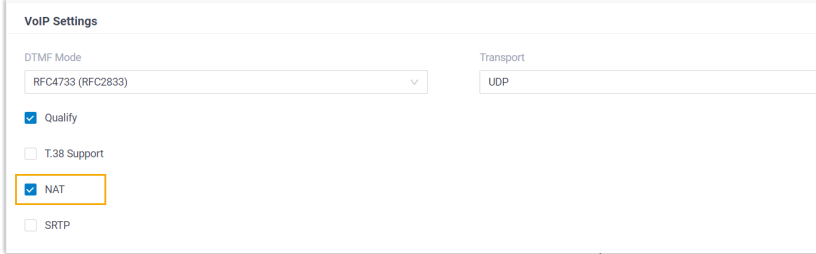
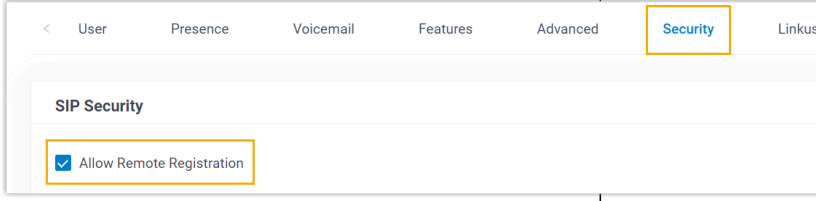
## Supported devices

The Htek IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Htek IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> </ul>

Network Environment	Setting
	<ul style="list-style-type: none"> <li>Grant remote SIP access permission for the extension (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
<p>Register extension using Public IP address / External Host domain name</p>	<ul style="list-style-type: none"> <li>Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>Set up the extension for remote registration.             <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> <li>Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> </li> </ul>  


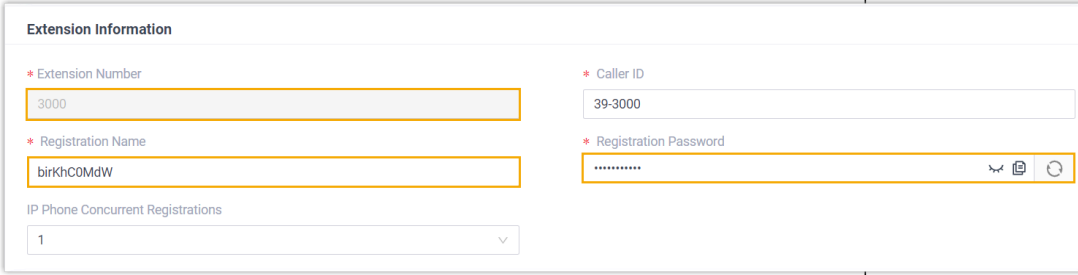

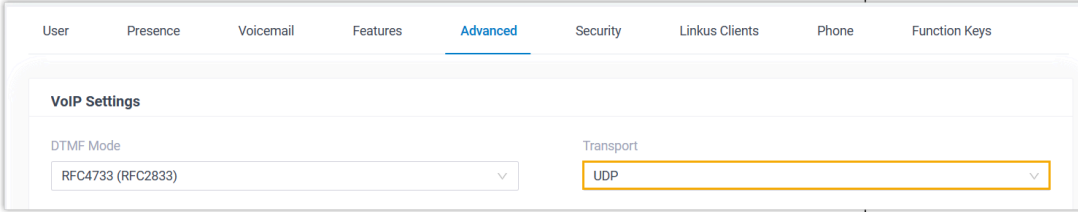

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)

- [Step 2. Register extension on Htek IP phone](#)


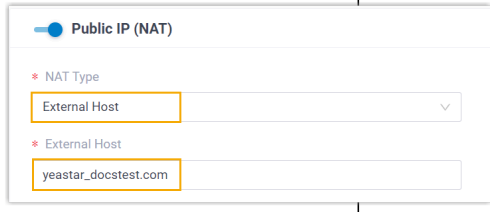
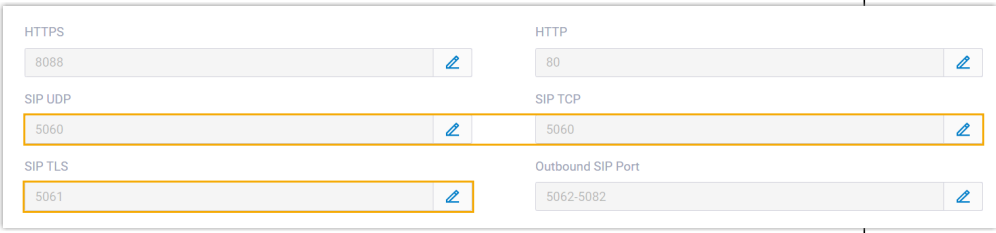
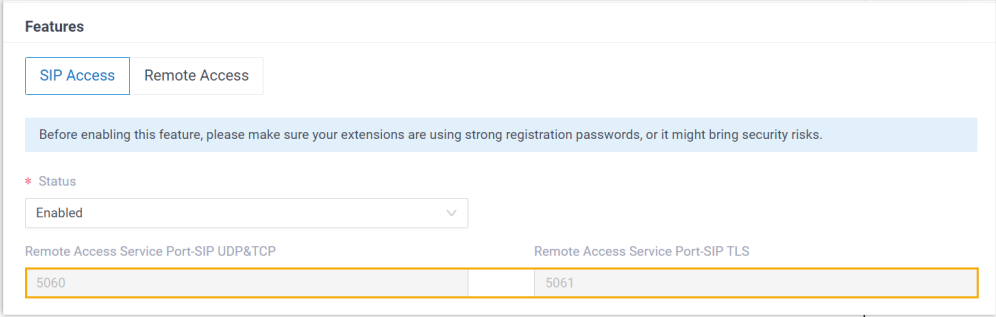
## Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul>
	
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>
	 <div>  <b>Note:</b> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div>

Information	Instruction
	<div data-bbox="560 262 609 315"></div> <div data-bbox="706 262 1599 472"> <p><b>Basic</b></p> <p>* SIP UDP Port 5060</p> <p>* SIP TCP Port <input checked="" type="checkbox"/> 5060</p> <p>* RTP Port Range 18256 : 18356</p> <p>* Outbound SIP Port Range <input type="checkbox"/> 5062 : 5082</p> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="706 619 1201 766"> <p><input checked="" type="checkbox"/> <b>TLS</b></p> <p>* SIP TLS Port 5061</p> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 1018 609 1071"></div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="544 1333 1534 1459"> <p>Status ● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN) yeastardocs.ras.yeastar.com</p> <p>Expiration Date 11/26/2023</p> <p><small>The domain name can be configured only once and cannot be altered after the configuration.</small></p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p>

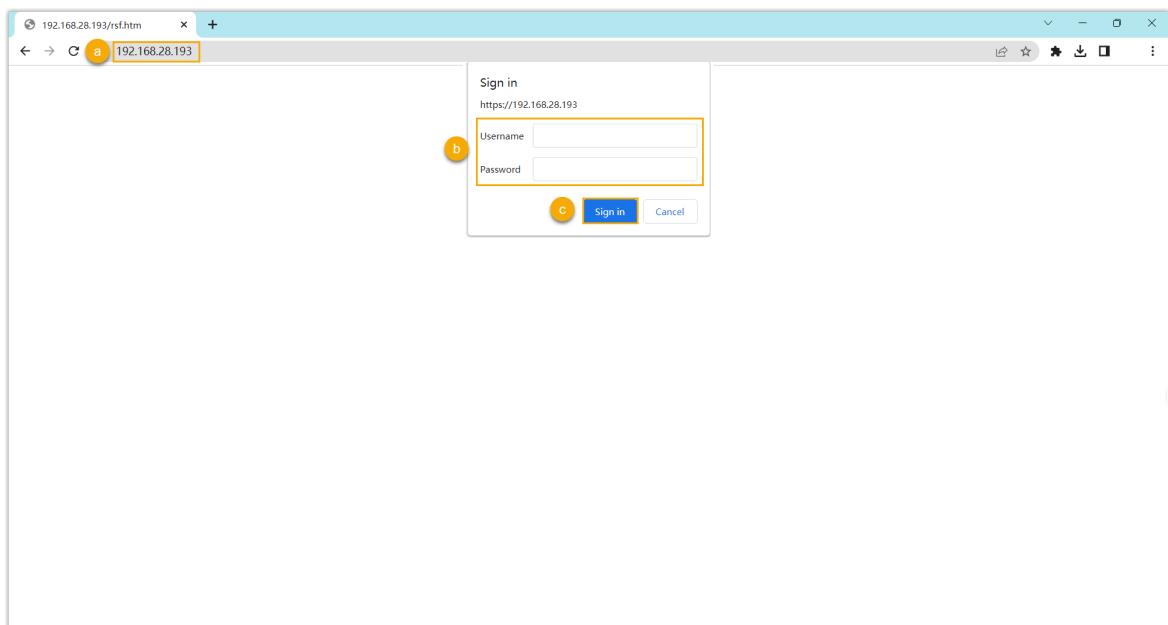


Information	Instruction
	<div data-bbox="540 258 1019 468">  </div> <div data-bbox="1044 258 1531 468">  </div>
SIP registration port	<p data-bbox="540 489 1401 531"><b>Scenario: Register extension in local network</b></p> <p data-bbox="540 541 1401 615">Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 636 1531 867">  </div> <p data-bbox="540 888 1401 930">In this example, we use the SIP UDP port 5060.</p> <p data-bbox="540 951 1401 993"><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p data-bbox="540 1003 1401 1119">Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1140 1531 1455">  </div> <p data-bbox="540 1497 1401 1570"><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p data-bbox="540 1581 1401 1694">Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>

Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> </div> <div> <div>External SIP TCP Port</div> <div>18205</div> </div> <div> <div>External SIP TLS Port</div> <div>18208</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Htek IP phone

1. Log in to the web interface of the Htek IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

In this example, enter the default password `admin`.

- c. Click **Sign in**.
2. Go to **Profile > Basic**, edit the profile for registration.
    - a. Complete the following settings

**Htek** | Home | Profile | Account | Network | Function Keys | Settings

**Basic** | Codec | Advanced

**Profile** | Profile 2

\* Primary SIP Server: 192.168.28.39 ?

Failover SIP Server: ?

Prefer Primary SIP Server: ☒ No ☐ Yes ?

Outbound Proxy: ?

Backup Outbound Proxy: ?

\* SIP Transport: ☒ UDP ☐ TCP ☐ TLS ?

NAT Traversal: ☐ No ☒ No, but send keep alive ☐ STUN

- **Primary SIP Server:** Enter the IP address / domain name of the PBX.
- **SIP Transport:** Select the transport protocol of the extension. In this example, select **UDP**.

b. At the bottom of the page, click **SaveSet**.

3. Go to **Account > Basic**, complete the following settings.

**Htek** | Home | Profile | Account | Network | Function Keys | Settings

**Basic**

**a** **Account** | Account 2

Account Status: Disabled

**b** \* Account Active: ☐ No ☒ Yes

**c** Profile: Profile 2

Label: Leo Ball ?

\* SIP User ID: 3000 ?

\* Authenticate ID: birKhcOMdW ?

\* Authenticate Password: \*\*\*\*\* ?

Name: ?

Local SIP Port: 5060 ?

Use Random Port: ☒ No ☐ Yes

a. In the **Account** drop-down list, select an available account.

b. In the **Account Active** field, select **Yes** to activate the account.

c. In the **Profile** drop-down list, select [the profile edited in step 2](#).

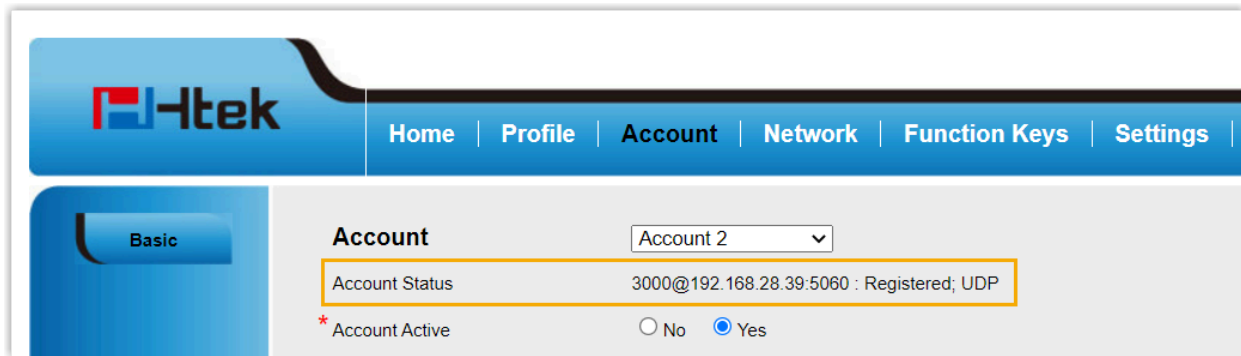
d. Enter the extension information,

- **Label:** Enter the name associated with the account, which will be displayed on the phone screen.
- **SIP User ID:** Enter the extension number.
- **Authenticate ID:** Enter the registration name of the extension.
- **Authenticate Password:** Enter the registration password of the extension.
- **Local SIP Port:** Enter the SIP registration port.

e. At the bottom of the page, click **SaveSet**.

## Result

The extension is registered successfully. You can check the registration status in the **Account Status** field.



The screenshot shows the Htek web interface. The top navigation bar includes links for Home, Profile, Account, Network, Function Keys, and Settings. The 'Account' section is active, and a dropdown menu shows 'Account 2'. The 'Account Status' field is highlighted with an orange border and displays the text '3000@192.168.28.39:5060 : Registered; UDP'. Below this, the 'Account Active' status is indicated with a red asterisk and two radio buttons: 'No' and 'Yes', with 'Yes' being the selected option.

# Tiptel

## Auto Provision Tiptel IP Phone with Yeastar P-Series PBX System

This topic takes Tiptel 3310 (firmware: 2.42.6.5.55) as an example to introduce how to auto provision a Tiptel IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Tiptel IP Phone** and **Yeastar PBX** meet the following requirements.

**Table 1.**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
3310	2.42.6.5.55 or later	37.7.0.16 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
3320	2.42.6.5.55 or later	37.7.0.16 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
3330	2.42.6.5.55 or later	37.7.0.16 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
3340	2.42.6.5.55 or later	37.7.0.16 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

### Scenarios

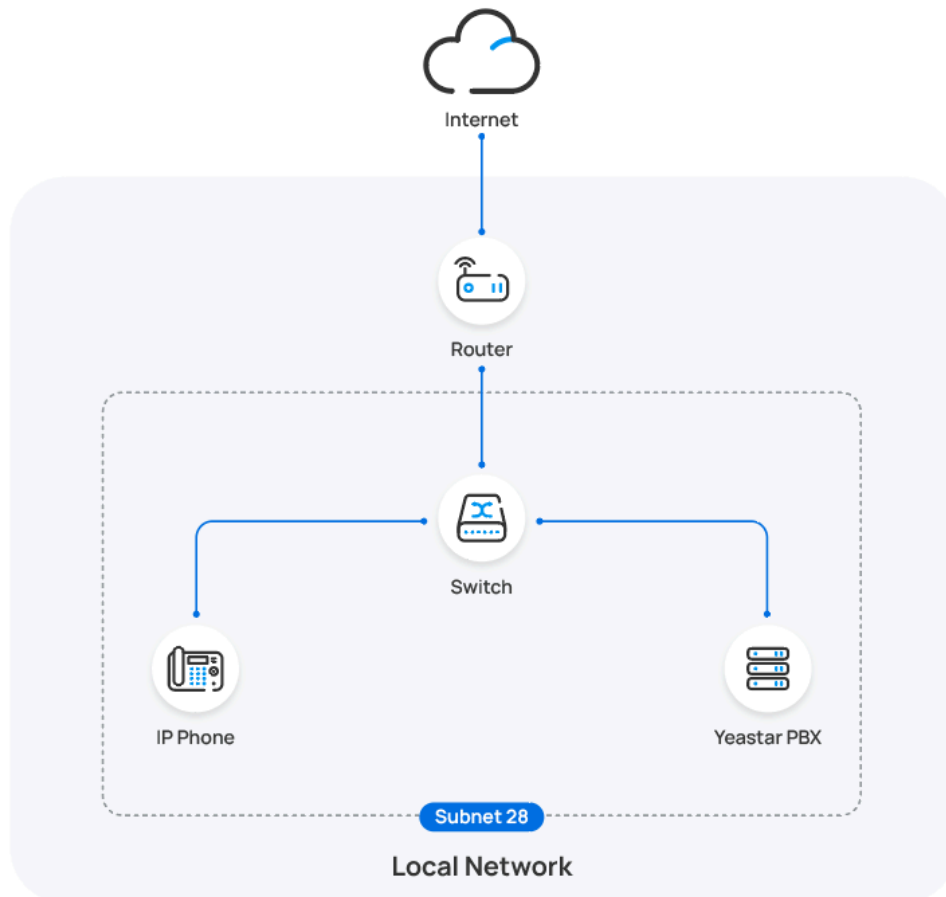
The provisioning methods and operations vary depending on the network environment of **Tiptel IP Phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Tiptel IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Tiptel IP phone in the same subnet (PnP)</a>.</p>

Scenario	Description
IP Phone and PBX are in DIFFERENT subnets (LAN)	In this scenario, you can provision the Tiptel IP phone with the PBX via <a href="#">DHCP method</a> . For more information, see <a href="#">Auto provision a Tiptel IP phone in the different subnets (DHCP)</a> .
IP Phone and PBX are in DIFFERENT network	In this scenario, you can provision the Tiptel IP phone with the PBX via <a href="#">RPS method</a> . For more information, see <a href="#">Auto provision a Tiptel IP phone in remote network (RPS)</a> .

## Auto provision a Tiptel IP phone in the same subnet (PnP)

In this example, the Tiptel IP phone (IP: 192.168.28.195) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.




## Prerequisites






- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Tiptel IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Tiptel	3310	192.168.28.195	-	   

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



### Note:

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



### Note:

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).



- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.

## Result



### Note:

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

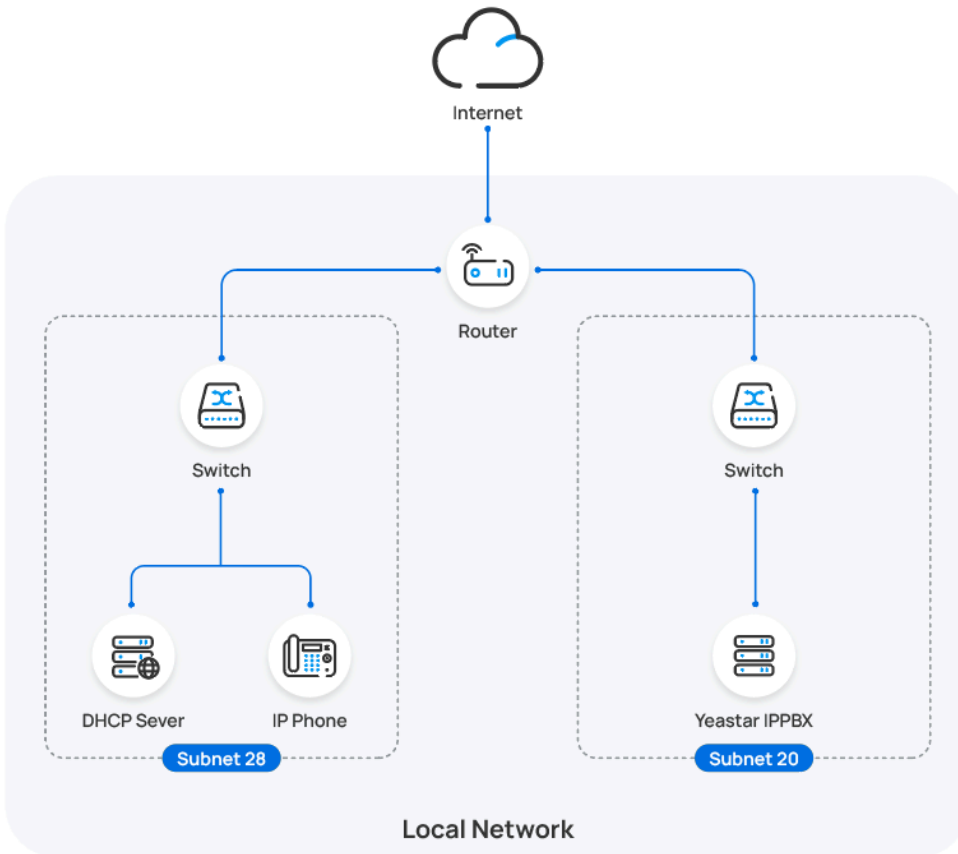
- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Tiptel	3310	192.168.28.195	-	

## Auto provision a Tiptel IP phone in the different subnets (DHCP)

In this example, the Tiptel IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.





## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

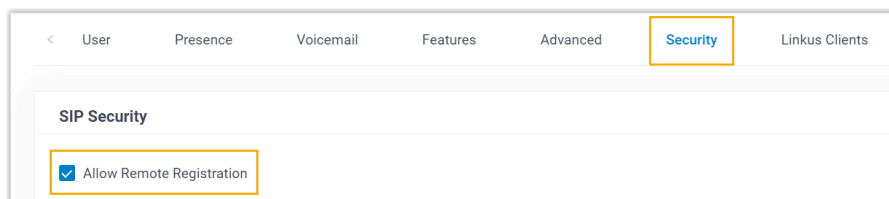
- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Tiptel IP phone on PBX](#)

- [Step 3. Configure DHCP option 66 on DHCP server](#)

## Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

## Step 2. Add the Tiptel IP phone on PBX

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

 A screenshot of the 'IP Phone' configuration form. It has three fields: 'Vendor' (a dropdown menu with 'Tiptel' selected), 'Model' (a dropdown menu with '3310' selected), and 'MAC Address' (a text input field with a blurred value). Each field has a red asterisk indicating it is required.

- **Vendor:** Select **Tiptel**.
  - **Model:** Select the phone model. In this example, select **3310**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

 A screenshot of the 'Options' configuration form. It has two main sections. The first section contains 'Template' (a dropdown menu with 'YSDP\_Tiptel' selected) and 'Provisioning Method' (a dropdown menu with 'DHCP (In the Office)' selected). The second section, labeled 'Provisioning Link', contains a text input field with the URL 'http://192.168.20.58:7778/apl/autoprovision/KZVJ3gwlHjecazEQB' and a copy icon.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

The screenshot shows a web form titled 'Assign Extension'. Below the title is a label '\* Select Extension' in red. Underneath is a drop-down menu with a yellow border. The menu is open, showing '3000-Leo Ball' as the selected option. A small downward arrow is visible on the right side of the menu.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

**Options**

\* Template  
YSDP\_Tiptel

\* Provisioning Method  
DHCP (In the Office)

Provisioning Link  
http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

**Interfaces » LAN**

General Settings Advanced Settings Firewall Settings DHCP Server

General Setup Advanced Settings IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒  
Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐  
Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0  
Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5  
66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB  
Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

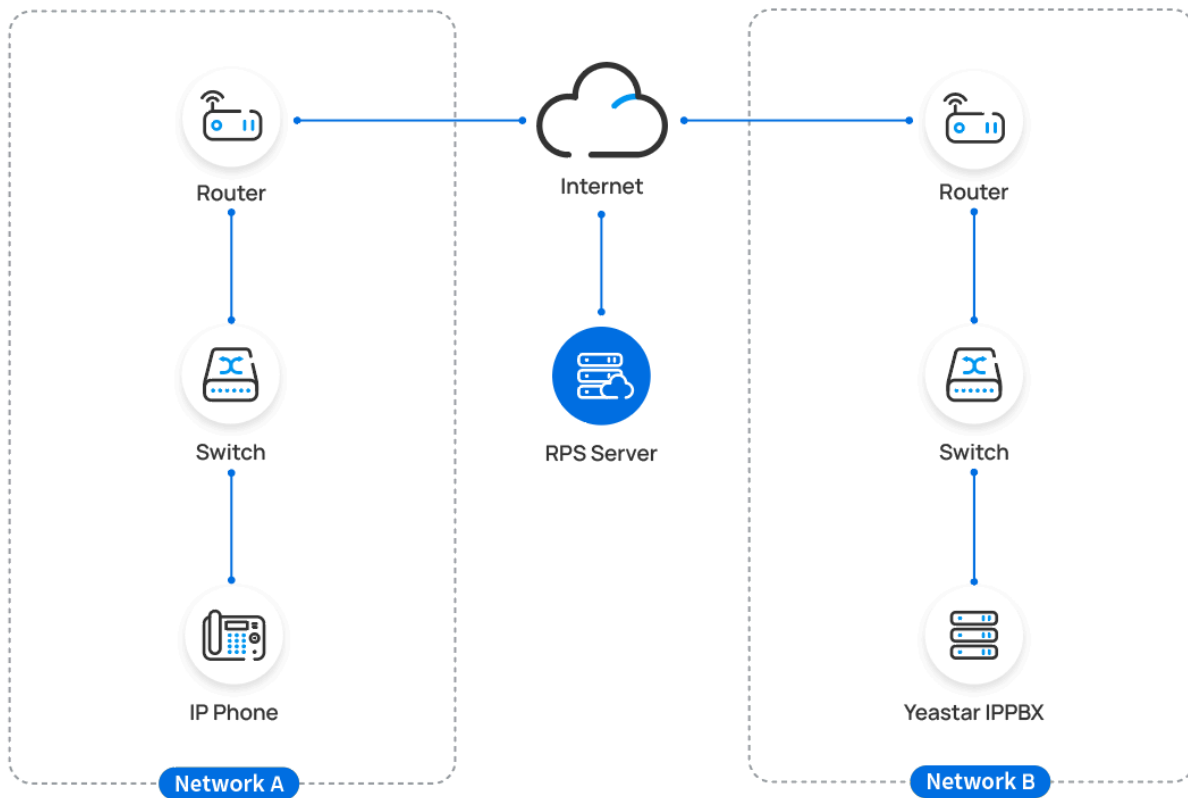
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Tiptel	3310	-	-	

## Auto provision a Tiptel IP phone in remote network (RPS)

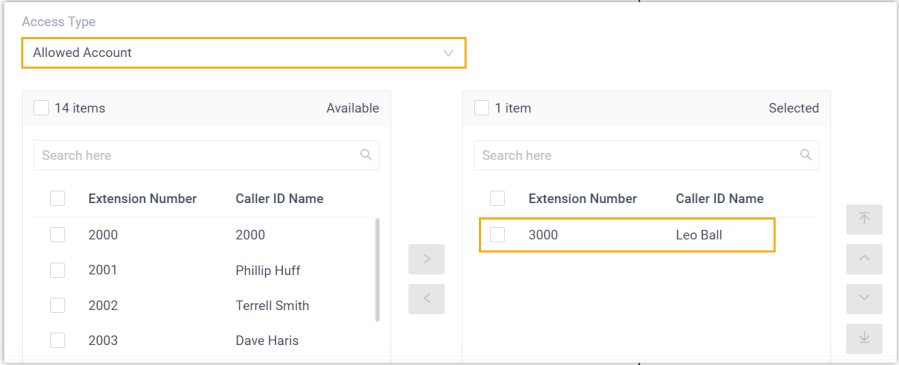
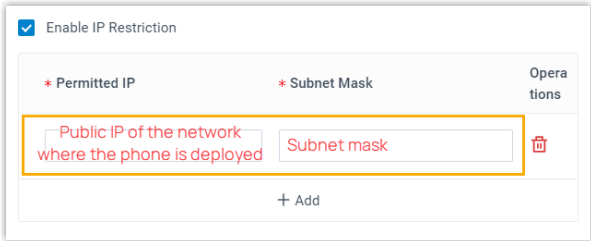
In this example, the Tiptel IP phone and the Yeastar PBX are deployed in different network.


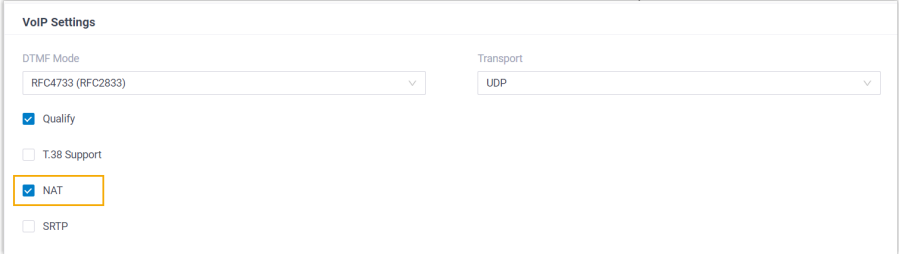

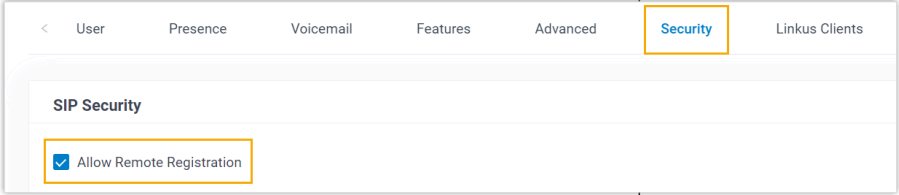


## Prerequisites

Yeastar P-Series PBX System supports to auto provision a Tiptel phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>Grant remote access permission for extension to be registered and the remote IP phones:               <ul style="list-style-type: none"> <li><a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via</li> </ul> </li> </ul>

Method	Setting
	<p>FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</p>  <p>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</p>  <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>Important:</b></p> <p>The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> </div>

Method	Setting
	<ul style="list-style-type: none"> <li>Set up the extension for remote registration.               <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul>
	
	<ul style="list-style-type: none"> <li>Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul>
	
	<ul style="list-style-type: none"> <li>Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>RESET the IP phone if it is previously used.</li> <li>Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>

## Procedure

- [Step 1. Add the Tiptel IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Tiptel IP phone on PBX

- Log in to PBX web portal, go to **Auto Provisioning > Phones**.
- Click **Add > Add**.
- In the **IP Phone** section, enter the following phone information.

The form is titled "IP Phone". It contains three fields:
 

- \* Vendor:** A dropdown menu with "Tiptel" selected.
- \* Model:** A dropdown menu with "3310" selected.
- \* MAC Address:** A text input field with a blurred value.

- **Vendor:** Select **Tiptel**.
- **Model:** Select the phone model. In this example, select **3310**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

Figure 15. RPS using Yeastar FQDN

The form is titled "Options". It contains:
 

- \* Template:** A dropdown menu with "YSDP\_Tiptel" selected.
- \* Provisioning Method:** A dropdown menu with "RPS FQDN (Remote)" selected.
- Provisioning Link:** A text field displaying "https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oi".
- ☒ **Authentication for the First-time Auto Provisioning**

Figure 16. RPS using Public IP Address / External Host domain name

The form is titled "Options". It contains:
 

- \* Template:** A dropdown menu with "YSDP\_Tiptel" selected.
- \* Provisioning Method:** A dropdown menu with "RPS (Remote)" selected.
- Provisioning Link:** A text field displaying "https://110.35.77.110:18207/api/autoprovision/H70R1oiPnJCnp6L".
- ☒ **Authentication for the First-time Auto Provisioning**

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.



- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.

**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

1. Reboot the IP phone.
2. If you have enabled **Authentication for the First-time Auto Provisioning** on the PBX, enter the authentication credential on the IP phone.



1. UserName:

2. Password:

Back


Save

- **UserName:** Enter the extension number that is assigned to the phone.
- **Password:** Enter the extension's Voicemail Access PIN.


**Tip:**

You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.

The screenshot shows the 'Voicemail' tab in the configuration interface. Under 'Enable Voicemail', there is a section for 'Voicemail PIN Authentication' with a dropdown set to 'Enabled'. Next to it, the 'Voicemail Access PIN' is set to '8742'.

## Result

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Tiptel	3310	-	-	

**Related information**[Auto Provision LDAP for IP Phones](#)

## Manually Register Tiptel IP Phone with Yeastar P-Series PBX System


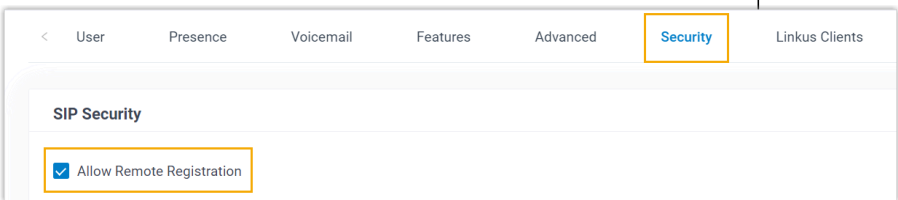
This topic takes Tiptel 3310 (firmware: 2.42.6.5.55) as an example to introduce how to manually register an extension on a Tiptel IP phone.

**Supported devices**

The Tiptel IP phones that are compatible with SIP (Session Initiation Protocol).

**Prerequisites**

Make sure that you have completed the corresponding settings shown below according to the network environment of **Tiptel IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• <a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul>


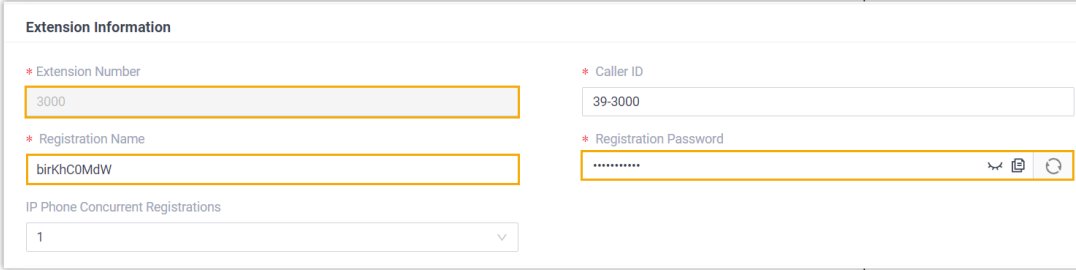

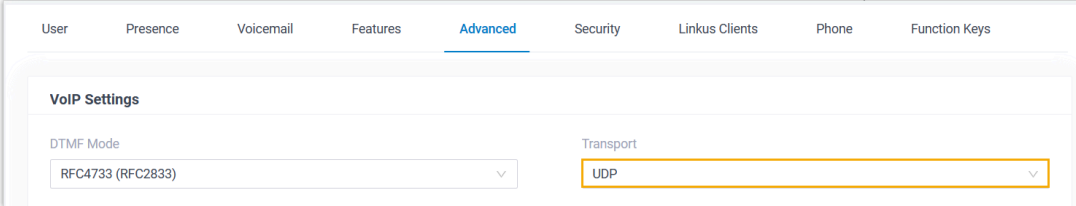

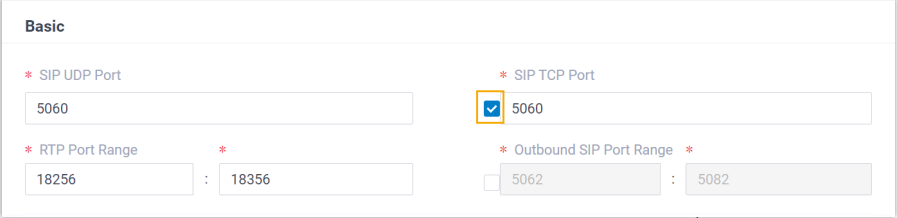
Network Environment	Setting
Register extension using Public IP address / External Host domain name	<div data-bbox="727 260 1619 621"> </div> <ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>• Set up the extension for remote registration.               <ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul> <div data-bbox="805 932 1624 1184"> </div> <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> <div data-bbox="805 1394 1624 1583"> </div>

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Tiptel IP phone](#)

## Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

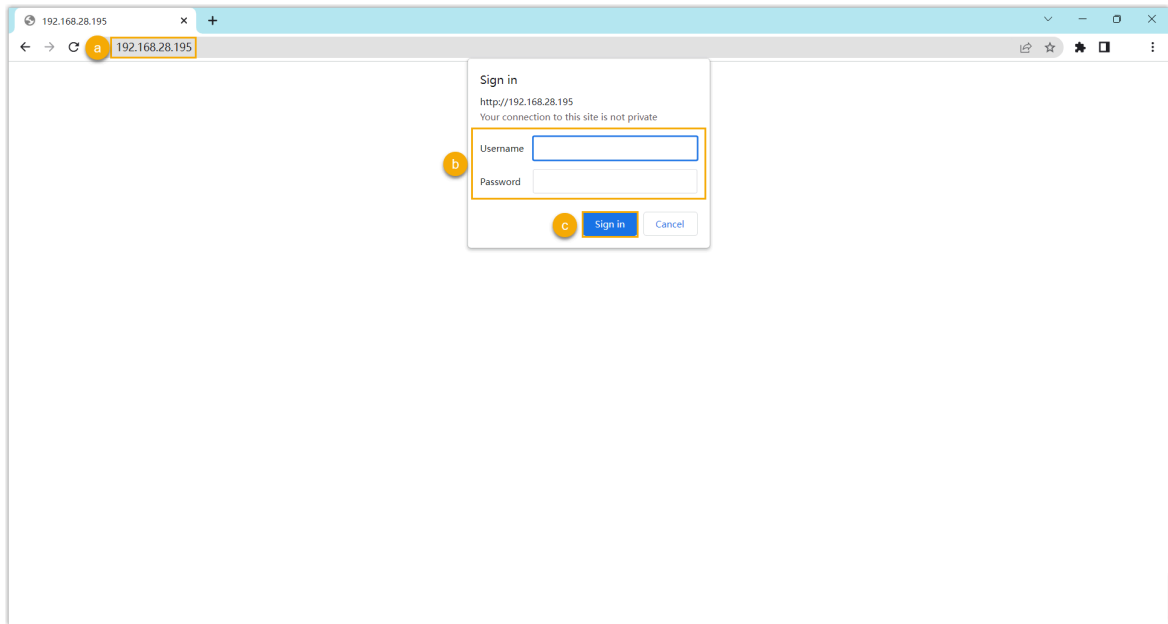
Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>  <div>  <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div> 

Information	Instruction
	<div data-bbox="560 262 609 315"></div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="706 388 1198 525"> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 766 609 819"></div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="540 1081 1531 1207"> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="540 1438 1531 1640"> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>

Information	Instruction
	<div> <div> <div>HTTPS</div> <div>8088</div> <div></div> </div> <div> <div>HTTP</div> <div>80</div> <div></div> </div> <div> <div>SIP UDP</div> <div>5060</div> <div></div> </div> <div> <div>SIP TCP</div> <div>5060</div> <div></div> </div> <div> <div>SIP TLS</div> <div>5061</div> <div></div> </div> <div> <div>Outbound SIP Port</div> <div>5062-5082</div> <div></div> </div> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div> <div>Features</div> <div> <div>SIP Access</div> <div>Remote Access</div> </div> <div>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</div> <div> <div>* Status</div> <div>Enabled</div> </div> <div> <div>Remote Access Service Port-SIP UDP&amp;TCP</div> <div>5060</div> <div>Remote Access Service Port-SIP TLS</div> <div>5061</div> </div> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> <div>External SIP TCP Port</div> <div>18205</div> <div>External SIP TLS Port</div> <div>18208</div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Tiptel IP phone

1. Log in to the web interface of the Tiptel IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

In this example, enter the default password `admin`.

- c. Click **Sign in**.

2. Go to **Profile > Basic**, edit the profile for registration.

- a. Complete the following settings.



- **Primary SIP Server:** Enter the IP address / domain name of the PBX.
- **SIP Transport:** Select the transport protocol of the extension. In this example, select **UDP**.

b. At the bottom of the page, click **SaveSet**.

3. Go to **Account > Basic**, complete the following settings.

a. In the **Account** drop-down list, select an available account.

b. In the **Account Active** field, select **Yes** to activate the account.

c. In the **Profile** drop-down list, select [the profile edited in step 2](#).

d. Enter the extension information.

- **Label:** Enter the name associated with the account, which will be displayed on the phone screen.
- **SIP User ID:** Enter the extension number.
- **Authenticate ID:** Enter the registration name of the extension.
- **Authenticate Password:** Enter the registration password of the extension.
- **Local SIP Port:** Enter the SIP registration port.

e. At the bottom of the page, click **SaveSet**.

## Result

The extension is registered successfully. You can check the registration status in the **Account status** field.

The screenshot shows the Tiptel web interface. At the top is a red header with the 'tiptel' logo on the left and navigation links 'Home', 'Profile', 'Account', 'Network', and 'Function Keys' on the right. Below the header is a sidebar with a red 'Basic' tab. The main content area is titled 'Account' and features a dropdown menu set to 'Account 1'. A yellow box highlights the 'Account Status' field, which displays '3000@192.168.28.39:5060 : Registered; UDP'. Below this, the 'Account Active' status is shown with a red asterisk, a radio button for 'No', and a selected radio button for 'Yes'.

Account	
Account Status	3000@192.168.28.39:5060 : Registered; UDP
* Account Active	<input type="radio"/> No <input checked="" type="radio"/> Yes

# Alcatel-Lucent Enterprise (ALE)

## Auto Provision Alcatel Lucent Enterprise (ALE) IP Phone with Yeastar P-Series PBX System

This topic takes Alcatel Lucent Enterprise M3 (firmware: 2.13.39.000.2217) as an example to describe how to auto provision Alcatel Lucent Enterprise (ALE) IP phone with Yeastar P-Series PBX System in Local Area Network (LAN).

### Requirements

The firmwares of **ALE IP phone** and **Yeastar PBX** meet the following requirements.

**Table 2.**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
H2	2.10.00.0001083 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
H2P	2.10.00.0001083 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
H3P	2.12.43.010.2272 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
H3G	2.12.43.010.2272 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
H6	2.12.43.010.2272 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
M3	2.13.37.000.2202 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
M5	2.13.37.000.2202 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
M7	2.13.37.000.2202 or later	37.5.0.9 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
M8	2.13.32.000.1535 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>

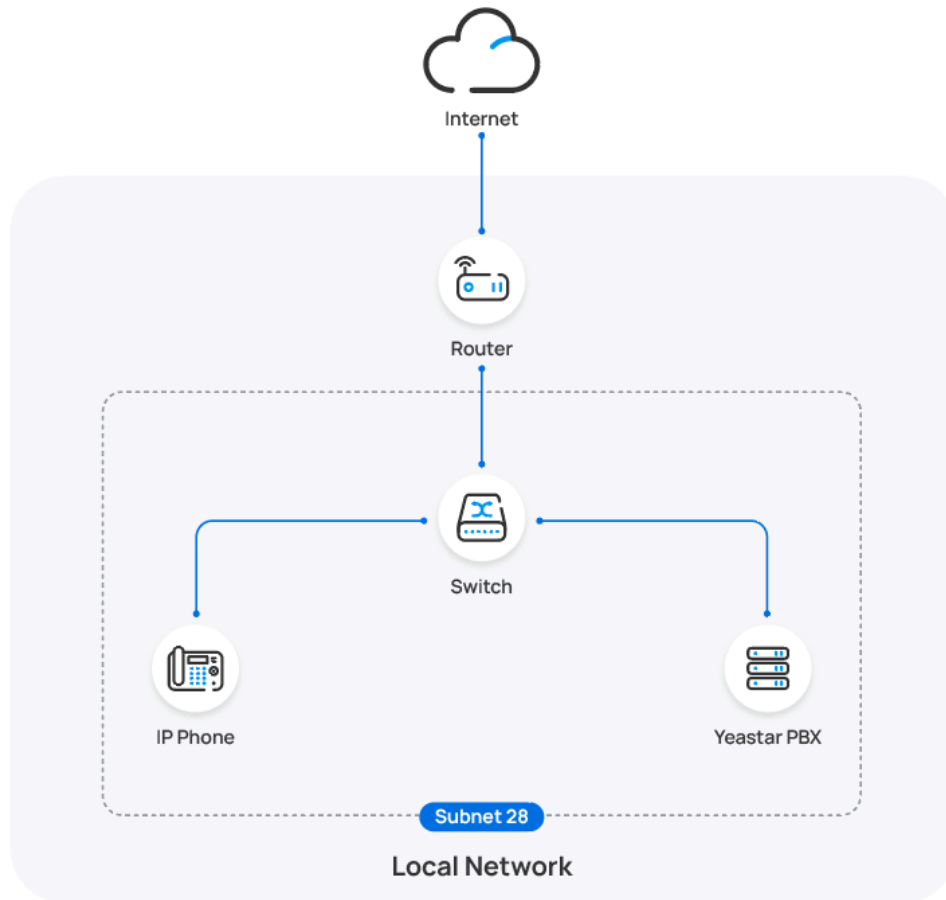
## Scenarios

The provisioning methods and operations vary depending on the network environment of **ALE IP phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet	<p>In this scenario, you can provision the ALE IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision an ALE IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets	<p>In this scenario, you can provision the ALE IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision an ALE IP phone in different subnets (DHCP)</a>.</p>

### Auto provision an ALE IP phone in the same subnet (PnP)


In this example, the ALE IP phone (IP: 192.168.28.205) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.







## Prerequisites

- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.  
The IP phones detected by the PBX via PnP are displayed in the phone list.
2. Click  beside the ALE IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
<input type="checkbox"/>	✕	Unassigned	Unassigned	Alcatel-Lucent Enterprise	M3	192.168.28.205	-	   

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.

## Result



**Note:**

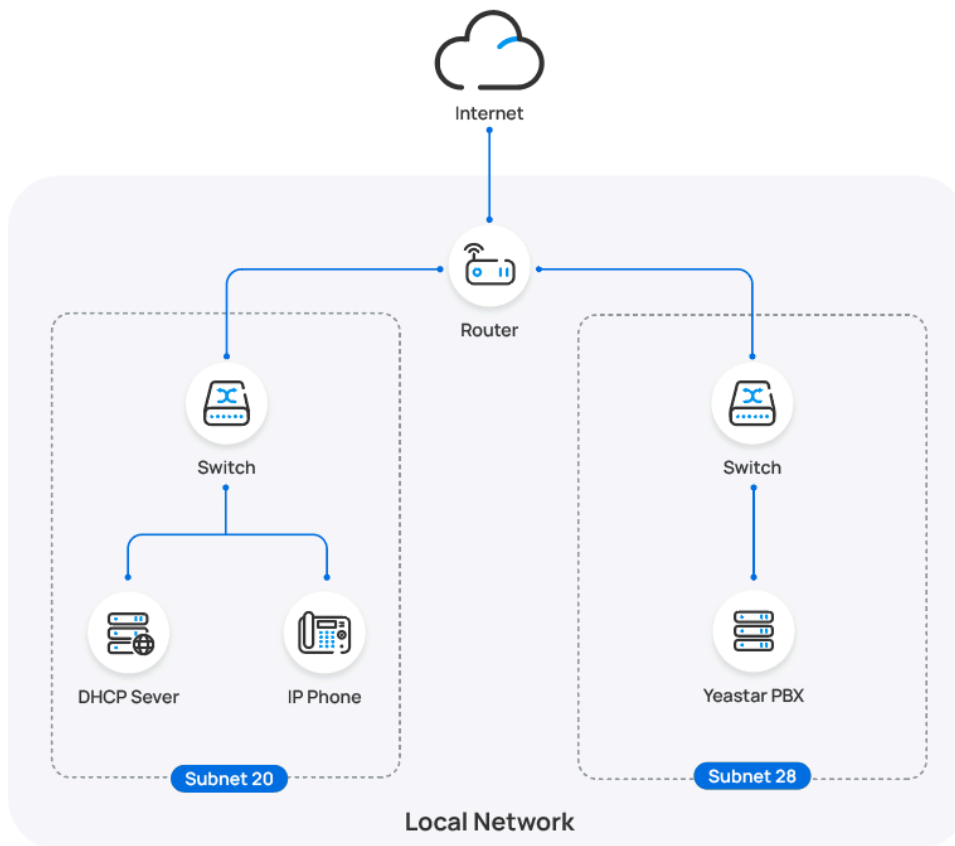
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Alcatel-Lucent Enterprise	M3	192.168.28.205	*****@	

## Auto provision an ALE IP phone in different subnets (DHCP)

In this example, the ALE IP phone and DHCP server are deployed in subnet 20, while the Yeastar PBX (IP: 192.168.28.110) is deployed in subnet 28.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.

- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

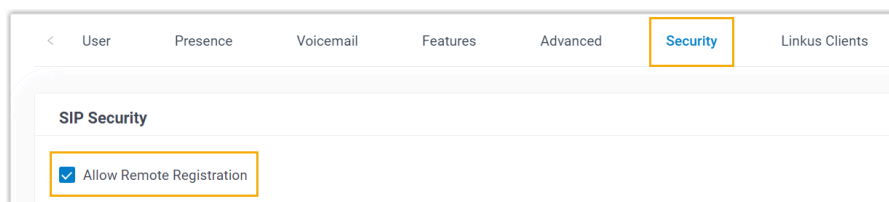
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the ALE IP phone on the PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the ALE IP phone on the PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, configure phone information as follows:



**IP Phone**

\* Vendor: Alcatel-Lucent Enterprise

\* Model: M3

\* MAC Address:

- **Vendor:** Select **Alcatel-Lucent Enterprise**.
- **Model:** Select a phone model. In this example, select **M3**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template: YSDP\_AleMyriad

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: <http://192.168.28.110:7778/api/autoprovision/scdF7vCgneHkCpZm>

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Assign Extension**

\* Select Extension: 3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.



- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration is shown below.






## Result



### Note:

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor ↕	Model ↕	IP Address ↕	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Alcatel-Lucent Enterprise	M3	-	*****@	   

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Alcatel-Lucent Enterprise (ALE) Phone with Yeastar P-Series PBX System


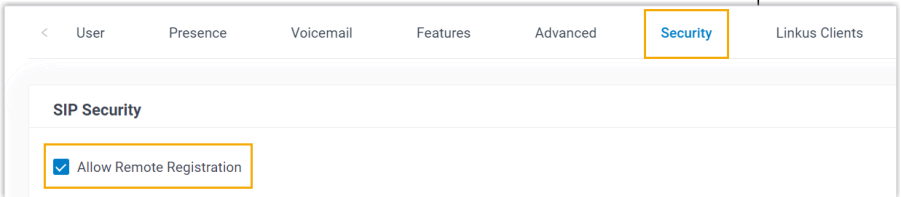
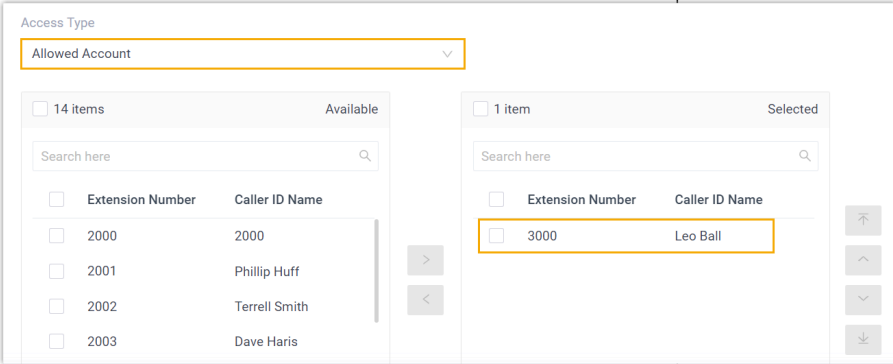

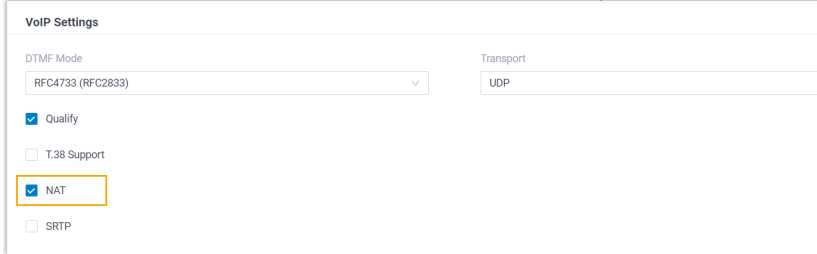
This topic takes Alcatel-Lucent Enterprise M3 (firmware: 2.13.39.000.2217) as an example to introduce how to manually register an extension on an Alcatel-Lucent Enterprise (ALE) IP phone.


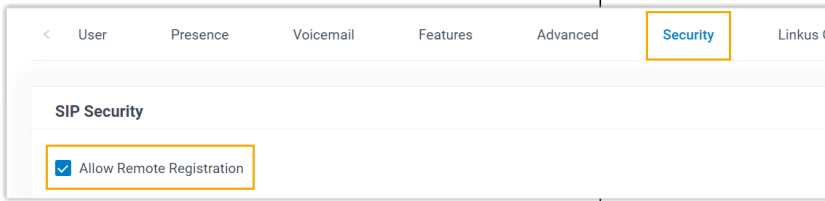
## Supported devices

The Alcatel-Lucent Enterprise IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **ALE IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li><a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>Set up the extension for remote registration. <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul> 


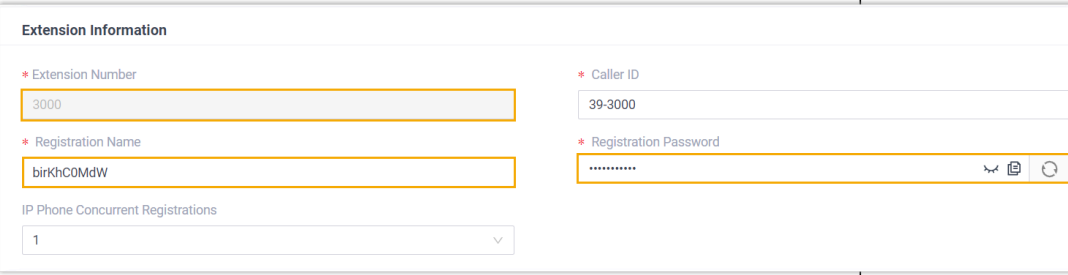

Network Environment	Setting
	<p>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 

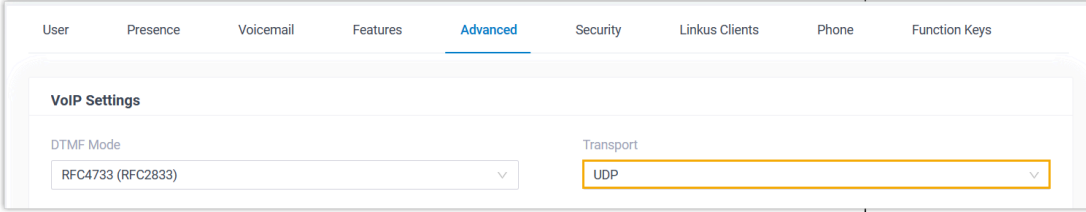

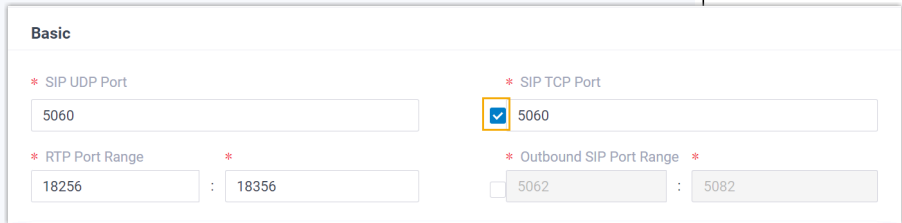
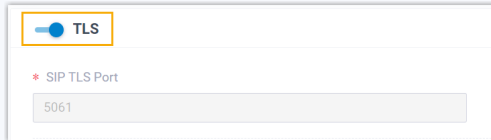

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on ALE IP phone](#)

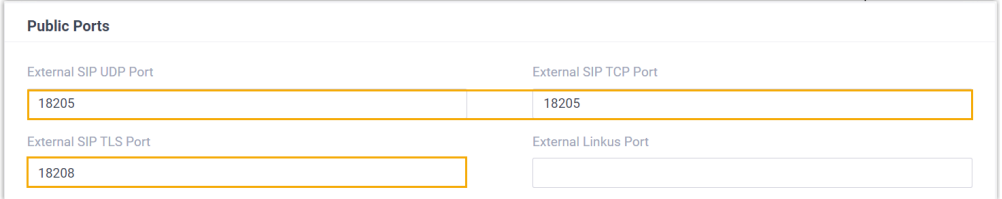
### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>

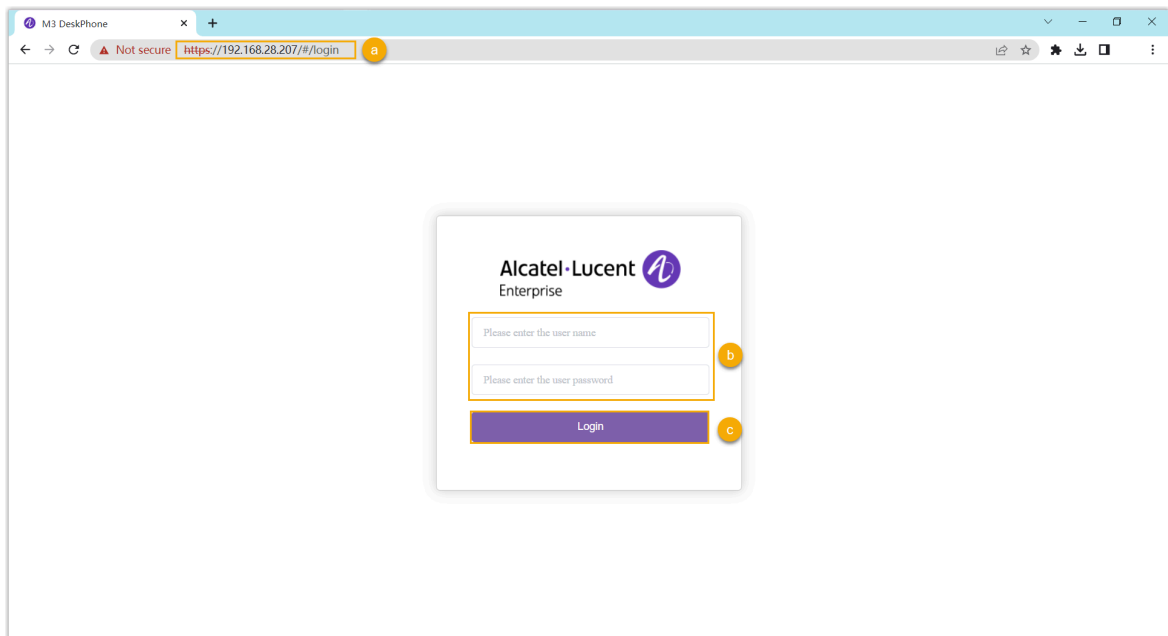
Information	Instruction
	<div data-bbox="540 260 1620 470">  </div> <div data-bbox="558 520 609 573">  </div> <div data-bbox="617 527 691 558"> <b>Note:</b> </div> <div data-bbox="678 596 1385 745"> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div> <div data-bbox="701 768 1598 989">  </div> <div data-bbox="678 1001 1344 1113"> <ul style="list-style-type: none"> <li>• If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> </div> <div data-bbox="701 1136 1188 1274">  </div>
PBX IP address or domain name	<div data-bbox="532 1360 1099 1392"> <b>Scenario: Register extension in local network</b> </div> <div data-bbox="532 1411 1356 1478"> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> </div> <div data-bbox="558 1522 609 1575">  </div> <div data-bbox="617 1526 691 1558"> <b>Note:</b> </div> <div data-bbox="617 1562 1359 1631"> <p>This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> </div> <div data-bbox="532 1684 1269 1717"> <b>Scenario: Register extension remotely using Yeastar FQDN</b> </div> <div data-bbox="532 1734 1369 1806"> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> </div>

Information	Instruction
	<div data-bbox="540 260 1528 394"> <p>Status</p> <p>● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN)</p> <p>yeastardocs.ras.yeastar.com</p> <p>* Expiration Date</p> <p>11/26/2023</p> <p>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="540 617 1019 821"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>Public IP Address</p> <p>* Public IP Address</p> <p>110.35.77.110</p> </div> <div data-bbox="1049 617 1528 821"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>External Host</p> <p>* External Host</p> <p>yeastar_docstest.com</p> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 999 1528 1220"> <p>HTTPS</p> <p>8088</p> <p>HTTP</p> <p>80</p> <p>SIP UDP</p> <p>5060</p> <p>SIP TCP</p> <p>5060</p> <p>SIP TLS</p> <p>5061</p> <p>Outbound SIP Port</p> <p>5062-5082</p> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1497 1528 1808"> <p>Features</p> <p>SIP Access Remote Access</p> <p>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</p> <p>* Status</p> <p>Enabled</p> <p>Remote Access Service Port-SIP UDP&amp;TCP</p> <p>5060</p> <p>Remote Access Service Port-SIP TLS</p> <p>5061</p> </div>

Information	Instruction
	<p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> 

## Step 2. Register extension on ALE IP phone

1. Log in to the web interface of the ALE IP phone.



a. In the browser's address bar, enter the IP address of the IP phone.

b. Enter the username `admin` and the associated password.

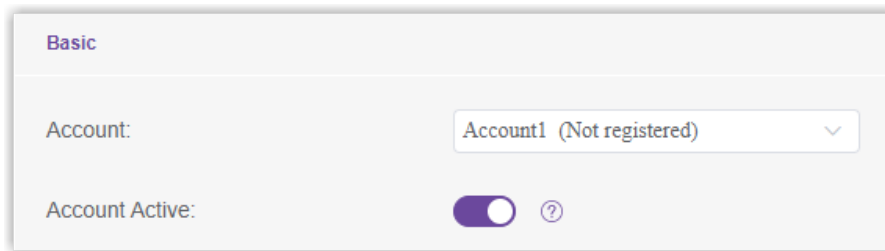
In this example, enter the default password `123456`.

c. Click **Login**.

2. On the left navigation bar, go to **Account > Basic**, and complete the following registration configurations.

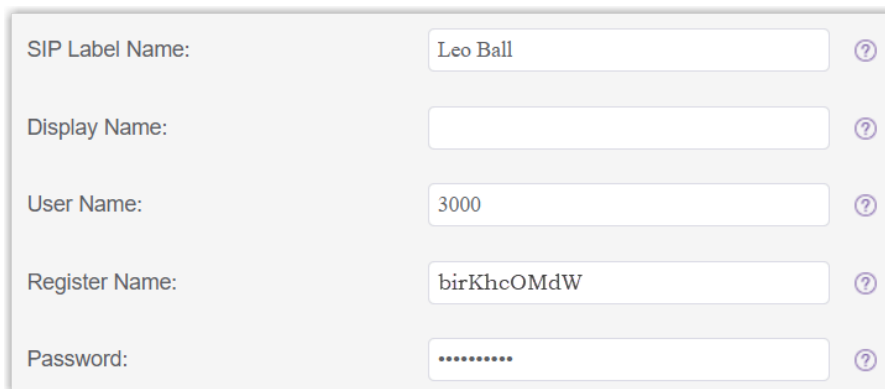


- a. In the **Account** drop-down list, select an available account, then enable the **Account Active** option.



The screenshot shows a configuration panel titled "Basic". It contains two fields: "Account:" with a dropdown menu showing "Account1 (Not registered)" and a small downward arrow, and "Account Active:" with a toggle switch that is currently turned on (blue) and a help icon (question mark) to its right.

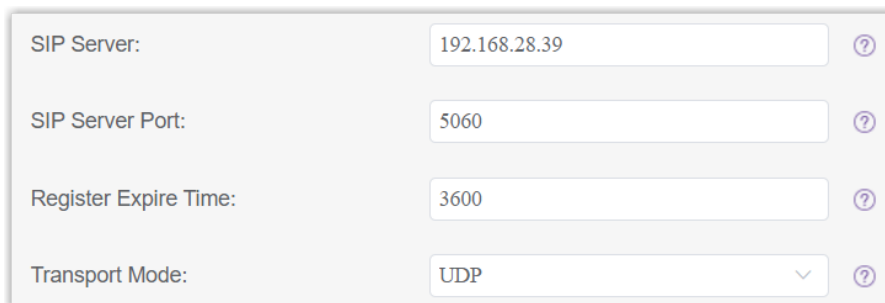
- b. Enter the extension information.



The screenshot shows a configuration panel with five fields, each with a help icon (question mark) to its right: "SIP Label Name:" with the value "Leo Ball", "Display Name:" which is empty, "User Name:" with the value "3000", "Register Name:" with the value "birKhcOMdW", and "Password:" with masked characters "\*\*\*\*\*".

- **SIP Label Name:** Enter the name associated with the account, which will be displayed on the phone screen.
- **User Name:** Enter the extension number.
- **Register Name:** Enter the registration name of the extension.
- **Password:** Enter the registration password of the extension.

- c. Enter the PBX's information and set the registration period.



The screenshot shows a configuration panel with four fields, each with a help icon (question mark) to its right: "SIP Server:" with the value "192.168.28.39", "SIP Server Port:" with the value "5060", "Register Expire Time:" with the value "3600", and "Transport Mode:" with a dropdown menu showing "UDP".

- **SIP Server:** Enter the IP address / domain name of the PBX.
- **SIP Server Port:** Enter the SIP registration port of the PBX. In this example, enter 5060.
- **Register Expire Time:** Optional. Configure the registration period.

**Tip:**

You can check the available range of the registration time on **PBX Settings > SIP Settings > General > SIP Endpoint Registration Timer** in the PBX web portal.

- **Transport Mode:** Select the transport protocol of the extension. In this example, select **UDP**.

d. Click **Submit**.

## Result

The extension is registered successfully. You can check the registration status in the **Account Status** field.

Account:	Account1 (Leo Ball : Registered) ▼
Account Active:	<input checked="" type="checkbox"/> ?
Account Status:	Registered

# Flyingvoice

## Auto Provision Flyingvoice IP Phone with Yeastar P-Series PBX System

This topic takes Flyingvoice P20P (firmware: V0.8.18.6) as an example to introduce how to auto provision a Flyingvoice IP phone with Yeastar P-Series PBX System.

### Requirements

The firmwares of **Flyingvoice IP Phone** and **Yeastar PBX** meet the following requirements.

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
FIP10	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP11C	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP12WP	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP13G	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP14G	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP15G	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP15G Plus	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>
FIP16	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
FIP16 Plus	0.7.23.1 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P10	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P10P	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P10G	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P10W	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P10LTE	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P11	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P11P	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P11G	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P11W	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P11LTE	V0.7.56 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P20	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P20P	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> </ul>
P20W	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P20G	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P21	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P21P	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P21W	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
flyphone	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P22P	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P22G	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P23G	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P23GW	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
P24G	V0.7.57 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i86Box_Basic	V0.0.16.1 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i86Box_Indoor	V0.0.16.1 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>
i86Box_2Line	V0.0.16.1 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i86Box_PCBA	V0.0.16.1 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>
i86Box_NFC	V0.0.16.1 or later	37.9.0.20 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> </ul>

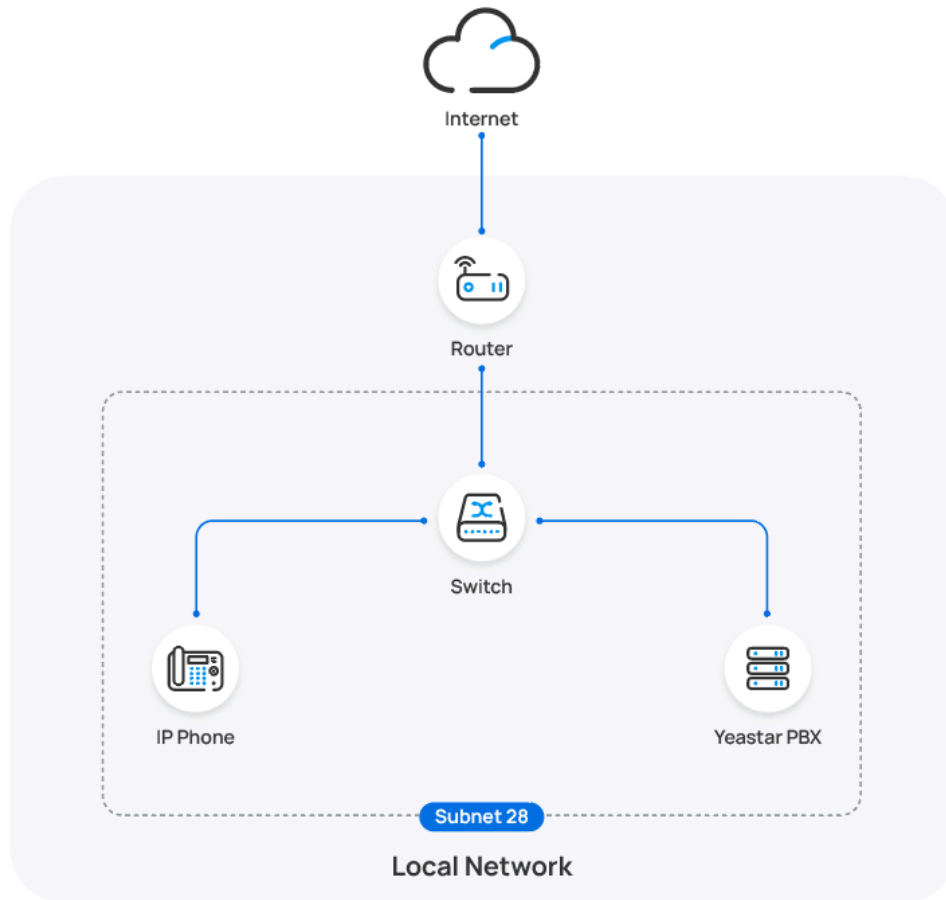
## Scenarios

The provisioning methods and operations vary depending on the network environment of **Flyingvoice IP Phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet (LAN)	<p>In this scenario, you can provision the Flyingvoice IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Flyingvoice IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Flyingvoice IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Flyingvoice IP phone in the different subnets (DHCP)</a>.</p>
IP Phone and PBX are in DIFFERENT network	<p>In this scenario, you can provision the Flyingvoice IP phone with the PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision a Flyingvoice IP phone in remote network (RPS)</a>.</p>

## Auto provision a Flyingvoice IP phone in the same subnet (PnP)

In this example, the Flyingvoice IP phone (IP: 192.168.28.194) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.



## Prerequisites










- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Flyingvoice IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor 	Model 	IP Address 	Phone Passw	Operations	
<input type="checkbox"/>		Unassigned	Unassigned	Flyingvoice	P20P	192.168.28.194	-	   	

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.

## Result



**Note:**

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

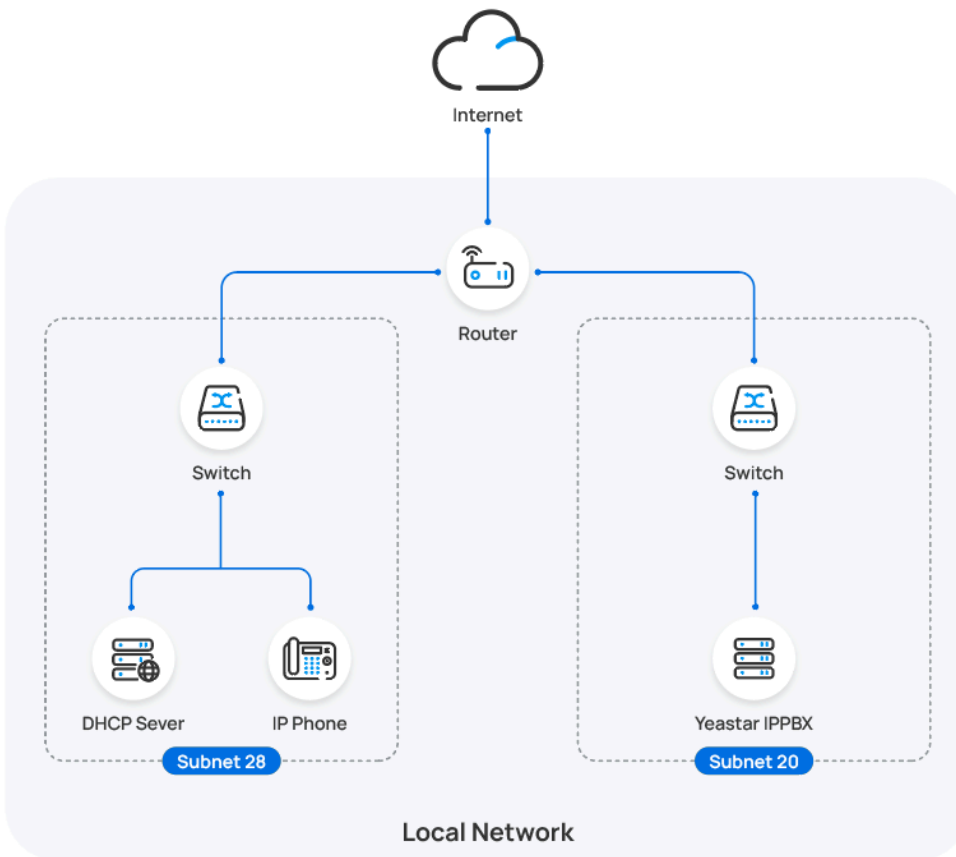


- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Flyingvoice	P20P	192.168.28.194	*****@	

## Auto provision a Flyingvoice IP phone in the different subnets (DHCP)

In this example, the Flyingvoice IP phone and a DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

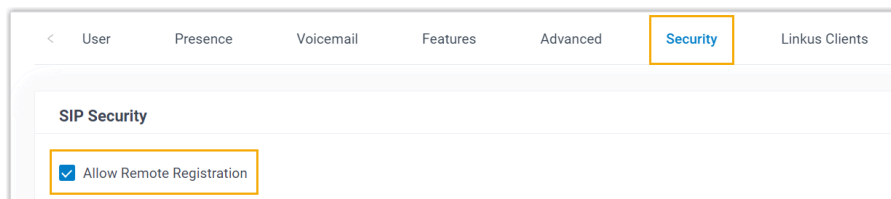
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Flyingvoice IP phone on PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Flyingvoice IP phone on PBX

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

**IP Phone**

\* Vendor: Flyingvoice

\* Model: P20P

\* MAC Address: [Redacted]

- **Vendor:** Select **Flyingvoice**.
- **Model:** Select the phone model. In this example, select **P20P**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template: YSDP\_FlyingvoiceP2

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: <http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB>

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Assign Extension**

\* Select Extension: 3000-Leo Ball



**Note:**



If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

The screenshot shows a configuration page titled "Options". It contains two dropdown menus: "Template" with the value "YSDP\_FlyingvoiceP2" and "Provisioning Method" with the value "DHCP (In the Office)". To the right, under the heading "Provisioning Link", there is a text box containing the URL "http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB" and a copy icon.

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

**Interfaces » LAN**

General Settings Advanced Settings Firewall Settings **DHCP Server**

General Setup **Advanced Settings** IPv6 Settings IPv6 RA Settings

Dynamic DHCP ☒   
 ? Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐   
 ? Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0   
 ? Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5   
 66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB   
 ? Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

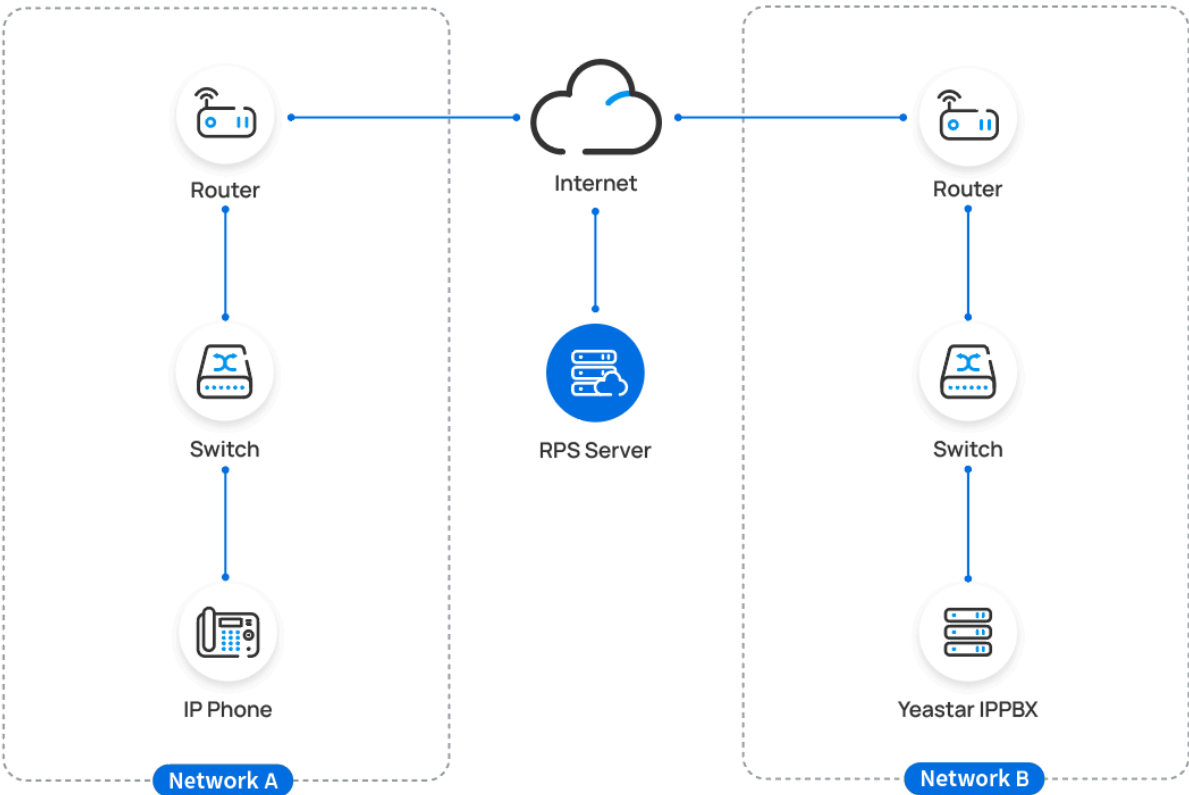
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Flyingvoice	P20P	-	*****@	

## Auto provision a Flyingvoice IP phone in remote network (RPS)

In this example, the Flyingvoice IP phone and the Yeastar PBX are deployed in different network.





Prerequisites

Yeastar P-Series PBX System supports to auto provision a Flyingvoice phone remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

Method	Setting
Using Yeastar FQDN	<ul style="list-style-type: none"><li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li><li>• Grant remote access permission for extension to be registered and the remote IP phones:<ul style="list-style-type: none"><li>◦ <a href="#">Grant remote SIP access permission for the extension</a>, so that the extension can be registered remotely via FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li></ul></li></ul>

Method	Setting
	<div data-bbox="672 260 1565 621"> </div> <ul style="list-style-type: none"> <li>◦ If you have <a href="#">enabled IP restriction for Yeastar FQDN remote Web access</a>, make sure that you have added the phone's IP address to the permitted IP list, so that the phone can obtain configuration files from the PBX (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; Remote Access &gt; Web Access</b>).</li> </ul> <div data-bbox="678 877 1265 1119"> </div> <ul style="list-style-type: none"> <li>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</li> <li>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</li> <li>• RESET the IP phone if it is previously used.</li> <li>• Gather information of IP phone, including Vendor, Model, and MAC address.</li> </ul>
Using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> </ul> <div data-bbox="592 1560 1297 1814" style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>Important:</b></p> <p>The following PBX ports MUST be forwarded for RPS provisioning.</p> <ul style="list-style-type: none"> <li>◦ RTP ports</li> <li>◦ SIP port</li> <li>◦ Web Server port</li> </ul> </div> <ul style="list-style-type: none"> <li>• Set up the extension for remote registration.</li> </ul>

Method	Setting
	<div><div>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</div><div><div><div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833) ▾</div></div><div><div>Transport</div><div>UDP ▾</div></div><div><div><input checked="" type="checkbox"/> Qualify</div><div><input type="checkbox"/> T.38 Support</div><div><input checked="" type="checkbox"/> NAT</div><div><input type="checkbox"/> SRTP</div></div></div></div></div><div><div>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</div><div><div><div><div>&lt; User Presence Voicemail Features Advanced <b>Security</b> Linkus Clients</div><div><div>SIP Security</div><div><input checked="" type="checkbox"/> Allow Remote Registration</div></div></div></div></div><div><div><div>• Make sure that the IP phone and PBX can communicate with each other over the subnets.</div><div>• Make sure that you have <a href="#">downloaded the template</a> for the desired phone model (Path: <b>Auto Provisioning &gt; Resource Repository &gt; Default Templates</b>).</div><div>• RESET the IP phone if it is previously used.</div><div>• Gather information of IP phone, including Vendor, Model, and MAC address.</div></div></div></div></div>

Procedure

- [Step 1. Add the Flyingvoice IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

Step 1. Add the Flyingvoice IP phone on PBX

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.



The form is titled "IP Phone". It contains three fields:
 

- \* Vendor:** A dropdown menu with "Flyingvoice" selected.
- \* Model:** A dropdown menu with "P20P" selected.
- \* MAC Address:** A text input field with a blurred value.

- **Vendor:** Select **Flyingvoice**.
- **Model:** Select the phone model. In this example, select **P20P**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

Figure 17. RPS using Yeastar FQDN

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_FlyingvoiceP2" selected.
- \* Provisioning Method:** A dropdown menu with "RPS FQDN (Remote)" selected.
- Provisioning Link:** A text input field containing the URL: `https://yeastardocs.ras.yeastar.com:443/api/autoprovision/H70R1oii`.
- ☒ **Authentication for the First-time Auto Provisioning**

Figure 18. RPS using Public IP Address / External Host domain name

The form is titled "Options". It contains the following fields:
 

- \* Template:** A dropdown menu with "YSDP\_FlyingvoiceP2" selected.
- \* Provisioning Method:** A dropdown menu with "RPS (Remote)" selected.
- Provisioning Link:** A text input field containing the URL: `https://110.35.77.110:18207/api/autoprovision/H70R1oiiPnUCnp6L`.
- ☒ **Authentication for the First-time Auto Provisioning**

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **RPS FQDN (Remote)** or **RPS (Remote)** according to your need.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

- **Authentication for the First-time Auto Provisioning:** If enabled, users are requested to fill in authentication information on the IP phones before triggering the first-time provisioning.

**Note:**

We recommend that you keep this option selected.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

The PBX will send an event notification of **RPS Request Success**.

## Step 2. Trigger the IP phone to complete provisioning

1. Reboot the IP phone.

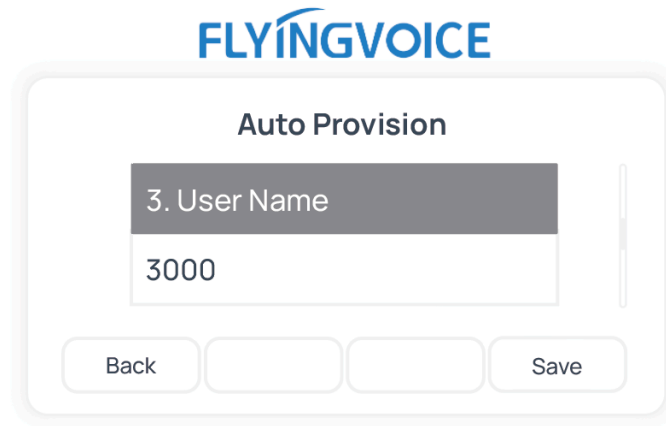
After boot-up, the phone screen displays an HTTP Authentication prompt.

2. Press **OK**.

You are redirected to the **Auto Provision** page.

3. In the **Auto Provision** page, complete the following configurations.

- a. Scroll down to the **User Name** field, enter the extension number that is assigned to the phone.

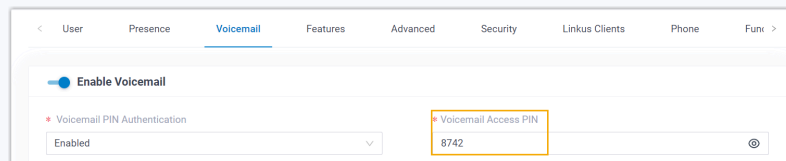


The image shows the Flyingvoice Auto Provision interface. At the top is the Flyingvoice logo. Below it is the title "Auto Provision". A scrollable list shows "3. User Name" as the current step. Below this is a text input field containing the number "3000". At the bottom are four buttons: "Back", an empty button, another empty button, and "Save".

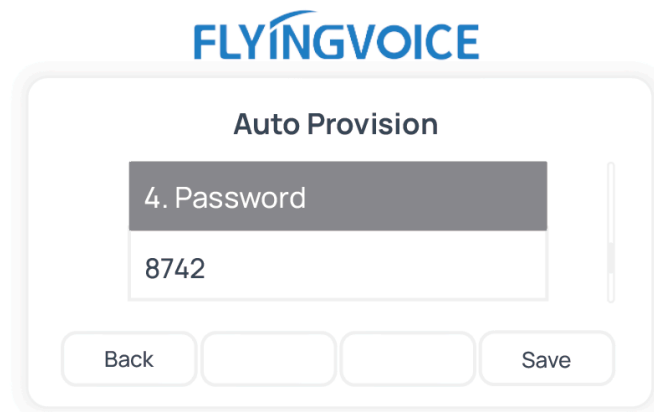
- b. Scroll down to the **Password** field, enter the extension's Voicemail Access PIN.

**Tip:**

You can check the Voicemail Access PIN in the **Voice-mail** tab on the extension's configuration page.

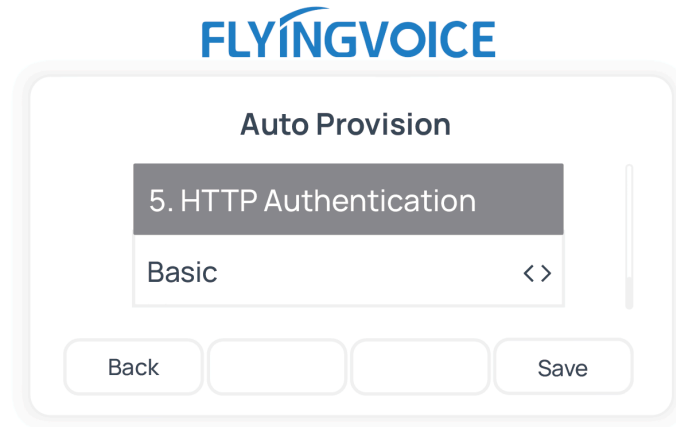


The image shows a configuration page with tabs: User, Presence, Voicemail, Features, Advanced, Security, Linkus Clients, Phone, and Funix. The Voicemail tab is selected. Under "Enable Voicemail", there is a section for "Voicemail PIN Authentication" with a dropdown menu set to "Enabled". To the right, the "Voicemail Access PIN" is displayed as "8742" and is highlighted with a yellow box.



The image shows the Flyingvoice Auto Provision interface. At the top is the Flyingvoice logo. Below it is the title "Auto Provision". A scrollable list shows "4. Password" as the current step. Below this is a text input field containing the number "8742". At the bottom are four buttons: "Back", an empty button, another empty button, and "Save".

- c. Scroll down to the **HTTP Authentication** field, select **Basic**.



d. Press **Save** to save the configurations.

The phone screen displays a prompt, asking whether to update now.

e. Press **OK** to trigger the update.

## Result

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Flyingvoice	P20P	-	*****@	

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Flyingvoice IP Phone with Yeastar P-Series PBX System


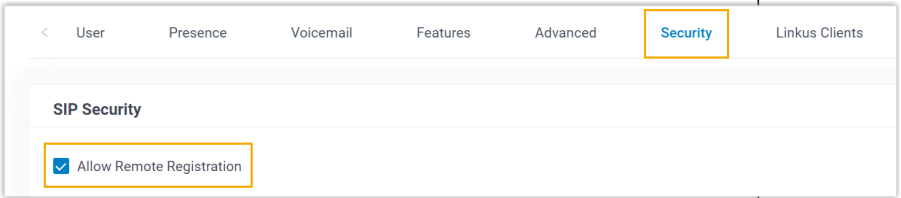
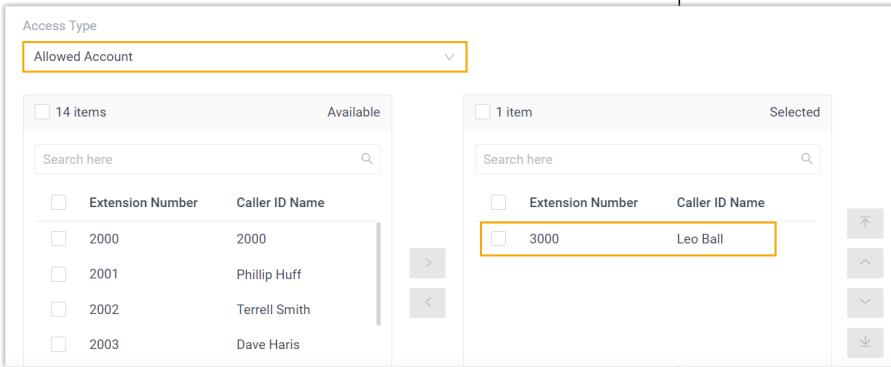
This topic takes Flyingvoice P20P (firmware: V0.8.18.6) as an example to introduce how to manually register an extension on a Flyingvoice IP phone.


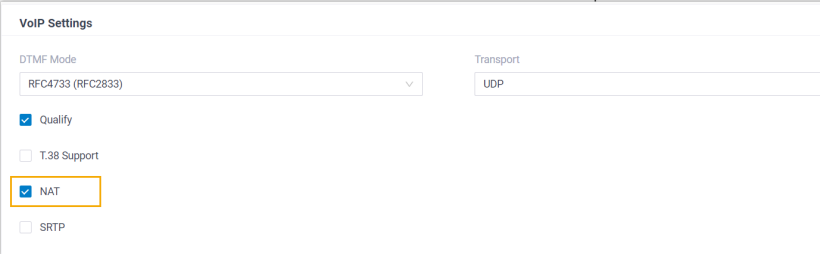

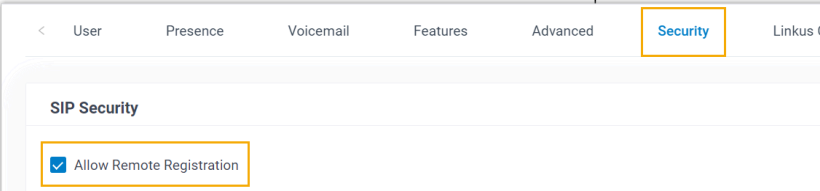
## Supported devices

The Flyingvoice IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Flyingvoice IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• <a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Register extension using Public IP address / External Host domain name	<ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>• Set up the extension for remote registration.</li> </ul>


Network Environment	Setting
	<p>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</p>  <p>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 



## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Flyingvoice IP phone](#)

### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul>

Information	Instruction
	<div data-bbox="540 260 1607 520"> <p><b>Extension Information</b></p> <p>* Extension Number 3000</p> <p>* Registration Name birKhC0MdW</p> <p>IP Phone Concurrent Registrations 1</p> <p>* Caller ID 39:3000</p> <p>* Registration Password *****</p> </div>
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p> <div data-bbox="540 724 1607 934"> <p>User Presence Voicemail Features <b>Advanced</b> Security Linkus Clients Phone Function Keys</p> <p><b>VoIP Settings</b></p> <p>DTMF Mode RFC4733 (RFC2833)</p> <p>Transport UDP</p> </div> <p> <b>Note:</b></p> <ul style="list-style-type: none"> <li>If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> <div data-bbox="706 1239 1599 1459"> <p><b>Basic</b></p> <p>* SIP UDP Port 5060</p> <p>* SIP TCP Port <input checked="" type="checkbox"/> 5060</p> <p>* RTP Port Range 18256 : 18356</p> <p>* Outbound SIP Port Range <input type="checkbox"/> 5062 : 5082</p> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="706 1606 1201 1753"> <p><input checked="" type="checkbox"/> <b>TLS</b></p> <p>* SIP TLS Port 5061</p> </div>
PBX IP address or domain name	<b>Scenario: Register extension in local network</b>

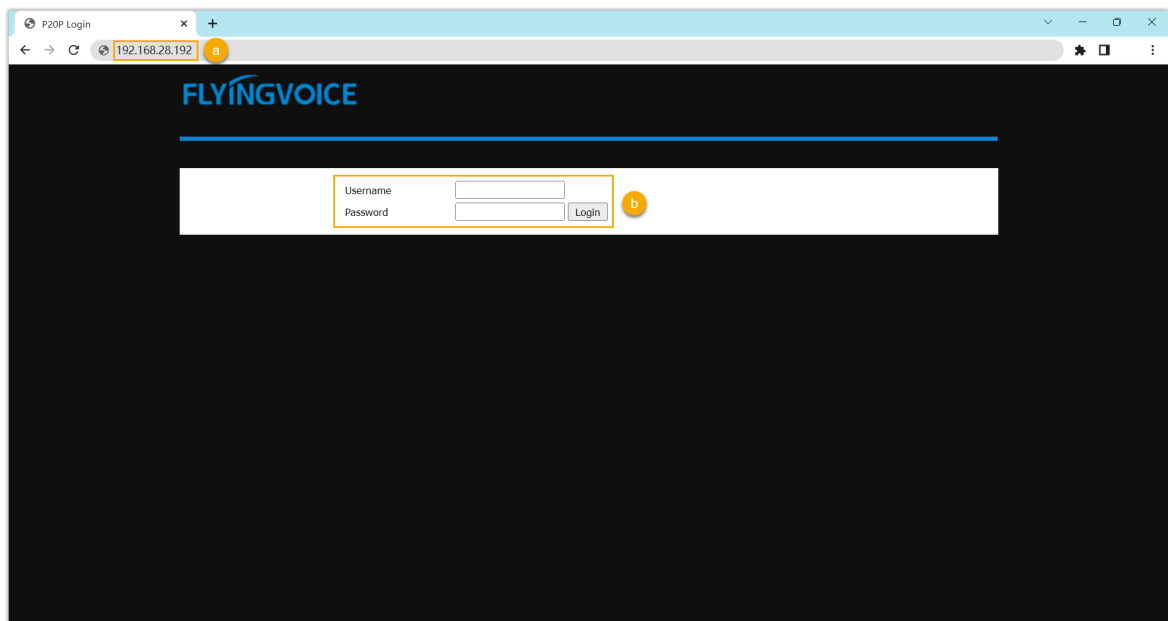
Information	Instruction
	<p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 363 609 415"> </div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="540 672 1533 806"> <p>Status</p> <p>● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN)</p> <p>yeastardocs.ras.yeastar.com</p> <p>* Expiration Date</p> <p>11/26/2023</p> <p>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="540 1031 1019 1234"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>Public IP Address</p> <p>* Public IP Address</p> <p>110.35.77.110</p> </div> <div data-bbox="1049 1031 1533 1234"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>External Host</p> <p>* External Host</p> <p>yeastar_docstest.com</p> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div data-bbox="540 1409 1533 1633"> <p>HTTPS</p> <p>8088</p> <p>HTTP</p> <p>80</p> <p>SIP UDP</p> <p>5060</p> <p>SIP TCP</p> <p>5060</p> <p>SIP TLS</p> <p>5061</p> <p>Outbound SIP Port</p> <p>5062-5082</p> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>



Information	Instruction
	<div> <div> <div>Features</div> <div> <div>SIP Access</div> <div>Remote Access</div> </div> <div> <p>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</p> </div> <div> <div>* Status</div> <div>Enabled</div> </div> <div> <div>Remote Access Service Port-SIP UDP&amp;TCP</div> <div>5060</div> </div> <div> <div>Remote Access Service Port-SIP TLS</div> <div>5061</div> </div> </div> </div> <div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> </div> <div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> </div> <div> <div>External SIP TCP Port</div> <div>18205</div> </div> <div> <div>External SIP TLS Port</div> <div>18208</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Flyingvoice IP phone

1. Log in to the web interface of the Flyingvoice IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password, then click **Login**.

In this example, enter the default password `admin`.

2. Go to the **SIP Account** tab, complete the registration configurations.

**FLYINGVOICE**

Status Network Wireless **SIP Account** Phone Administration

Line 1 **Line 2** SIP Settings VoIP QoS Ring

**Basic**

**Register Status**

Register Status Disable

**Basic Setup**

Line Enable Enable

**Subscriber Information**

Display Name Leo Ball Phone Number 3000

Account birKhcOMdW Password .....

**Proxy and Registration**

Proxy Server 192.168.28.39 Proxy Port 5060

Outbound Server Outbound Port 5060

Backup Outbound Server Backup Outbound Port 5060

Allow DHCP Option 120 to Override SIP Server Disable Transport UDP

- a. Select an available line.
  - b. In the **Line Enable** drop-down list, select **Enable**.
  - c. In the **Subscriber Information** section, enter the extension information.
    - **Display Name:** Enter the name associated with the account, which will be displayed on the phone screen.
    - **Phone Number:** Enter the extension number.
    - **Account:** Enter the registration name of the extension.
    - **Password:** Enter the registration password of the extension.
  - d. In the **Proxy and Registration** section, enter the PBX server information.
    - **Proxy Server:** Enter the IP address / domain name of the PBX.
    - **Proxy Port:** Enter the SIP registration port of the PBX.
3. At the bottom of the page, click **Save & Apply**.

## Result

The extension is registered successfully. You can check the registration status in the **Register status** field.

The screenshot displays the 'SIP Account' configuration page. The top navigation bar includes tabs for 'Status', 'Network', 'Wireless', 'SIP Account' (selected), 'Phone', and 'Administration'. Below this, a sub-navigation bar shows 'Line 1', 'Line 2' (selected), 'SIP Settings', 'VoIP QoS', and 'Ring'. The main content area is divided into two sections: 'Basic' and 'Basic Setup'. The 'Basic' section contains a 'Register Status' field, which is highlighted with a yellow border and shows the value 'Registered'. The 'Basic Setup' section contains a 'Line Enable' field with a dropdown menu set to 'Enable'.

Basic	
Register Status	Registered

Basic Setup	
Line Enable	Enable ▼

# Mitel

## Auto Provision Mitel IP Phone with Yeastar P-Series PBX System

This topic takes Mitel 6867i (firmware: 5.0.0.1018) as an example to describe how to auto provision Mitel IP phones with Yeastar P-Series PBX System in Local Area Network (LAN).

### Requirements and restrictions

#### Requirements

The firmwares of **Mitel IP phone** and **Yeastar PBX** meet the following requirements.

**Table 3.**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
6863i	R5.1.0SP6 or later	37.9.0.103 or later	• DHCP
6865i	R5.1.0SP6 or later	37.9.0.103 or later	• DHCP
6867i	R5.1.0SP6 or later	37.9.0.103 or later	• DHCP
6869i	R5.1.0SP6 or later	37.9.0.103 or later	• DHCP
6873i	R5.1.0SP6 or later	37.9.0.103 or later	• DHCP
6920	6.3.1 SP1 or later	37.9.0.103 or later	• DHCP
6930	6.3.1 SP1 or later	37.9.0.103 or later	• DHCP
6940	6.3.1 SP1 or later	37.9.0.103 or later	• DHCP


#### Restrictions

The following features are NOT supported on the provisioned Mitel IP phones:

- LDAP Directory
- Specific types of PBX function keys, including **LDAP Directory**, **DTMF**, **Intercom** and **Park & Retrieve**.

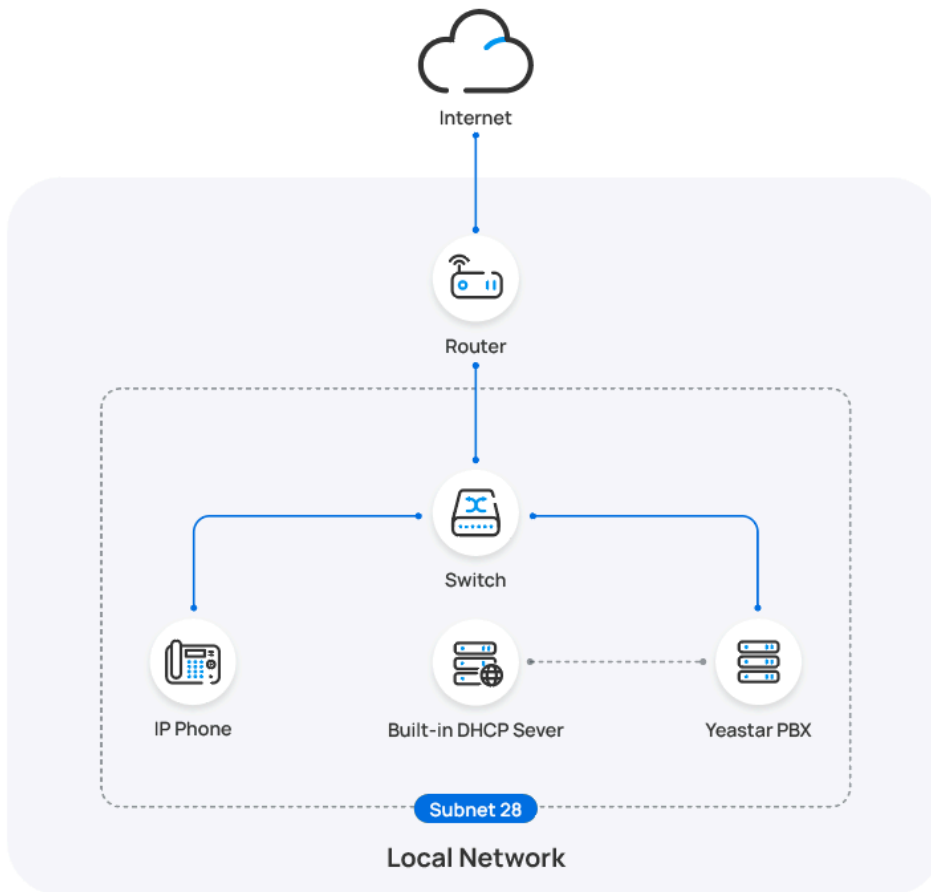
## Scenarios

Yeastar P-Series PBX System supports to auto provision Mitel IP phone via [DHCP method](#) in the local network. The provisioning operations vary depending on the network environment of **Mitel IP phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet	<p>In this scenario, you can provision the Mitel IP phone using the PBX built-in DHCP server to deliver a PBX-provided provisioning link to the IP phones. In this way, the phones can retrieve configurations from the PBX using the given link.</p> <div>  <b>Note:</b>            If there is already a DHCP server running in the subnet, you can directly <a href="#">set up DHCP option 66 with PBX-provided provisioning link</a> on the DHCP server.         </div> <p>For more information, see <a href="#">Auto provision a Mitel IP phone in the same subnet</a>.</p>
IP Phone and PBX are in DIFFERENT subnets	<p>In this scenario, you can provision the Mitel IP phone using DHCP option 66 of a third-party DHCP server to deliver a PBX-provided provisioning link to the IP phones. In this way, the phones can retrieve configurations from the PBX using the given link.</p> <p>For more information, see <a href="#">Auto provision a Mitel IP phone in different subnets</a>.</p>

### Auto provision a Mitel IP phone in the same subnet

In this example, the Mitel IP phone and the Yeastar PBX (IP: 192.168.28.118) are both deployed in subnet 28.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

- [Step 1. Set the PBX as a DHCP server](#)
- [Step 2. Add the Mitel IP phone on PBX](#)

### Step 1. Set the PBX as a DHCP server

1. Log in to PBX web portal, go to **System > Network**, click **DHCP Server** tab.
2. Turn on the **DHCP Server**, and complete the following network configurations.

The screenshot shows the 'DHCP Server' configuration page. At the top, there are tabs: Basic Settings, Web Server, Service Ports, Yeastar FQDN, Public IP and Ports, Static Routes, and DHCP Server. The 'DHCP Server' tab is selected. Below the tabs, there is a 'Status' section with a 'Stopped' indicator. A yellow box highlights the configuration fields: Gateway (192.168.28.1), Subnet Mask (255.255.255.0), Preferred DNS Server (223.5.5.5), Alternative DNS Server (114.114.114.114), DHCP Address Range (192.168.28.204 - 192.168.28.206), and NTP Server (192.168.28.39).

- **Gateway:** Specify the IP address of the default gateway for the DHCP server.
- **Subnet Mask:** Specify the subnet mask used to subdivide your IP address.
- **Preferred DNS Server:** Specify a DNS server for the DHCP server.
- **Alternative DNS Server:** Optional. Specify a secondary DNS server for the DHCP server.
- **DHCP Address Range:** Specify the IP address range that will be allocated to DHCP clients.
- **NTP Server:** Enter the IP address of an NTP server.



**Note:**

The default value is the IP address of the PBX, which can synchronize the network time of the client devices with the PBX.

3. Click **Save**.

The **Status** field displays **Running**, indicating the DHCP server is running.

The screenshot shows the 'Status' field with a green dot and the text 'Running'.

## Step 2. Add the Mitel IP phone on PBX

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.

The screenshot shows the 'IP Phone' configuration section. It contains three required fields, each marked with a red asterisk:
 

- \* Vendor:** A dropdown menu with 'Mitel' selected.
- \* Model:** A dropdown menu with '6867i' selected.
- \* MAC Address:** A text input field containing a blurred MAC address.

- **Vendor:** Select **Mitel**.
  - **Model:** Select the phone model. In this example, select **6867i**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

The screenshot shows the 'Options' configuration section. It contains three fields:
 

- \* Template:** A dropdown menu with 'YSDP\_Mitel68XX' selected.
- \* Provisioning Method:** A dropdown menu with 'DHCP (In the Office)' selected.
- Provisioning Link:** A text field displaying the URL 'http://192.168.28.118/api/autoprovision/oVFmKgeglnkzZf0Q' with a copy icon to its right.

- **Template:** Select a desired template from the drop-down list.



### Note:

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



### Assign Extension

\* Select Extension

3000-Leo Ball

**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.
7. Reboot the IP phone manually.

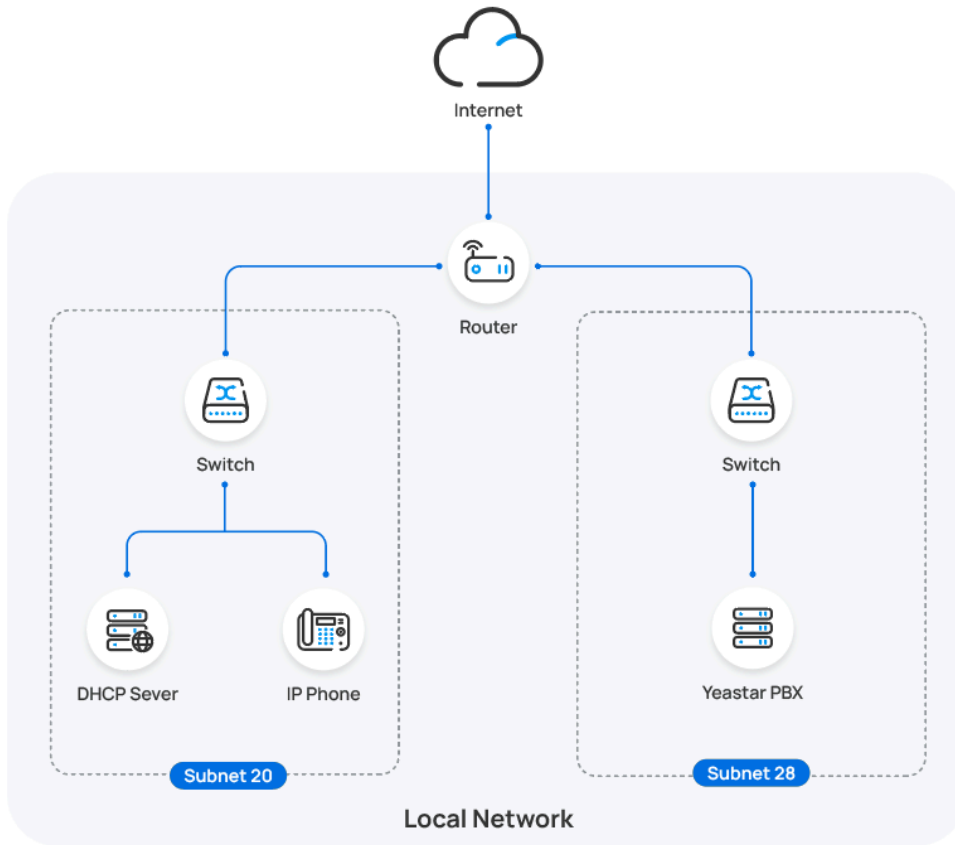
**Result**

- After the phone is rebooted, it gets an IP address from the PBX built-in DHCP server, download the configurations from the PBX and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the extension registration status on **Auto Provisioning > Phones** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Mitel	6867i	-	*****@	

**Auto provision a Mitel IP phone in different subnets**

In this example, the Mitel IP phone and DHCP server are deployed in subnet 20, while the Yeastar PBX (IP: 192.168.28.118) is deployed in subnet 28.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

## Procedure

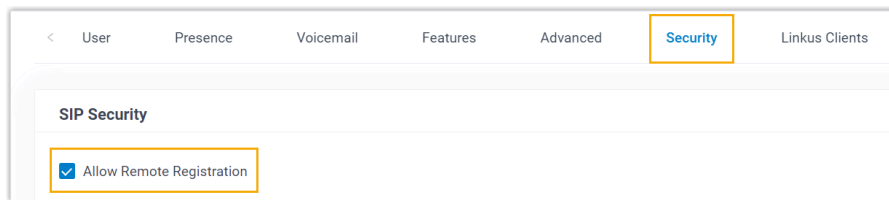
- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Mitel IP phone on PBX](#)

- [Step 3. Configure DHCP option 66 on DHCP server](#)
- [Step 4. Turn off certificate validation on the phone](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



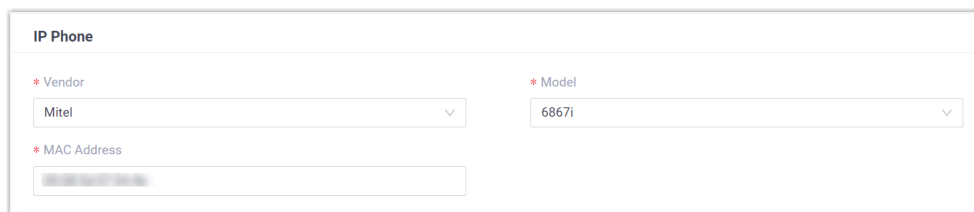
The screenshot shows the PBX web portal interface. At the top, there are tabs: User, Presence, Voicemail, Features, Advanced, Security (highlighted with an orange box), and Linkus Clients. Below the tabs, there is a section titled 'SIP Security'. Inside this section, the checkbox 'Allow Remote Registration' is checked and highlighted with an orange box.

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

### Step 2. Add the Mitel IP phone on PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, enter the following phone information.



The screenshot shows the 'IP Phone' configuration form. It has three fields: '\* Vendor' with a dropdown menu showing 'Mitel', '\* Model' with a dropdown menu showing '6867i', and '\* MAC Address' with a text input field containing a blurred MAC address.

- **Vendor:** Select **Mitel**.
  - **Model:** Select the phone model. In this example, select **6867i**.
  - **MAC Address:** Enter the MAC address of the IP phone.
4. In the **Options** section, configure the following settings.

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

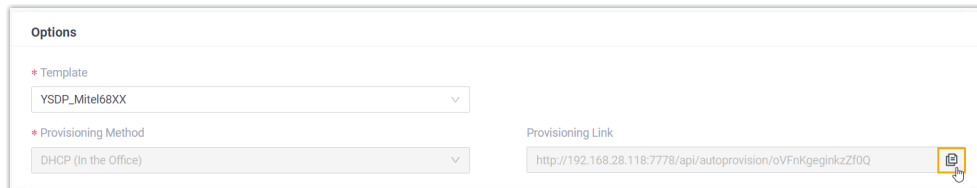
6. Click **Save**.

7. Reboot the IP phone manually.

### Step 3. Configure DHCP option 66 on DHCP server

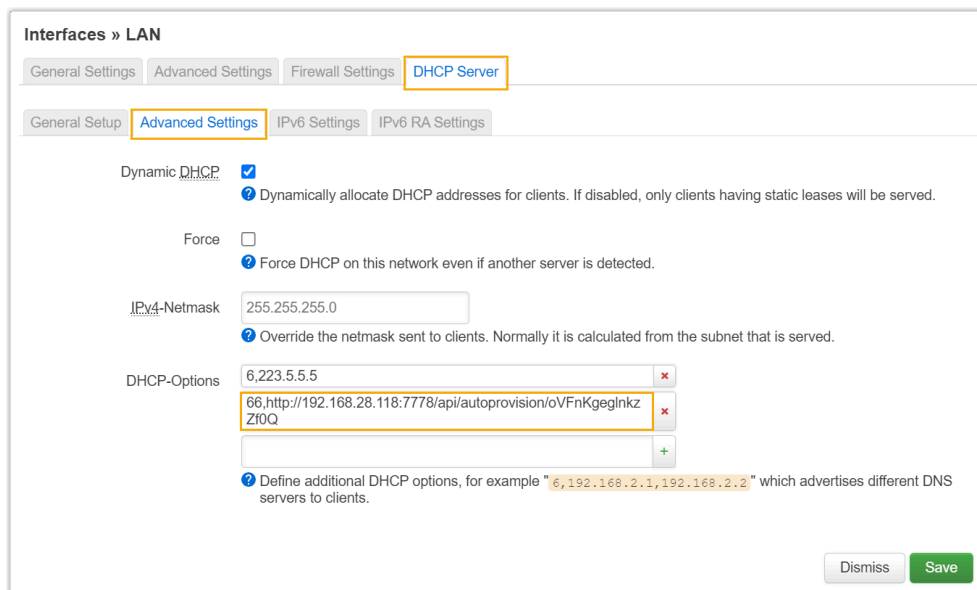
In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.



2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration is shown below.



### Step 4. Turn off certificate validation on the phone

Some older Mitel phones don't have certain necessary certificates, so they would not be able to download configuration files from the PBX due to the certification validation issue. In this case, you have to turn off the certificate validation on the IP phone to bypass the authentication between the PBX and the phone.



### Important:

It is strongly recommended that you use a trusted certificate, as disabling server validation may introduce security risks on the network.

## 1. Log in to the web interface of the Mitel IP phone.

a. In the browser's address bar, enter the IP address of the IP phone.

b. Enter the username `admin` and the associated password.

In this example, enter the default password `22222`.






c. Click **Sign in**.

## 2. On the left navigation bar, go to **Advanced Settings > Network > HTTPS Settings**, then unselect the checkbox of **Enabled** beside the **Validate Certificates**.

3. Click **Save Settings**.
4. Reboot the phone manually.

## Result

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the extension registration status on **Auto Provisioning > Phones** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Mitel	6867i	-	*****@	   

# Manually Register Mitel IP Phone with Yeastar P-Series PBX System


This topic takes Mitel 6867i (firmware: 5.0.0.1018) as an example to introduce how to manually register an extension on a Mitel IP phone.



## Supported devices

The Mitel IP phones that are compatible with SIP (Session Initiation Protocol).

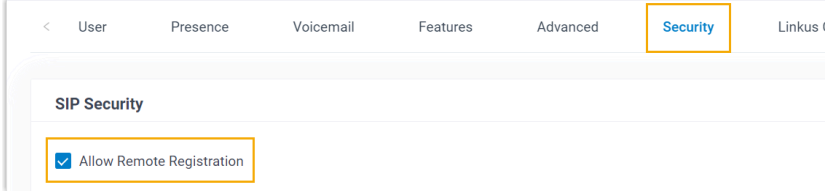
## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Mitel IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b> ).

Network Environment		Setting
		<div><div>&lt; User Presence Voicemail Features Advanced <b>Security</b> Linkus Clients</div><div><div>SIP Security</div><div><input checked="" type="checkbox"/> Allow Remote Registration</div></div></div>
Remote Network	Register extension using Yeastar FQDN	<div><ul style="list-style-type: none"><li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li><li>• <a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li></ul></div> <div><div>Access Type</div><div>Allowed Account</div><div><div><div>14 items</div><div>Available</div><div>Search here</div><div><div><div><input type="checkbox"/></div><div>Extension Number</div><div>Caller ID Name</div></div><div><div><input type="checkbox"/></div><div>2000</div><div>2000</div></div><div><div><input type="checkbox"/></div><div>2001</div><div>Phillip Huff</div></div><div><div><input type="checkbox"/></div><div>2002</div><div>Terrell Smith</div></div><div><div><input type="checkbox"/></div><div>2003</div><div>Dave Haris</div></div></div><div><div>&gt;</div><div>&lt;</div></div></div><div><div>1 item</div><div>Selected</div><div>Search here</div><div><div><div><input type="checkbox"/></div><div>Extension Number</div><div>Caller ID Name</div></div><div><div><input type="checkbox"/></div><div>3000</div><div>Leo Ball</div></div></div><div><div>↑</div><div>↕</div><div>↓</div></div></div></div></div>
	Register extension using Public IP address / External Host domain name	<div><ul style="list-style-type: none"><li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li><li>• Set up the extension for remote registration.<ul style="list-style-type: none"><li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li></ul></li></ul></div> <div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833)</div><div>Transport</div><div>UDP</div><div><input checked="" type="checkbox"/> Qualify</div><div><input type="checkbox"/> T.38 Support</div><div><input checked="" type="checkbox"/> NAT</div><div><input type="checkbox"/> SRTP</div></div></div> <div><ul style="list-style-type: none"><li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li></ul></div>




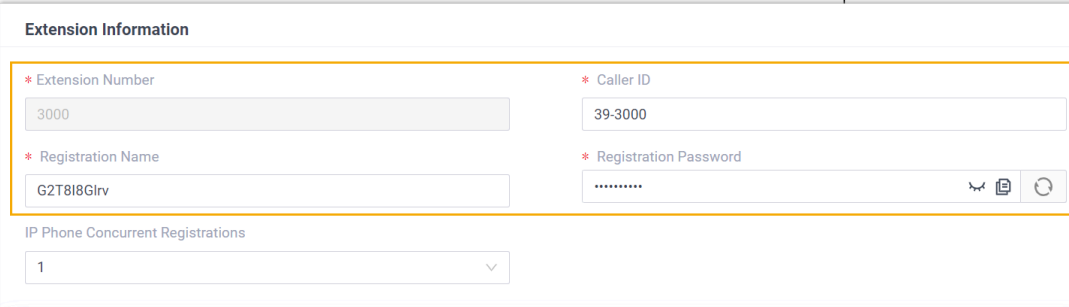

Network Environment	Setting
	

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Mitel IP phone](#)

### Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b>  <b>&gt; User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Caller ID</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b>  <b>&gt; Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>

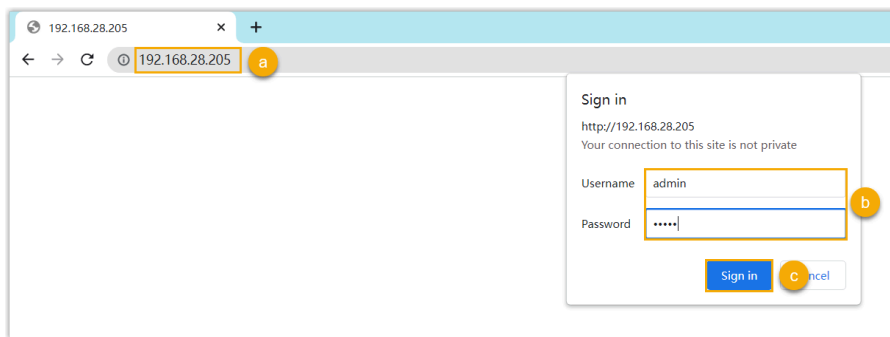
Information	Instruction
	<div><div><div>UserPresenceVoicemailFeaturesAdvancedSecurityLinkus ClientsPhoneFunction Keys</div><div><div>VoIP Settings</div><div><div>DTMF Mode</div><div>RFC4733 (RFC2833)</div></div><div><div>Transport</div><div>UDP</div></div></div></div></div> <div><div><div><div></div><div>Note:</div></div><div><div><div>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</div></div></div><div><div><div>Basic</div><div><div><div>* SIP UDP Port</div><div>5060</div></div><div><div>* RTP Port Range</div><div>18256</div><div>:</div><div>18356</div></div></div><div><div><div>* SIP TCP Port</div><div><input checked="" type="checkbox"/> 5060</div></div><div><div>* Outbound SIP Port Range</div><div><input type="checkbox"/> 5062</div><div>:</div><div>5082</div></div></div></div></div><div><div><div>• If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</div></div></div><div><div><div><div><input checked="" type="checkbox"/> TLS</div><div><div>* SIP TLS Port</div><div>5061</div></div></div></div></div></div></div> <div><div>PBX IP address or domain name</div><div><div><div><b>Scenario: Register extension in local network</b></div><div>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</div><div><div><div><div></div><div>Note:</div></div><div>This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</div></div></div><div><div><b>Scenario: Register extension remotely using Yeastar FQDN</b></div><div>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</div></div></div></div></div>

Information	Instruction
	<div data-bbox="553 258 1547 394"> <p>Status</p> <p>● Successfully connected to the tunnel server.</p> <p>Fully Qualified Domain Name (FQDN)</p> <p>yeastardocs.ras.yeastar.com</p> <p>* Expiration Date</p> <p>11/26/2023</p> <p>ⓘ The domain name can be configured only once and cannot be altered after the configuration.</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="553 604 1032 810"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>Public IP Address</p> <p>* Public IP Address</p> <p>110.35.77.110</p> </div> <div data-bbox="1065 604 1547 810"> <p>Public IP (NAT)</p> <p>* NAT Type</p> <p>External Host</p> <p>* External Host</p> <p>yeastar_docstest.com</p> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the extension's transport protocol.</p> <div data-bbox="553 982 1547 1209"> <p>HTTPS</p> <p>8088</p> <p>SIP UDP</p> <p>5060</p> <p>SIP TLS</p> <p>5061</p> <p>HTTP</p> <p>80</p> <p>SIP TCP</p> <p>5060</p> <p>Outbound SIP Port</p> <p>5062-5082</p> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the extension's transport protocol.</p> <div data-bbox="553 1472 1547 1787"> <p>Features</p> <p>SIP Access Remote Access</p> <p>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</p> <p>* Status</p> <p>Enabled</p> <p>Remote Access Service Port-SIP UDP&amp;TCP</p> <p>5060</p> <p>Remote Access Service Port-SIP TLS</p> <p>5061</p> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p>

Information	Instruction
	<p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the extension's transport protocol.</p> <div data-bbox="553 384 1547 583"> <p><b>Public Ports</b></p> <p>External SIP UDP Port: 18205</p> <p>External SIP TCP Port: 18205</p> <p>External SIP TLS Port: 18208</p> <p>External Linkus Port:</p> </div>

## Step 2. Register extension on Mitel IP phone

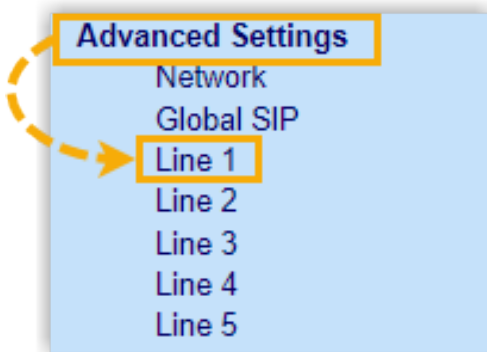
1. Log in to the web interface of the Mitel IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

In this example, enter the default password `22222`.

- c. Click **Sign in**.
2. On the left navigation bar, go to **Advanced Settings**, then select an available line.



3. Complete the registration configurations.

- a. In the **Basic SIP Authentication Settings** section, enter the extension information.

Basic SIP Authentication Settings	
Screen Name	Leo Ball
Screen Name 2	
Phone Number	3000
Caller ID	39-3000
Authentication Name	birKhcOMdW
Password	*****
BLA Number	
Line Mode	Generic ▼
Call Waiting	Global ▼

- **Screen Name:** Enter the name associated with the account, which will be displayed on the phone screen.
- **Phone Number:** Enter the extension number.
- **Caller ID:** Optional. Enter the caller ID number of the extension, which will be displayed on the callee's device.
- **Authentication Name:** Enter the registration name of the extension.
- **Password:** Enter the registration password of the extension.

- b. In the **Basic SIP Network Settings** section, enter the PBX server information and set the registration period.

Basic SIP Network Settings	
Proxy Server	192.168.28.39
Proxy Port	5060
Backup Proxy Server	0.0.0.0
Backup Proxy Port	0
Outbound Proxy Server	0.0.0.0
Outbound Proxy Port	0
Backup Outbound Proxy Server	0.0.0.0
Backup Outbound Proxy Port	0
Registrar Server	192.168.28.39
Registrar Port	5060
Backup Registrar Server	0.0.0.0
Backup Registrar Port	0
Registration Period	1800
Conference Server URI	

- **Proxy Server:** Enter the IP address / domain name of the PBX.
- **Proxy Port:** Enter the SIP registration port of the PBX.
- **Registrar Server:** Enter the IP address / domain name of the PBX.
- **Registrar Port:** Enter the SIP registration port of the PBX.
- **Registration Period:** Optional. Set the registration period.

**Tip:**

You can check the available range of the registration time on **PBX Settings > SIP Settings > General > SIP Endpoint Registration Timer** in the PBX web portal.

4. Click **Save Settings**.
5. Reboot the IP phone to make the configurations take effect.

## Result

The extension is registered successfully. You can check the registration status on **Status > System Information > SIP Status** on the phone's web interface.

SIP Status			
Line	SIP Account	Status	Backup Registrar Used?
1	3000@192.168.28.39:5060	Registered	No

# Dinstar

## Auto Provision Dinstar IP Phone with Yeastar P-Series PBX System

This topic takes Dinstar C60S (firmware: 2.60.11.7.0) as an example to describe how to auto provision Dinstar IP phone with Yeastar P-Series PBX System in Local Area Network (LAN).

### Requirements

The firmwares of **Dinstar IP phone** and **Yeastar PBX** meet the following requirements.

**Table 4.**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
C60S	2.60.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C60L	2.60.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C60U	2.60.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C61S	2.61.6.7.0/2.61.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C62S	2.62.6.7.0/2.62.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C62G	2.62.6.7.0/2.62.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C63S	2.63.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C63G	2.63.6.7.0/2.63.11.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C64G	2.64.6.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>
C66G	2.66.6.7.0 or later	37.6.0.24 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li></ul>

## Scenarios

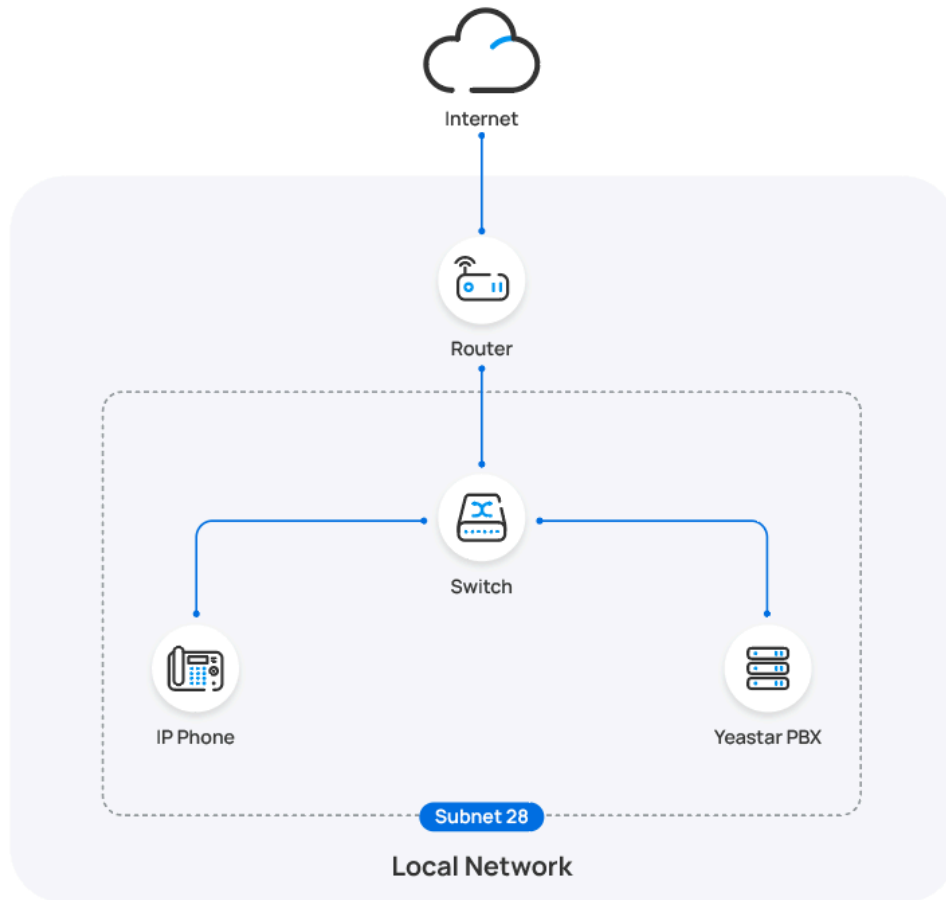
The provisioning methods and operations vary depending on the network environment of **Dinstar IP phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet	<p>In this scenario, you can provision the Dinstar IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Dinstar IP phone in the same subnet (PnP)</a>.</p>
IP Phone and PBX are in DIFFERENT subnets	<p>In this scenario, you can provision the Dinstar IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Dinstar IP phone in different subnets (DHCP)</a>.</p>

### Auto provision a Dinstar IP phone in the same subnet (PnP)

In this example, the Dinstar IP phone (IP: 192.168.28.192) and the Yeastar PBX (IP: 192.168.28.39) are both deployed in subnet 28.






## Prerequisites

- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone is previously used, you need to RESET the IP phone, then re-configure the network settings for the phone.

## Procedure

1. Log in to PBX web portal, go to **Auto Provisioning > Phones**.

The IP phones detected by the PBX via PnP are displayed in the phone list.

2. Click  beside the Dinstar IP phone.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		Unassigned	Unassigned	Dinstar	C60S	192.168.28.192	-	

3. **Optional:** In the **Options** section, select a desired template from the **Template** drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

4. In the **Assign Extension** section, assign an extension to the IP phone.

Assign Extension

\* Select Extension

3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.

- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

5. Click **Save**.

## Result



**Note:**

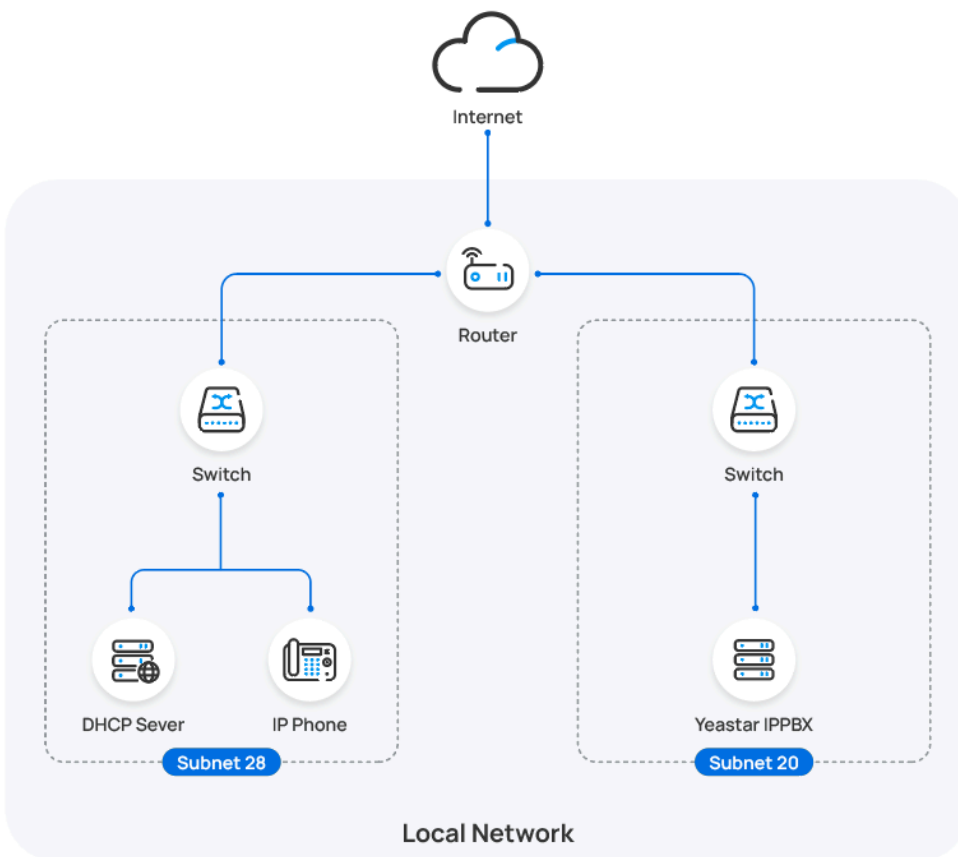
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- The IP phone automatically downloads the configurations from the PBX and applies the settings.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** in PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Dinstar	C60S	192.168.28.192	*****@	

## Auto provision a Dinstar IP phone in different subnets (DHCP)

In this example, the Dinstar IP phone and DHCP server are deployed in subnet 28, while the Yeastar PBX (IP: 192.168.20.58) is deployed in subnet 20.



## Prerequisites

- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.

- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

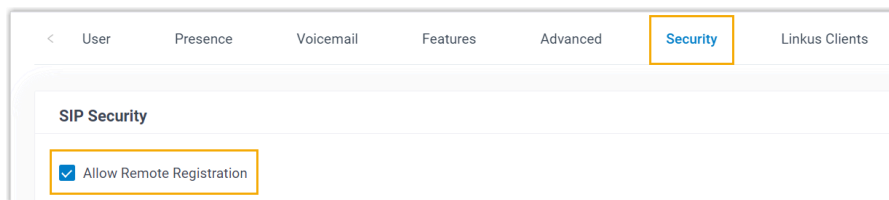
## Procedure

- [Step 1. Enable Remote Registration feature for the extension on PBX](#)
- [Step 2. Add the Dinstar IP phone on the PBX](#)
- [Step 3. Configure DHCP option 66 on DHCP server](#)

### Step 1. Enable Remote Registration feature for the extension on PBX

Enable the Remote Registration feature for the extension to be assigned to the phone, so that the extension can be registered in a different subnet.

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, edit the desired extension.
2. Click **Security** tab, select the checkbox of **Allow Remote Registration** in the **SIP Security** section.



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

### Step 2. Add the Dinstar IP phone on the PBX

Add the IP phone on PBX. The PBX will generate a configuration file based on the phone's MAC address.

1. On PBX web portal, go to **Auto Provisioning > Phones**.
2. Click **Add > Add**.
3. In the **IP Phone** section, configure phone information as follows:

**IP Phone**

\* Vendor: Dinstar

\* Model: C60S

\* MAC Address:

- **Vendor:** Select **Dinstar**.
- **Model:** Select a phone model. In this example, select **C60S**.
- **MAC Address:** Enter the MAC address of the IP phone.

4. In the **Options** section, configure the following settings.

**Options**

\* Template: YSDP\_Dinstar

\* Provisioning Method: DHCP (In the Office)

Provisioning Link: <http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB>

- **Template:** Select a desired template from the drop-down list.



**Note:**

You can select the default template corresponding to the phone model, or customize your own template. For more information, see [Create a Custom Auto Provisioning Template](#).

- **Provisioning Method:** Select **DHCP (In the Office)**.

A provisioning link is automatically generated and displayed in the **Provisioning Link** field. This provisioning link points to the location where the phone's configuration file is stored.

5. In the **Assign Extension** section, assign an extension to the IP phone.

**Assign Extension**

\* Select Extension: 3000-Leo Ball



**Note:**

If your desired extension is not listed in the drop-down list, it indicates that the extension has been associated with an IP phone or gateway.



- To release the extension from the associated IP phone or gateway, see [Release an Extension from a Provisioned IP Phone/Gateway](#).
- To assign the extension to the phone without releasing it from the previously associated device, you can [configure the concurrent registration setting for the extension](#), as the PBX only allows an extension to register with one SIP endpoint by default.

6. Click **Save**.

### Step 3. Configure DHCP option 66 on DHCP server

In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

1. On PBX web portal, copy the provisioning link from the phone's detail page.

Options	
* Template	YSDP_Dinstar
* Provisioning Method	DHCP (In the Office)
Provisioning Link	http://192.168.20.58:7778/api/autoprovision/KZVJ3gwHjecazEQB

2. On the DHCP server, set up option 66 with the provisioning link.

In this example, the configuration on a router's DHCP server is shown below.

**Interfaces » LAN**

General Settings | Advanced Settings | Firewall Settings | **DHCP Server**

General Setup | **Advanced Settings** | IPv6 Settings | IPv6 RA Settings

Dynamic DHCP ☒   
 ? Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.

Force ☐   
 ? Force DHCP on this network even if another server is detected.

IPv4-Netmask 255.255.255.0   
 ? Override the netmask sent to clients. Normally it is calculated from the subnet that is served.

DHCP-Options 6,223.5.5.5   
 66,http://192.168.20.58:7778/api/autoprovision/KZVJ3gwhJecazEQB   
 ? Define additional DHCP options, for example "6,192.168.2.1,192.168.2.2" which advertises different DNS servers to clients.

Dismiss Save

## Result



### Note:

Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on the PBX web portal.

<input type="checkbox"/>	Status	Extension	Name	Vendor	Model	IP Address	Phone Passw	Operations
<input type="checkbox"/>		3000	Leo Ball	Dinstar	C60S	-	*****@	

## Related information

[Auto Provision LDAP for IP Phones](#)

# Manually Register Dinstar IP Phone with Yeastar P-Series PBX System


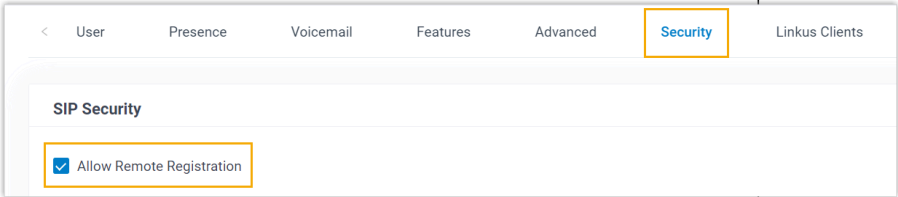
This topic takes Dinstar C60S (firmware: 2.60.11.7.0) as an example to introduce how to manually register an extension on a Dinstar IP phone.

## Supported devices

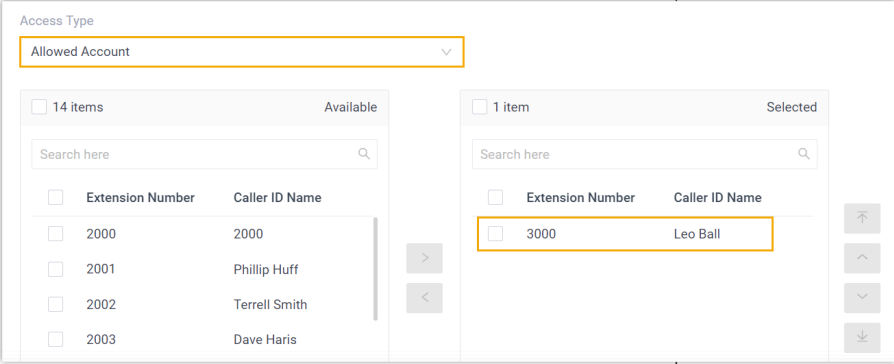

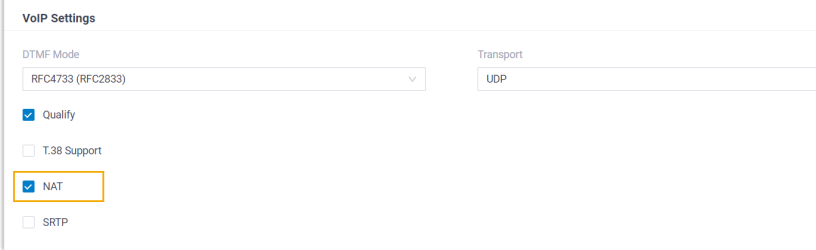

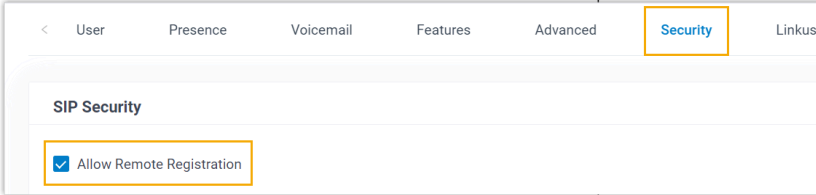
The Dinstar IP phones that are compatible with SIP (Session Initiation Protocol).

## Prerequisites

Make sure that you have completed the corresponding settings shown below according to the network environment of **Dinstar IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<p>Enable the Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</p> 
Remote Network	Register extension using Yeastar FQDN	<ul style="list-style-type: none"> <li>• Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX.</li> <li>• <a href="#">Grant remote SIP access permission for the extension</a> (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul>




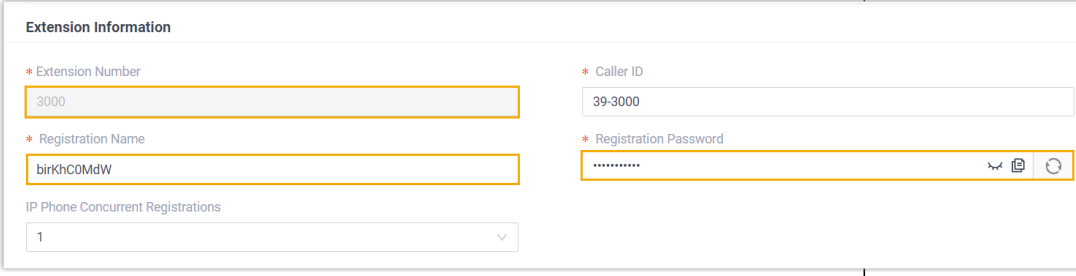

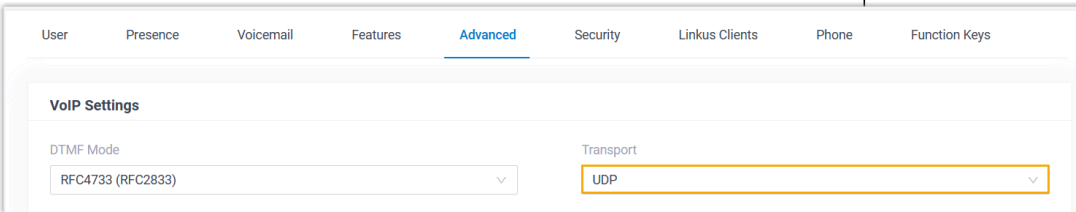

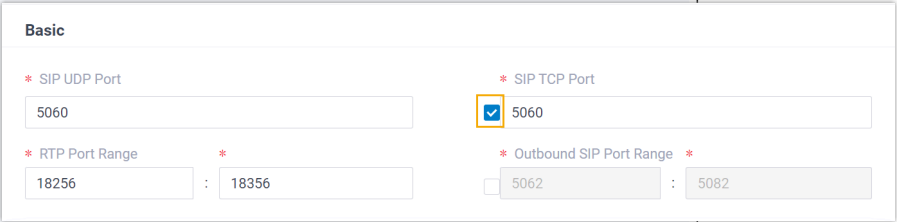
Network Environment	Setting
Register extension using Public IP address / External Host domain name	 <ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>• Set up the extension for remote registration.             <ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul>
	 <ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> 

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Dinstar IP phone](#)

## Step 1. Gather registration information on Yeastar PBX

Log in to PBX web portal, gather the following information for extension registration.

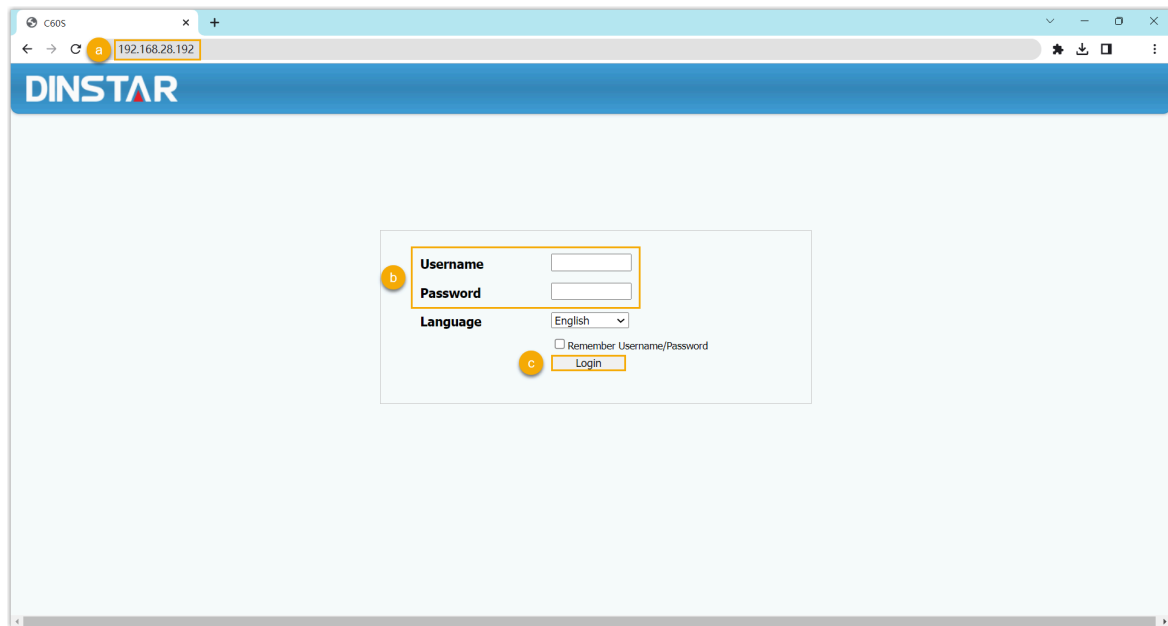
Information	Instruction
Extension information	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>User &gt; Extension Information</b>, note down the following information:</p> <ul style="list-style-type: none"> <li>• Extension Number</li> <li>• Registration Name</li> <li>• Registration Password</li> </ul> 
Transport protocol	<p>Go to <b>Extension and Trunk &gt; Extension</b> &gt;  &gt; <b>Advanced &gt; VoIP Settings &gt; Transport</b>, note down the transport protocol of the extension.</p> <p>In this example, the extension use UDP transport protocol.</p>  <div>  <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div> 

Information	Instruction
	<div data-bbox="560 262 609 315"></div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div data-bbox="706 388 1198 525"> </div>
PBX IP address or domain name	<p><b>Scenario: Register extension in local network</b></p> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> <div data-bbox="560 766 609 819"></div> <p><b>Note:</b> This topic provides the configuration example based on this scenario, where the PBX's private IP address is 192.168.28.39.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN</b>, note down the PBX's Fully Qualified Domain Name (FQDN).</p> <div data-bbox="544 1081 1534 1207"> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports</b>, note down the PBX's public IP address or external host domain name.</p> <div data-bbox="544 1438 1534 1638"> </div>
SIP registration port	<p><b>Scenario: Register extension in local network</b></p> <p>Go to <b>System &gt; Network &gt; Service Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p>

Information	Instruction
	<div> <div> <div>HTTPS</div> <div>8088</div> <div></div> </div> <div> <div>HTTP</div> <div>80</div> <div></div> </div> </div> <div> <div> <div>SIP UDP</div> <div>5060</div> <div></div> </div> <div> <div>SIP TCP</div> <div>5060</div> <div></div> </div> </div> <div> <div> <div>SIP TLS</div> <div>5061</div> <div></div> </div> <div> <div>Outbound SIP Port</div> <div>5062-5082</div> <div></div> </div> </div> <p>In this example, we use the SIP UDP port 5060.</p> <p><b>Scenario: Register extension remotely using Yeastar FQDN</b></p> <p>Go to <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div> <div>Features</div> <div> <div>SIP Access</div> <div>Remote Access</div> </div> <div>Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.</div> <div> <div>* Status</div> <div>Enabled</div> </div> <div> <div>Remote Access Service Port-SIP UDP&amp;TCP</div> <div>5060</div> </div> <div> <div>Remote Access Service Port-SIP TLS</div> <div>5061</div> </div> </div> <p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18205</div> </div> <div> <div>External SIP TCP Port</div> <div>18205</div> </div> <div> <div>External SIP TLS Port</div> <div>18208</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </div>

## Step 2. Register extension on Dinstar IP phone

1. Log in to the web interface of the Dinstar IP phone.

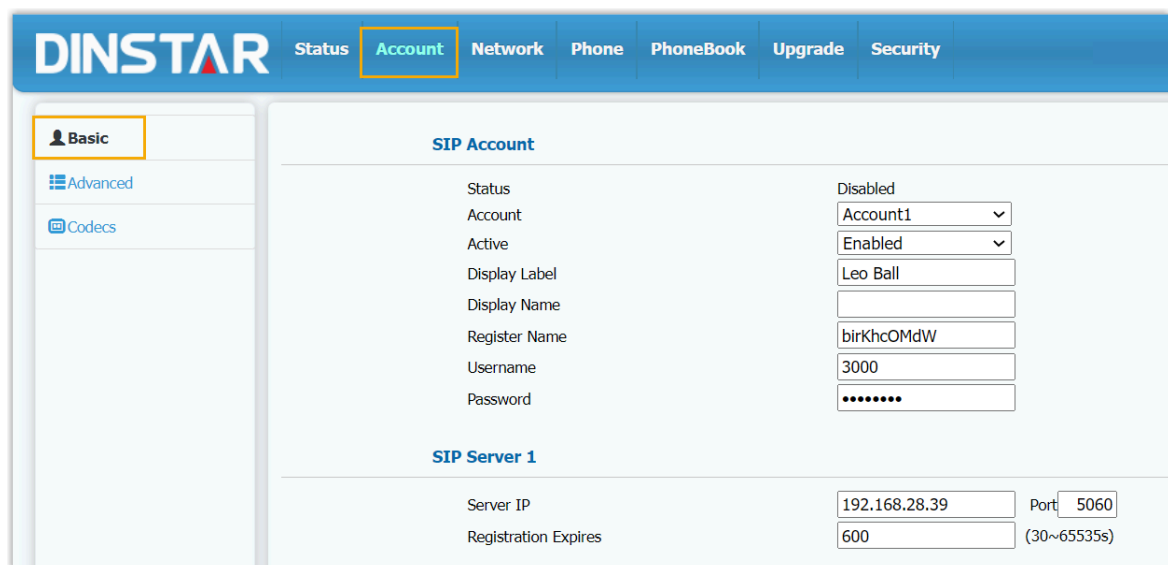


- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

In this example, enter the default password `admin`.

- c. Click **Login**.

2. Go to **Account > Basic**, complete the registration configurations.



- a. In the **Account** drop-down list, select an available account.
- b. In the **Active** drop-down list, select **Enabled**.
- c. Enter the extension information.

- **Display Label:** Enter the name associated with the account, which will be displayed on the phone screen.
  - **Register Name:** Enter the registration name of the extension.
  - **Username:** Enter the extension number.
  - **Password:** Enter the registration password of the extension.
- d. Enter the PBX server information.
- **Server IP:** Enter the IP address / domain name of the PBX.
  - **Port:** Enter the SIP registration port of the PBX.
3. Click **Submit**.

## Result

The extension is registered successfully. You can check the registration status in the **Status** field.

The screenshot shows the Dinstar web interface with the 'Account' tab selected. On the left sidebar, 'Basic' is selected. The main content area is titled 'SIP Account' and contains a table of configuration fields. The 'Status' field is highlighted with a yellow box and displays 'Registered'.

SIP Account	
Status	Registered
Account	Account1: Leo Ball ▼
Active	Enabled ▼
Display Label	Leo Ball
Display Name	
Register Name	birKhcOMdW
Username	3000
Password	••••••••