

# IP Phone Configuration Guide

Yeastar P-Series Appliance Edition

Version: v1

Date: 2025-03-04



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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.

Method	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 Provisioning</a>	<p>Provision IP phones one by one by manually entering a PBX-provided provisioning link on the phone's web interface, so as to complete general settings (preference, codecs, etc) and extension registration.</p> <p>This method is mainly used for IP phones that do NOT support <b>RPS</b> auto provisioning.</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.

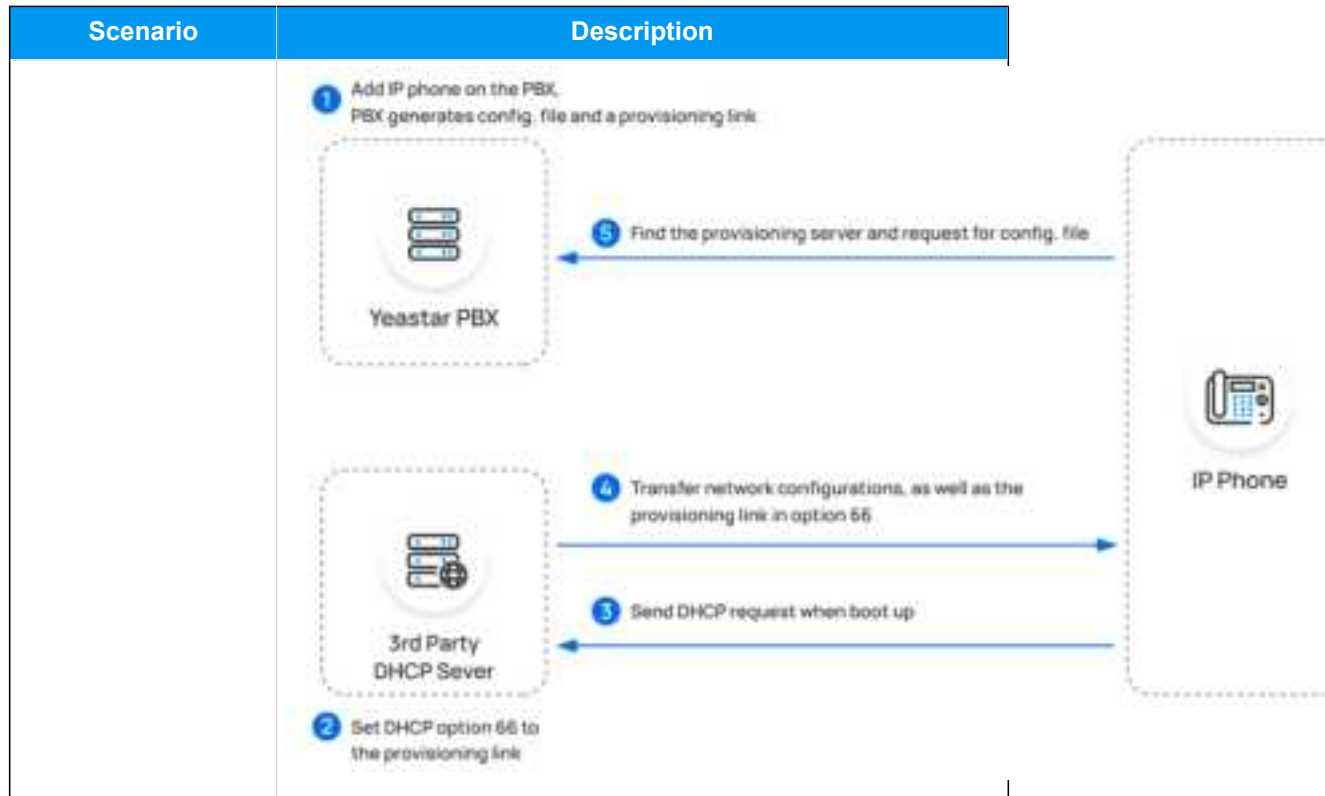
The provisioning process is shown below.



## 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:

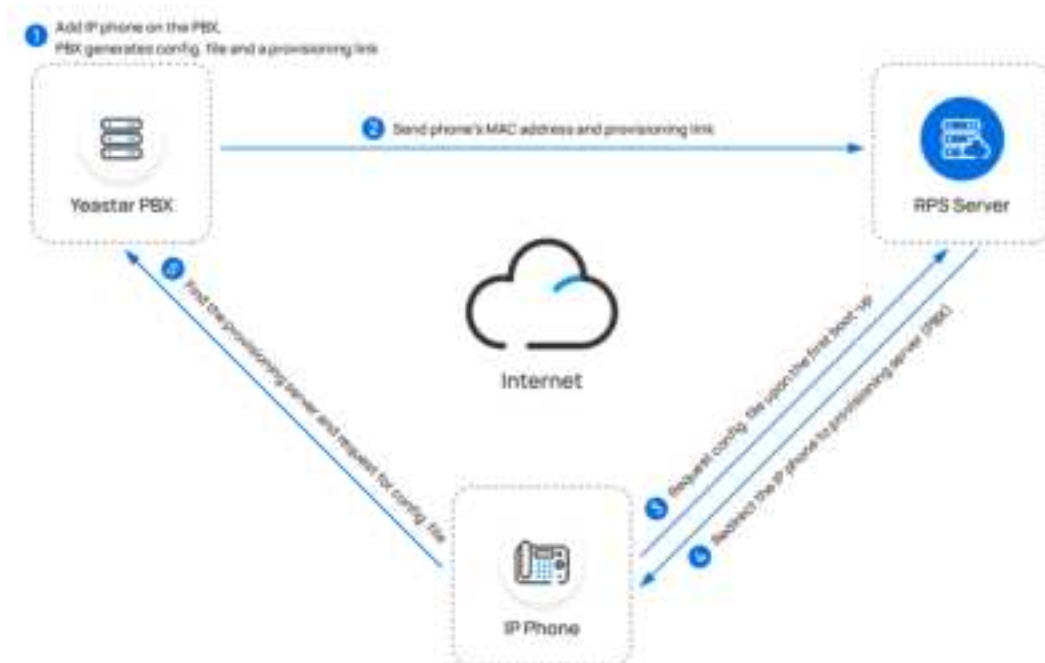
Scenario	Description
IP phone is deployed in the SAME subnet as the PBX, but does NOT support PnP provisioning	<p>In this scenario, you can use the PBX's built-in DHCP server. The provisioning process is shown below:</p> <p>The diagram illustrates the DHCP provisioning process using the PBX's built-in DHCP server. The process consists of five steps:</p> <ol style="list-style-type: none"> <li><b>1 Add IP phone on the PBX. PBX generates config. file and a provisioning link</b>: The PBX adds the IP phone and generates a configuration file and a provisioning link.</li> <li><b>2 The DHCP option 66 is set to the provisioning link automatically</b>: The DHCP option 66 is set to the provisioning link automatically.</li> <li><b>3 Send DHCP request when boot up</b>: The IP Phone sends a DHCP request when it boots up.</li> <li><b>4 Transfer network configurations, as well as the provisioning link in option 66</b>: The PBX Built-in DHCP Server transfers network configurations and the provisioning link in option 66 to the IP Phone.</li> <li><b>5 Find the provisioning server and request for config. file</b>: The IP Phone finds the provisioning server and requests a configuration file.</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 Provisioning

For an IP phone that does NOT support **RPS** provisioning, you can manually provision the IP phone with Yeastar PBX by entering a PBX-provided provisioning link on the phone's web interface.



#### Note:

Use the DHCP option 66 if you need to provision a large number of identical IP phones.

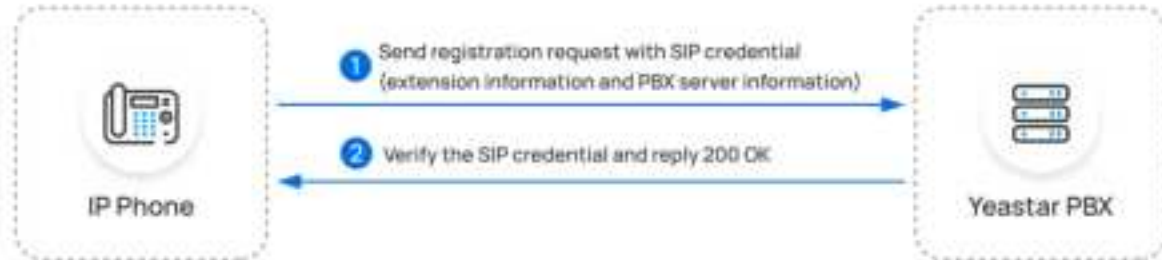
The provisioning process is shown below:



### 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>
 <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>
 <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>
 <a href="#">Auto Provisioning</a>	 <a href="#">Auto Provisioning</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
AX83H	180.86.0.5 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
AX86R	180.86.0.5 or later	37.18.0.59 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
T64LTE	132.86.0.25 or later	37.16.0.71 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
T67LTE	132.86.0.35 or later	37.16.0.71 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
W75DM	175.85.0.5 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

## Scenarios

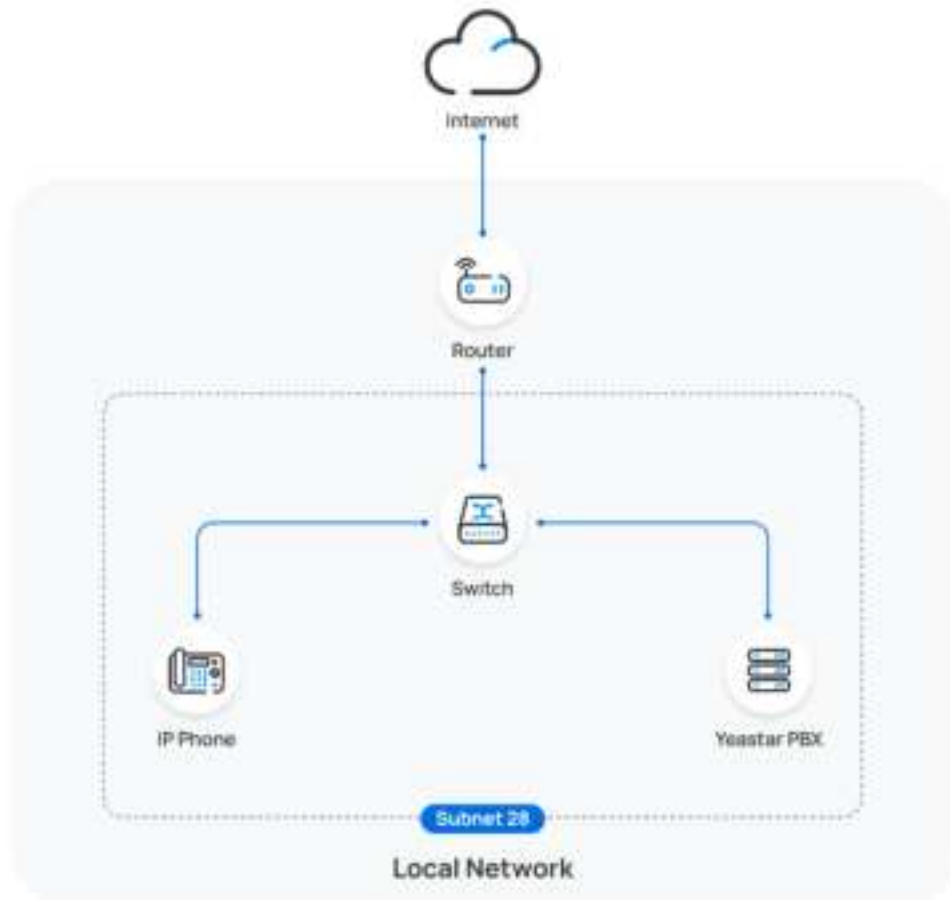
The provisioning methods and operations vary depending on the network environment of **Yealink IP Phone** and **Yeastar PBX**, as the following table shows.

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.

2. Click  beside the Yealink IP phone.

Status	Extension	Name	Vendor	Model	IP Address	Phone Factory Operations
Unassigned	Unassigned	Name	SIP-T209	192.168.30.193		

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-Lao Bai

**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:**

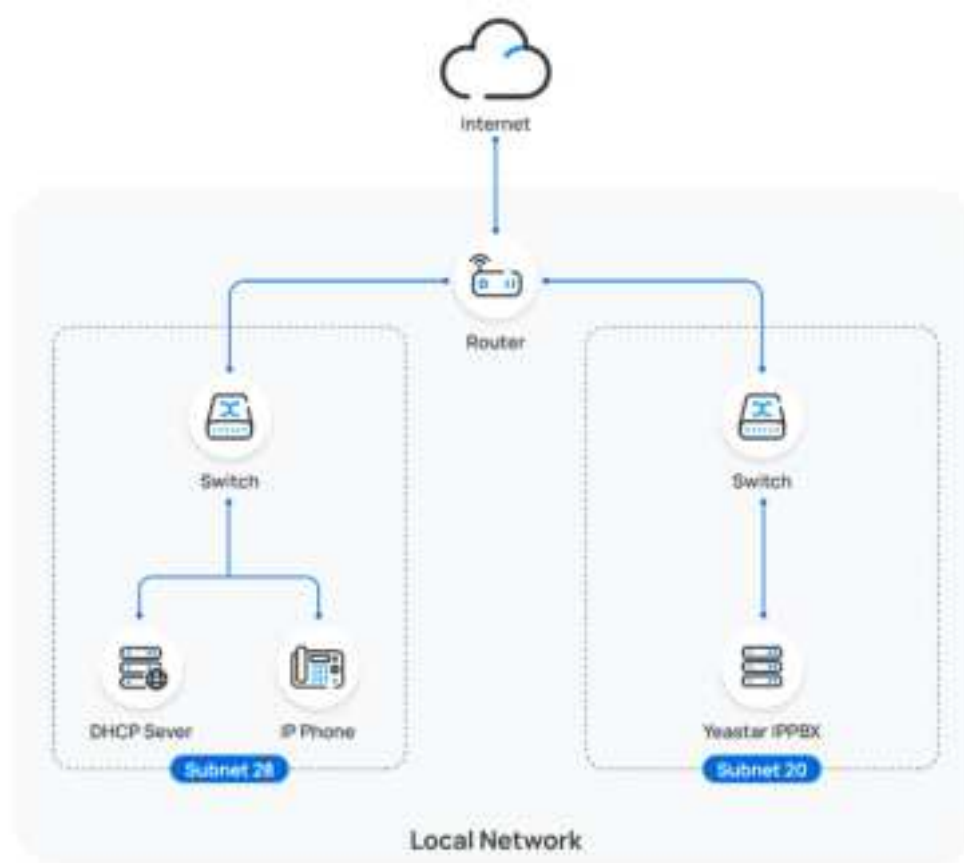
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	3008	Lin Qian	Yealink	SIP-T20P	192.168.28.102		  

## 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.

**IP Phone**

• Vendor: Yealink

• Model: SIP-T53W

• MAC Address: [Empty field]

- **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\_AutoProvision

• Provisioning Method: DHCP (In the Office)

Provisioning Link: [Long URL]

- **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 on a router's DHCP server is shown below.



## Result



### Note:

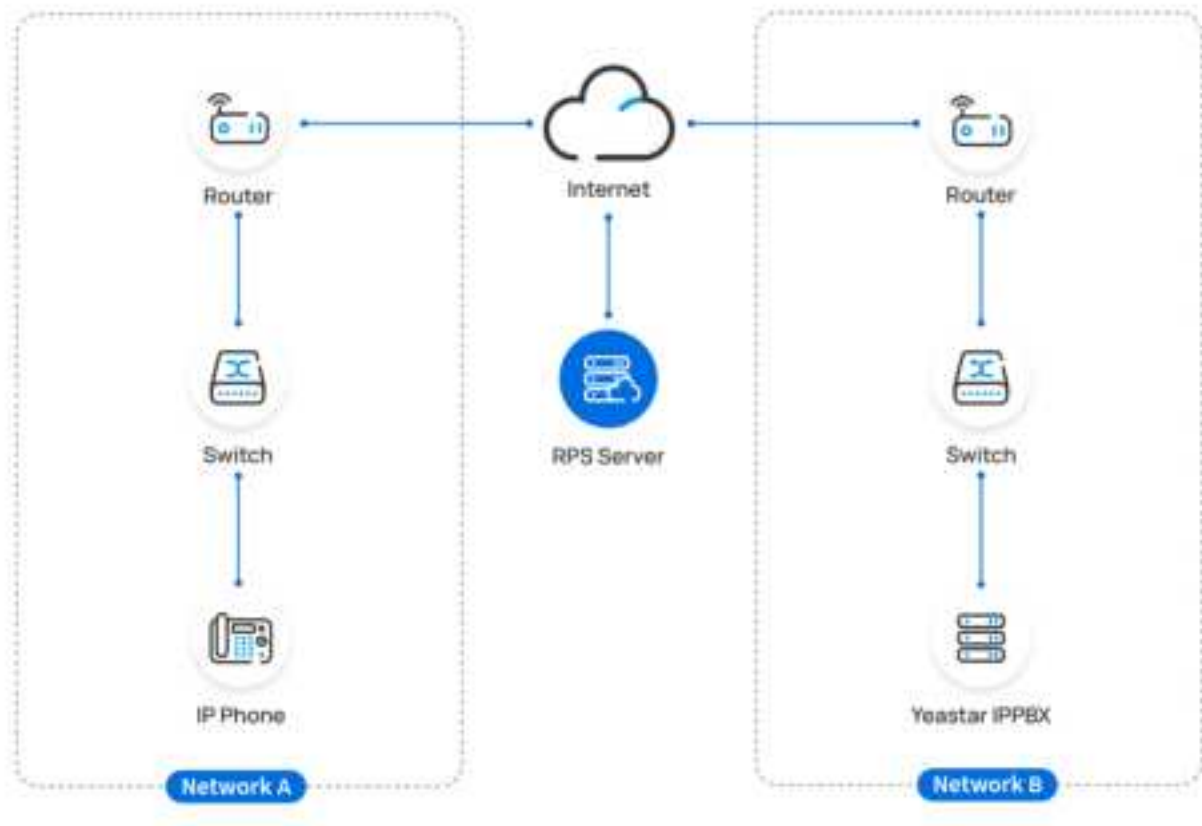
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Power	Operations
	2000	Lee Bar	Yealink	SP-T20W	...		

## 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.




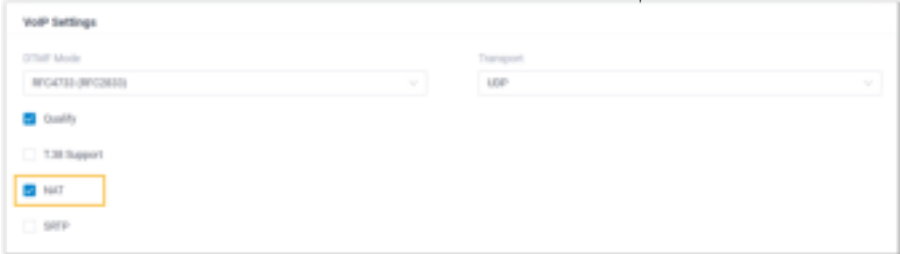

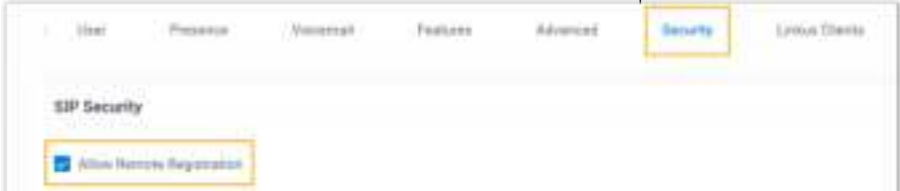
## Prerequisites

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> </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> </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 style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>! Important:</b> 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>

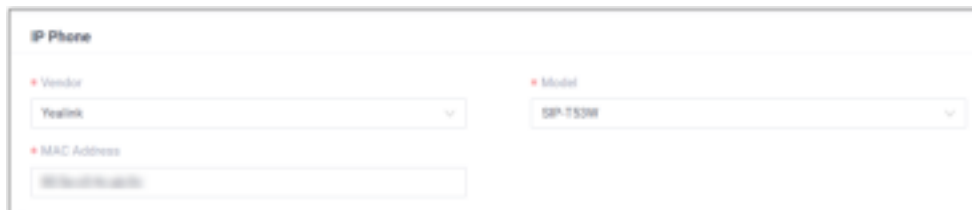
Method	Setting
	<ul style="list-style-type: none"> <li>◦ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> 
	<ul style="list-style-type: none"> <li>◦ Enable Remote Registration feature for the extension (Path: <b>Extension 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 screenshot shows the 'IP Phone' configuration section. It contains three fields: 'Vendor' with a dropdown menu showing 'Yealink', 'Model' with a dropdown menu showing 'SIP-T53W', and 'MAC Address' with a text input field containing '001410c00000'.

- **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 screenshot shows the 'Options' section. It includes a 'Provisioning Method' dropdown set to 'RPS Yeastar FQDN', a 'Provisioning Method' dropdown set to 'RPS FQDN (Remote)', and a 'Provisioning Link' text field containing a long URL. There is also a checkbox for 'Authentication for the Provisioning Link'.

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



The screenshot shows the 'Options' section. It includes a 'Provisioning Method' dropdown set to 'RPS Public IP', a 'Provisioning Method' dropdown set to 'RPS (Remote)', and a 'Provisioning Link' text field containing a long URL. There is also a checkbox for 'Authentication for the Provisioning Link'.

- **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.



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.



## 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.



## 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:

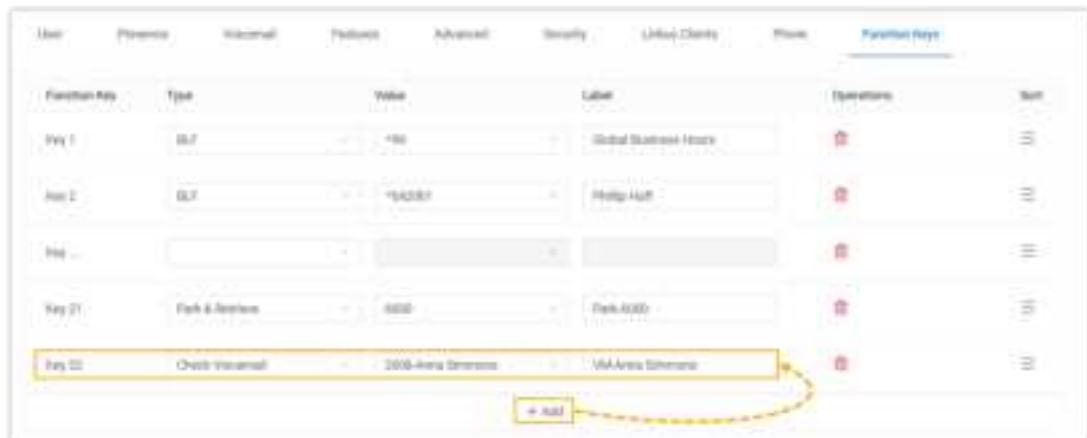
Yeastar P-Series PBX System supports to add up to **120** function keys on PBX web portal.


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.



- **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.



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
AX83H	180.86.0.5 or later	37.16.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
AX86R	180.86.0.5 or later	37.18.0.59 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
T64LTE	132.86.0.25 or later	37.16.0.71 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
T67LTE	132.86.0.35 or later	37.16.0.71 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
W75DM	175.85.0.5 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

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.



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.



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



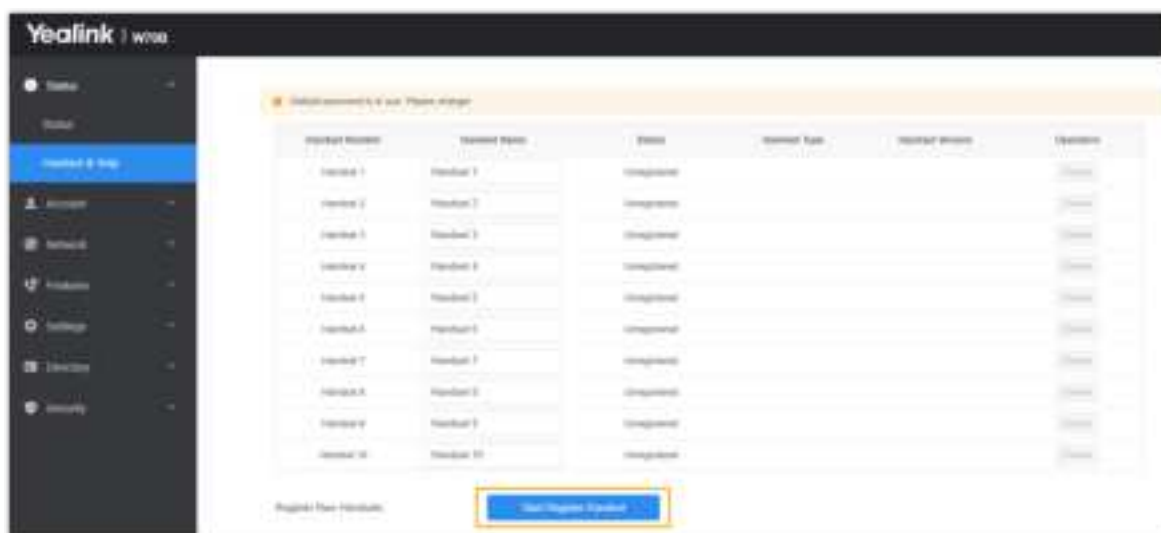
The handset is listed under the DECT base station.



Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Template	Firmware Version	MAC Address	Operations
	1001	Handset 1	Yealink	W700	192.168.0.101		YSPR Yealink70	1.46.05.0.20	80 Sec:10:30:22	

## 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**.



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
AX83H	180.86.0.5 or later	37.16.0.25 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
			<ul style="list-style-type: none"> <li>• Provision Link</li> </ul>
AX86R	180.86.0.5 or later	37.18.0.59 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
T64LTE	132.86.0.25 or later	37.16.0.71 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> <li>• Provision Link</li> </ul>
T67LTE	132.86.0.35 or later	37.16.0.71 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
W75DM	175.85.0.5 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

## 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: ⓘ  
2010878013200547

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.





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.



**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**.



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](#)





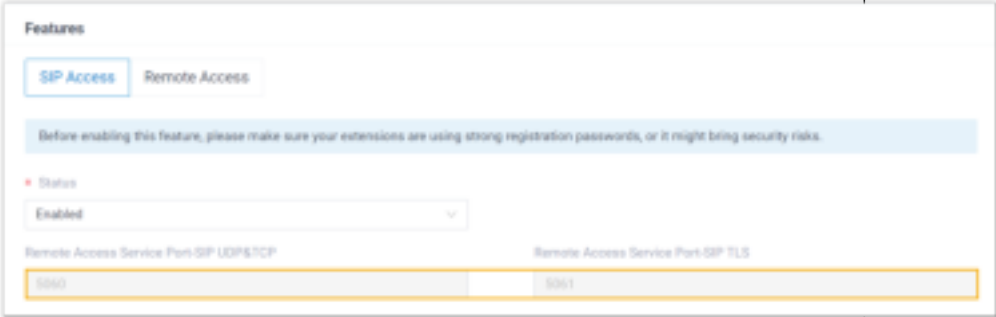
### Step 1. Gather registration information on Yeastar PBX

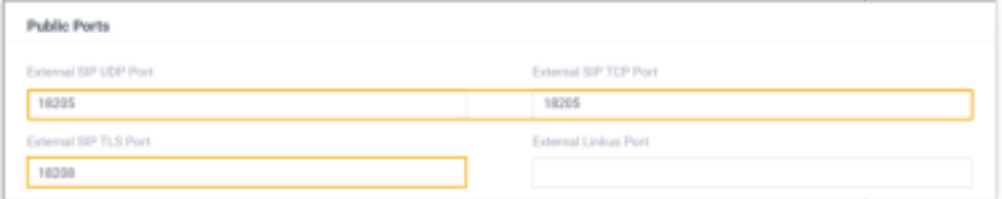
Log in to PBX web portal, gather the following information for extension registration.

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> </div> <div> </div> <div> <b>Note:</b> </div> <div> <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> </div> <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> <div> </div>
PBX IP address or domain name	<div> <b>Scenario: Register extension in local network</b> </div> <div> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> </div> <div> </div> <div> <b>Note:</b> </div> <div> <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> <b>Scenario: Register extension remotely using Yeastar FQDN</b> </div> <div> <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
	 <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>  
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>  <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
	<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.

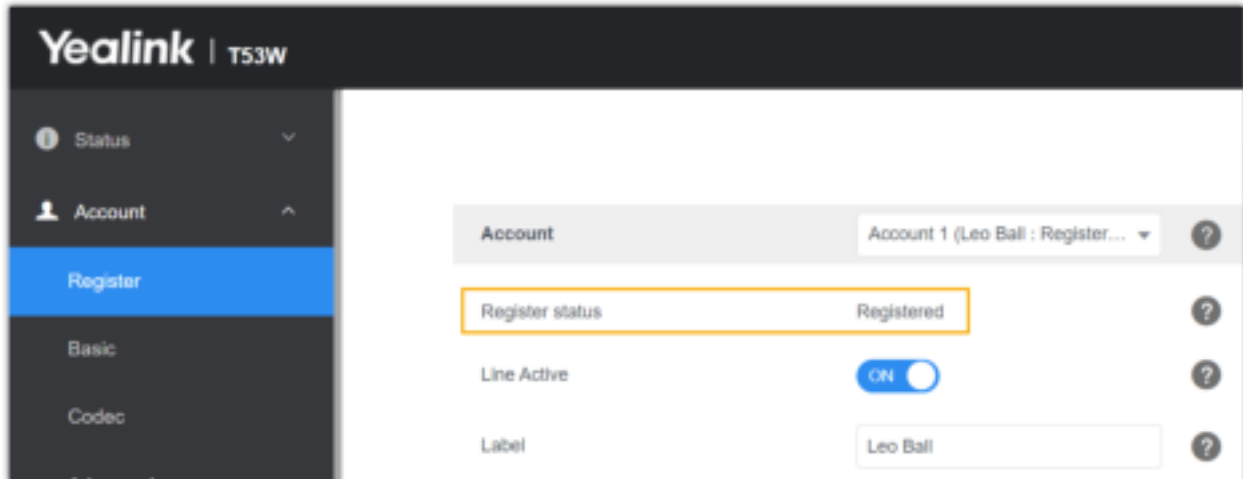


- a. In the browser's address bar, enter the IP address of the IP phone.
  - b. Enter the username `admin` and the associated password.  
In this example, enter the default password `admin`.
  - c. Click **Login**.
2. On the left navigation bar, go to **Account > Register**, and complete the registration 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><li>• Provision Link</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><li>• Provision Link</li></ul>
A308i	2.6.10.1177 or later	37.14.0.26 or later	<ul style="list-style-type: none"><li>• PnP</li><li>• DHCP</li><li>• RPS</li><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>
A320i	2.6.0.1402 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
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
H4	1.0.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
H4W	1.0.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</li> </ul>
H6	1.0.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
H6W	1.0.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
i33VF	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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
i52	2.8.13 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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
V61G	2.12.18.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
V61W	2.12.18.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
V62G	2.12.18.8 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
V62W	2.12.18.8 or later	37.14.0.26 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
			<ul style="list-style-type: none"> <li>• Provision Link</li> </ul>
V62 Pro	2.12.18.2 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• RPS</li> <li>• Provision Link</li> </ul>
V66	2.12.18.4 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
V66 Pro	2.12.18.4 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
W710D	1.16.2 or later	37.14.0.26 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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
X301	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
X301G	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
X301W	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
X303	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
X303G	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
X303W	2.12.2 or later	37.8.0.25 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
X303-2 WIRE	1.0.3 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> </ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
Y501W-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> <li>• Provision Link</li> </ul>

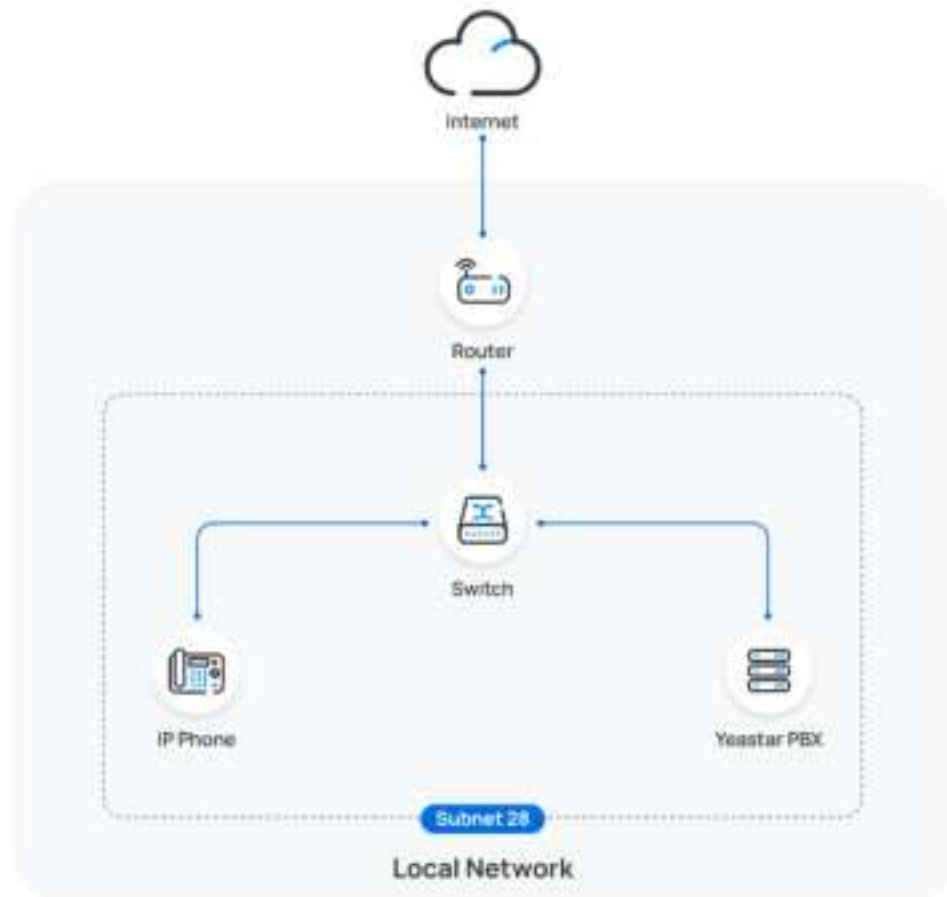
## Scenarios

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>
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.

- Click  beside the Fanvil IP phone.



Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	(Unassigned)	(Unassigned)	Fanvil	X60-V2	192.168.25.208		

- 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:**

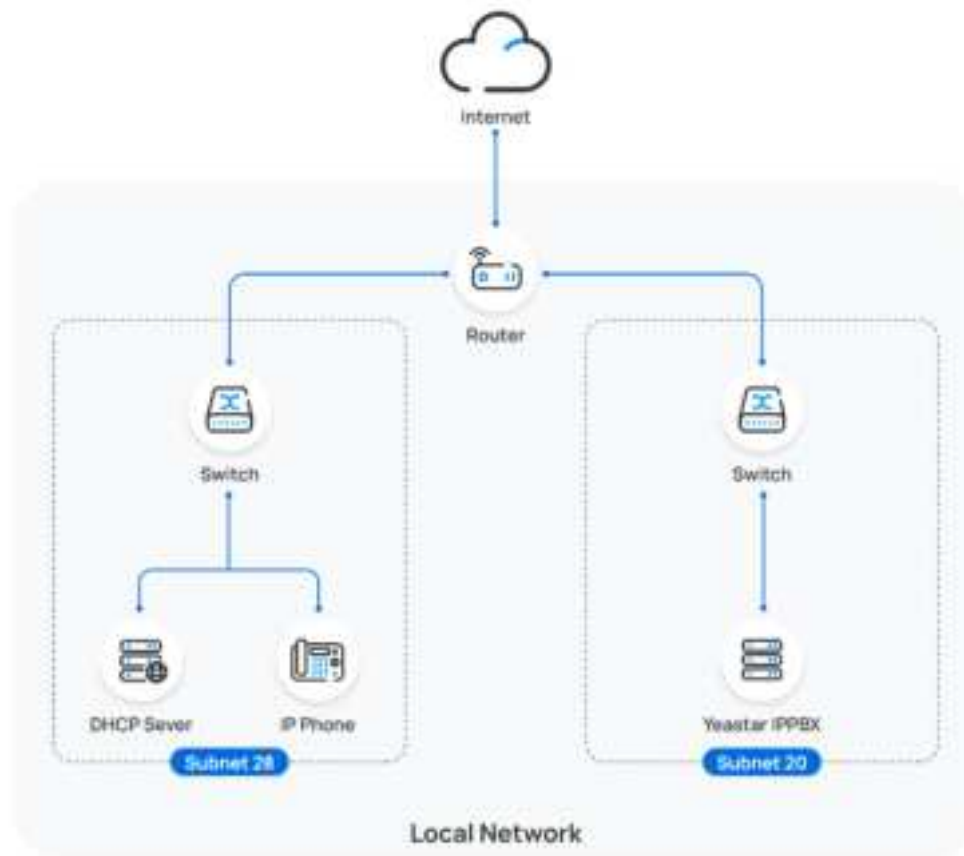
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	3000	Liu Qian	Fanvil	XDP-VCE	192.168.28.200		

## 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.

The screenshot shows the 'IP Phone' configuration form. It has three main sections: 'Vendor' with a dropdown menu showing 'Fanvil', 'Model' with a dropdown menu showing 'X6U-V2', and 'MAC Address' with a text input field containing '00:0C:29:00:00:00'.

- **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.

The screenshot shows the 'Options' configuration form. It has three main sections: 'Template' with a dropdown menu showing 'P20P\_Fanvil88', 'Provisioning Method' with a dropdown menu showing 'DHCP (In the Office)', and 'Provisioning Link' with a text input field containing 'http://192.168.1.1:8080/...'.

- **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' form. It has a single section: 'Select Extension' with a dropdown menu showing '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 on a router's DHCP server is shown below.

**Interfaces - LAN**

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

General Settings | **Advanced Settings** | Firewall Settings | Firewall Rules Settings

Dynamic DHCP ☒

**Force** ☐

**DHCP Netmask** 255.255.255.0

**DHCP Options** 0.223.5.5.0

192.168.0.1

**Apply**

## Result



**Note:**

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

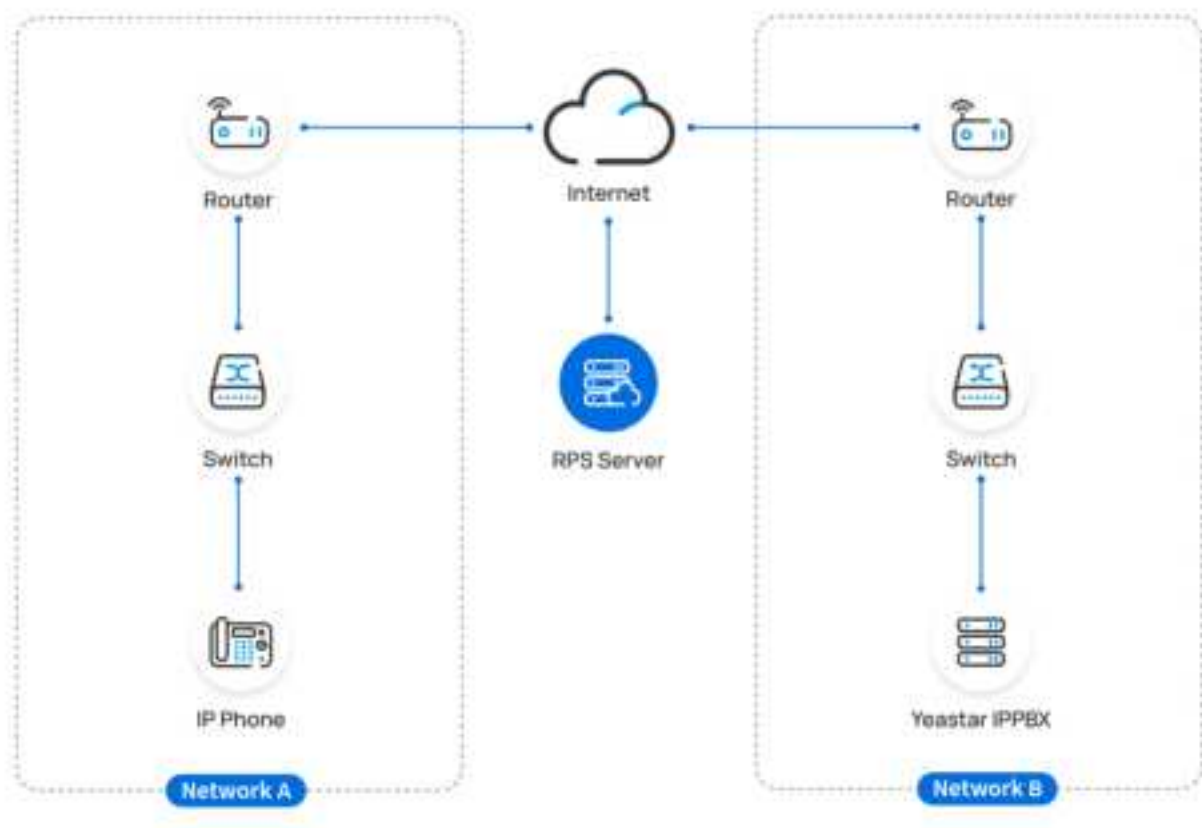
- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning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

Status	Extension	Name	Vendor	Model	IP Address	Phone Feature	Operations
	3300	Lee Bell	Panasonic	NUX42			   

## 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.




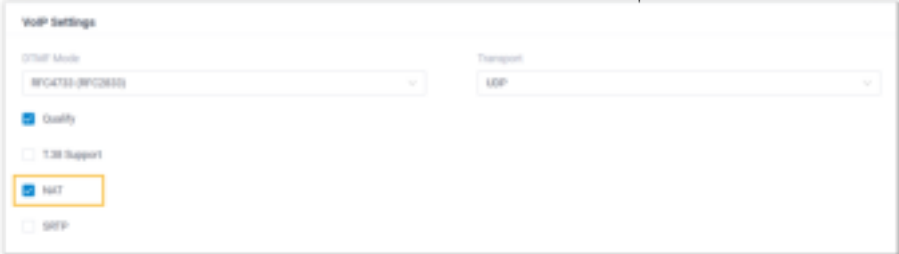

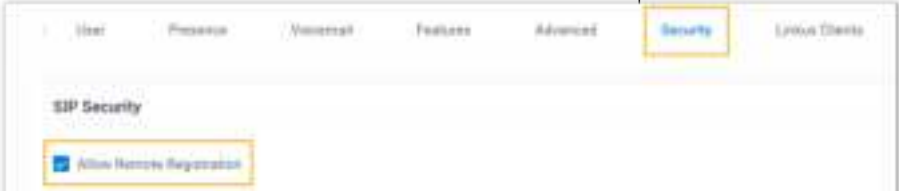


## Prerequisites

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>

Method	Setting
	<div> </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> </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> <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 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 section. It includes three main fields: 'Vendor' with 'Fanvil' selected, 'Model' with 'X6U-V2' selected, and 'MAC Address' with '00:0C:29:00:00:00' entered. There are also expandable sections for 'Advanced' and 'Advanced Settings'.

- **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 section. It includes fields for 'RPS FQDN' with '192.168.1.100' entered and 'RPS FQDN Domain' with '192.168.1.100' entered. There is also a 'Provisioning URL' field and a checkbox for 'Authentication for the Following Auto Provisioning'.

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

This screenshot is identical to Figure 3, showing the 'Options' configuration section with 'RPS FQDN' and 'RPS FQDN Domain' both set to '192.168.1.100'.

- **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.



Update Prompt11:38

1. Username

2. Password

Return

- **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.



## 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Feature Operations
	3006	Lin Hall	Fanvil	RMU42		

## 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.




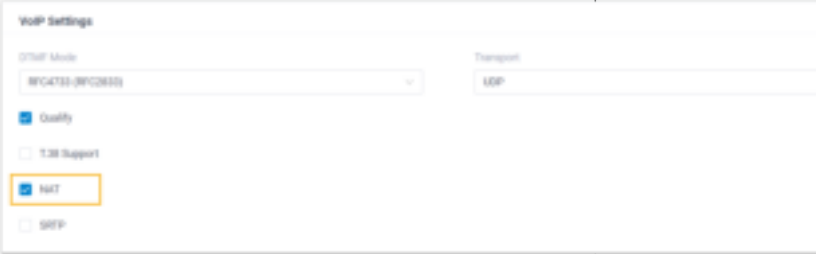

## Supported devices

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> 
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> 
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](#)





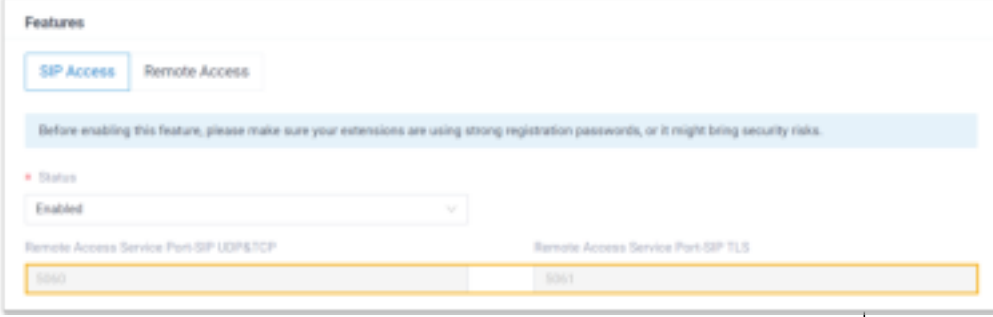
- [Step 2. Register extension on Fanvil IP phone](#)

## 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 &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>  <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></div> <div> </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> </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></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> </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
	
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>  <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>  <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>

Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18285</div> </div> <div> <div>External SIP TCP Port</div> <div>18285</div> </div> <div> <div>External SIP TLS Port</div> <div>18288</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.

The screenshot shows the Fanvil X60 web interface. The left sidebar has a red header with the Fanvil logo and a menu with 'System', 'Network', 'Line', and 'Phone settings'. The 'Line' menu item is selected. The main content area has a red header with tabs: 'SIP', 'SIP Network', 'Dial Plan', 'Active Plan', 'Basic Settings', and 'RTCP-MD'. The 'SIP' tab is active. Below the tabs, there's a 'Line' dropdown set to 'SIP'. The 'Register Settings' section is expanded, showing fields for 'Line Status' (Inactive), 'Username', 'Display name', 'Number', 'Activate' (checkbox), 'Authentication User', 'Authentication Password', and 'Server Name'.

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

The screenshot shows the Fanvil X60 web interface. The left sidebar has a red header with the Fanvil logo and a menu with 'System', 'Network', 'Line', and 'Phone settings'. The 'Line' menu item is selected. The main content area has a red header with tabs: 'SIP', 'SIP Network', 'Dial Plan', 'Active Plan', 'Basic Settings', and 'RTCP-MD'. The 'SIP' tab is active. Below the tabs, there's a 'Line' dropdown set to 'SIP'. The 'Register Settings' section is expanded, showing fields for 'Line Status' (Inactive), 'Username' (1000), 'Display name' (Line 1000), 'Number', 'Activate' (checkbox), 'Authentication User' (1000@000000), 'Authentication Password' (000000), and 'Server Name'. Below this, there are sections for 'SIP Server 1' and 'SIP Server 2' with fields for 'Server Address', 'Server Port', 'Transport Protocol', and 'Registration Expiration'.

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.

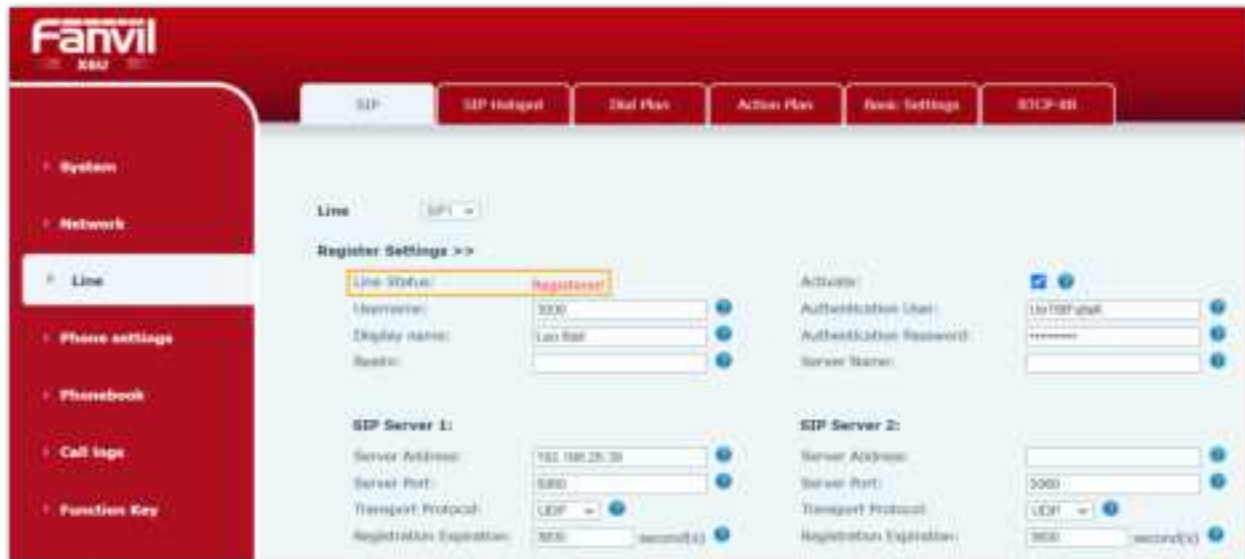
c. Enter the PBX server information.

- **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.



## 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.



- **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.



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: 4.1.5.0.6) as an example to describe how to auto provision Avaya IP phone with Yeastar P-Series PBX System.

### 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	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
J139	4.1.1.0.7 or later	37.12.0.23 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
J159	4.1.1.0.7 or later	37.12.0.23 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
J169	4.1.1.0.7 or later	37.12.0.23 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
J179	4.1.1.0.7 or later	37.12.0.23 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
J189	4.1.1.0.7 or later	37.12.0.23 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
9608	7.1.15.2.1 or later	37.14.0.26 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>






### Prerequisites






- Set up a DHCP server in the same subnet as the IP phone to assign it an IP address.

**Note:**




Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.

- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Make sure that you have completed the corresponding settings shown below according to the network environment of **Avaya IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Provision an IP phone in the same subnet	<p>Set the registration name to the same as the extension number for the extension that will be assigned to the IP phone (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</p> <div>  <b>Important:</b>            Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.         </div> 
	Provision an IP phone in different subnets	<ul style="list-style-type: none"> <li>◦ Make sure that the two subnets can communicate with each other.</li> <li>◦ Complete the following settings for the extension to be assigned to the IP phone:               <ul style="list-style-type: none"> <li>▪ Set the registration name to the same as the extension number for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</li> </ul> </li> </ul> <div>  <b>Important:</b>            Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.         </div>

Network Environment		Setting
		 <ul style="list-style-type: none"> <li>▪ 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>)</li> </ul> 
Remote Network	Remotely provision an IP phone using Yeastar FQDN	<ul style="list-style-type: none"> <li>◦ Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX to ensure that the FQDN is available.</li> <li>◦ Complete the following settings for the extension to be assigned to the IP phone:             <ul style="list-style-type: none"> <li>▪ Set the registration name to the same as the extension number for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</li> </ul> </li> </ul> <div style="background-color: #fff9e6; padding: 10px; border: 1px solid #f0e68c;"> <p><b>! Important:</b> Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.</p> </div>  <ul style="list-style-type: none"> <li>▪ <a href="#">Grant remote SIP access permission</a> for the extension (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul>

Network Environment	Setting										
<p>Remotely provision an IP phone using Public IP address / External Host domain name</p>	<div> <table border="1"> <thead> <tr> <th>Extension Number</th> <th>Caller ID Name</th> </tr> </thead> <tbody> <tr> <td>2000</td> <td>2000</td> </tr> <tr> <td>2001</td> <td>Philip Hunt</td> </tr> <tr> <td>2002</td> <td>Tyrell Smith</td> </tr> <tr> <td>2003</td> <td>Doreen Harris</td> </tr> </tbody> </table> </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>Complete the following settings for the extension to be assigned to the IP phone:             <ul style="list-style-type: none"> <li>Set the registration name to the same as the extension number for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</li> </ul> </li> </ul> <div> <p><b>Important:</b> Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.</p> </div> <div> </div> <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>	Extension Number	Caller ID Name	2000	2000	2001	Philip Hunt	2002	Tyrell Smith	2003	Doreen Harris
Extension Number	Caller ID Name										
2000	2000										
2001	Philip Hunt										
2002	Tyrell Smith										
2003	Doreen Harris										

Network Environment	Setting
	 <ul style="list-style-type: none"> <li>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>)</li> </ul> 

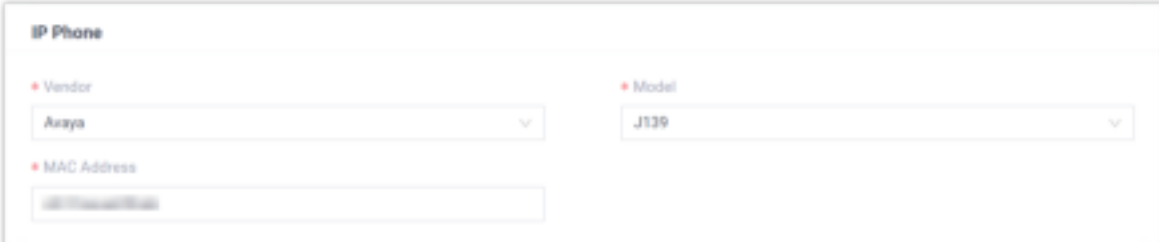
## Procedure

- [Step 1. Add the Avaya IP phone on PBX](#)
- [Step 2. Configure DHCP option 242 on DHCP server](#)

### 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.

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:

• Model:

• MAC Address:

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

Options

+ Template  
YSDP\_Avaya100

+ Provisioning Method  
DHCP (in the Office)

Provisioning Link  
[http://192.168.28.247:7070/webui/wireless/WIRELESS.jsp?](#)

- **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 the provisioning method according to your needs.

Provisioning Method	Description
DHCP (In the Office)	Suitable for provisioning the IP phone that is located in the local network, either in the same subnet or in different subnets.
Provision Link (Remote)	Suitable for provisioning the IP phone located in a remote network, and the IP phone will access the PBX using public IP address / external host name to retrieve configuration files.
Provision Link - FQDN (Remote)	Suitable for provisioning the IP phone located in a remote network, and the IP phone will access the PBX using Yeastar FQDN to retrieve configuration files.

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.



**Note:**

Note down the provisioning link, as you will use it later.

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**.

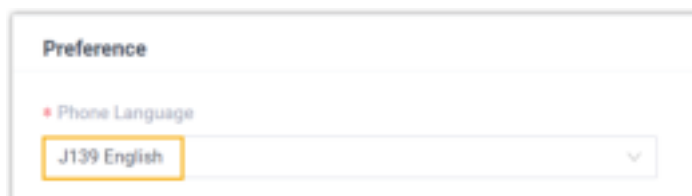
The IP phone is added and displayed in the Auto Provisioning phone list.

7. Set the phone language for the IP phone.

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

Status	Extension	Name	Vendor	Model	IP Address	Phone Passcode	Operations
	3000	Let Bell	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.



- c. Click **Save**.

## Step 2. Configure DHCP option 242 on DHCP server

Configure DHCP option 242 to point to the PBX. This allows the Avaya IP phone to automatically retrieve its configuration files from the PBX.

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.



- a. In the **Additional Option** field, enter 242.
- b. In the string value field, enter the [provisioning link obtained from the PBX](#) according to the selected provisioning method.

Provisioning Method	Instruction
DHCP	<p>Enter the link in the following format:</p> <pre>HTTPSRR=192.168.28.39,HTTPDIR=api/autoprovision/lgjnRL8CkoYFXWJd,HTTPPORT=7778,SIG=2</pre> <ul style="list-style-type: none"> <li>• <b>HTTPSRR</b>: The IP address of the PBX.</li> </ul>



Provisioning Method	Instruction
	<ul style="list-style-type: none"> <li>• <b>HTTPTDIR</b>: The file path on the PBX (e.g. <code>api/autoprovision/lgjnRL8CkoYFXWJd</code>).</li> <li>• <b>HTTSPORT</b>: The server port of the PBX.</li> <li>• <b>SIG</b>: The software version of the Avaya IP phone. Set the value to 2.</li> </ul>
Provision Link	<p>Enter the link in the following format:</p> <pre>TLSSRV=yeastardocs.ras.yeastar.com,TLSDIR=api/autoprovision/lgjnRL8CkoYFXWJd,TLSPORT=443,SIG=2</pre> <ul style="list-style-type: none"> <li>• <b>TLSSRV</b>: The public IP address / domain name of the PBX.</li> <li>• <b>TLSDIR</b>: The file path on the PBX (e.g. <code>api/autoprovision/lgjnRL8CkoYFXWJd</code>).</li> <li>• <b>TLSPORT</b>: The server port of the PBX.</li> <li>• <b>SIG</b>: The software version of the Avaya IP phone. Set the value to 2.</li> </ul>

3. Click **OK** to save the settings.

## Results

- After rebooting the IP phone, 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Pass	Operations
	3000	Let Ball	Avaya	2131	-	*****@	  

# 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
7911	SIP11.9-2-1S or later	37.17.0.17 or later	• DHCP
7942	SIP42.9-4-2SR3-1S or later	37.12.0.23 or later	• DHCP
7975	SIP75.9-3-1SR4-1S or later	37.17.0.17 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

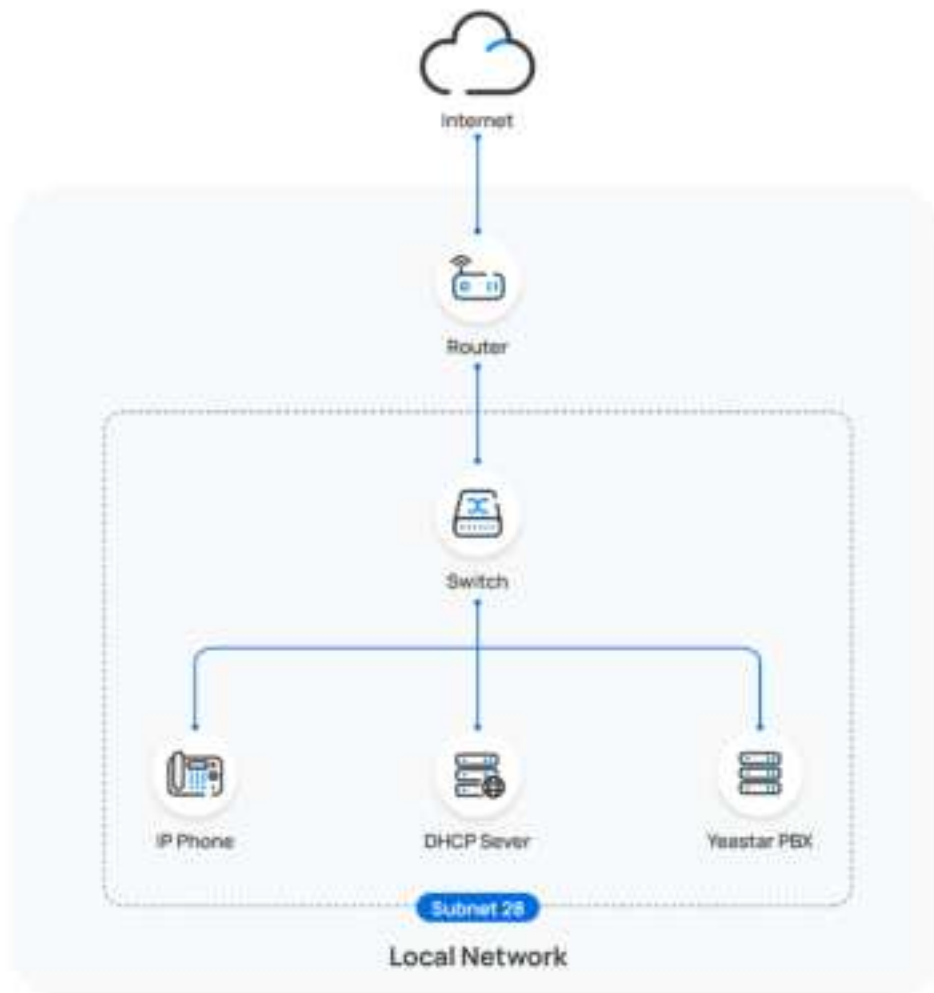
## Scenarios

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.



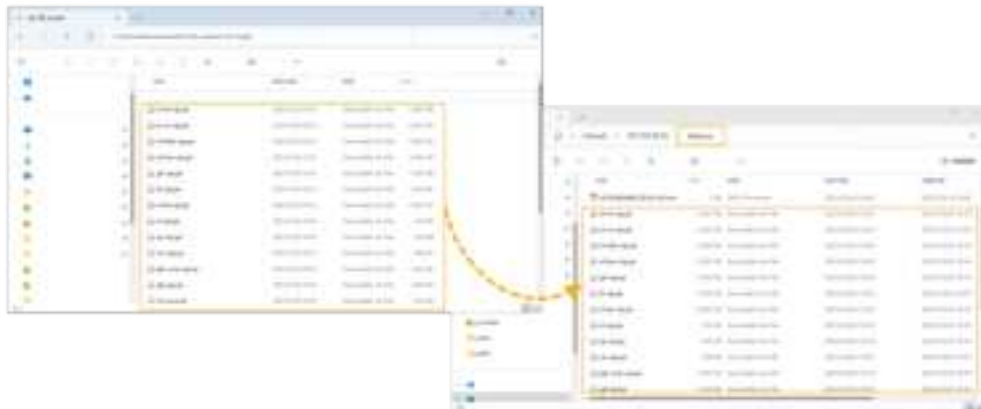
### Prerequisites

- 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](#).

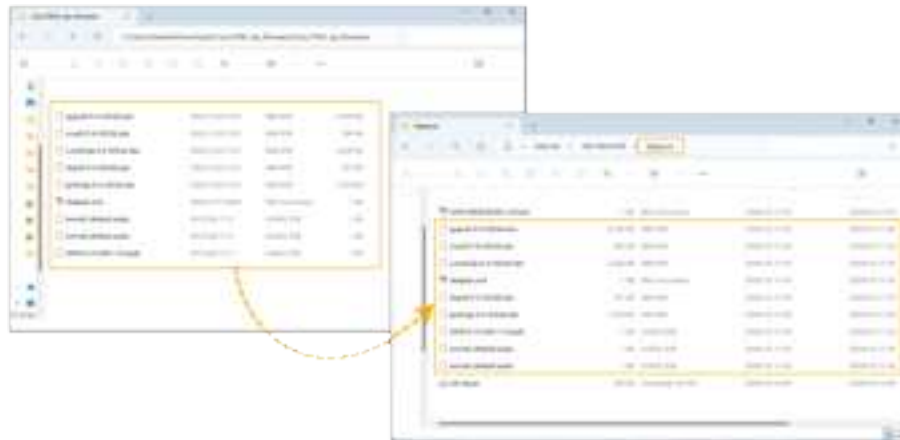



**Note:**

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**).



## 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.

The screenshot shows a form titled 'IP Phone'. It contains three fields: 'Vendor' with a dropdown menu showing 'Cisco', 'Model' with a dropdown menu showing 'Cisco8945', and 'MAC Address' with a text input field containing '000000000000'.

- **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.

The screenshot shows a form titled 'Options'. It contains three fields: 'Template' with a dropdown menu showing 'YIPF\_Default8945', 'Provisioning Method' with a dropdown menu showing 'DHCP (In the Office)', and 'Provisioning Link' with a text input field containing 'http://192.168.1.100:8080'.

- **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 interface titled "Assign Extension". Below the title is a label "Select Extension" followed by a dropdown menu. The dropdown menu is open, showing a list of extensions, with "3000-Lao Bai" selected and highlighted in yellow.

**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 | Physical Settings | **DHCP Server**

General Settings | **Advanced Settings** | Physical Settings | Physical Settings

Dynamic DHCP: ☒

☐ Force

255.255.255.0

DHCP Option: 6.223.5.5.5


192.168.28.41

Cancel Apply



### 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

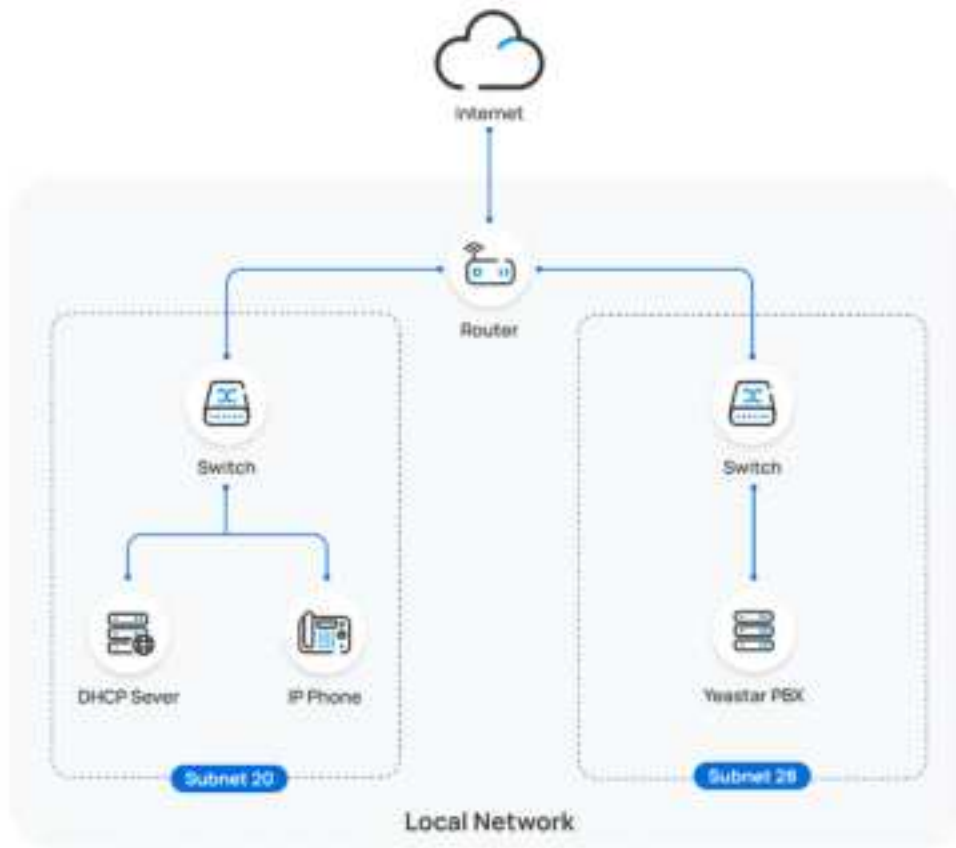
- After boot-up, the IP phone gets an IP address from the DHCP server, downloads configurations from the PBX via TFTP protocol, and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the registration status on **Auto Provisioning > Phone** on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



Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	3006	Joe Ball	Cisco	Cisco8945			  

### 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

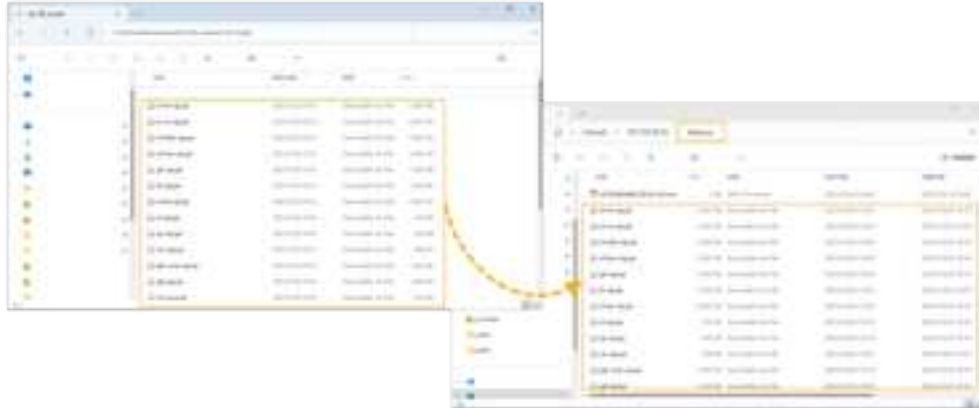
- Make sure that there is only one DHCP server running in the subnet where the IP phone is deployed, or the IP phone would fail to obtain an IP address.
- Make sure that the IP phone and PBX can communicate with each other over the subnets.
- Make sure that you have [downloaded the template](#) for the 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](#).



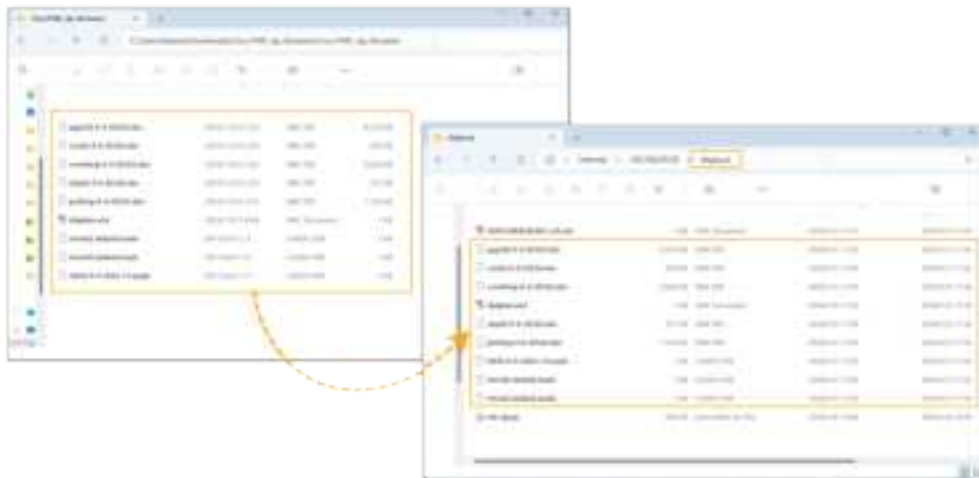
**Note:**



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.



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



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.

The screenshot shows the 'IP Phone' configuration form. It has three main fields: 'Vendor' with a dropdown menu showing 'Cisco', 'Model' with a dropdown menu showing 'Cisco8945', and 'MAC Address' with an empty text input field.

- **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.

The screenshot shows the 'Options' configuration form. It has two main fields: 'Template' with a dropdown menu showing 'YIGP\_Cisco8945' and 'Provisioning Method' with a dropdown menu showing 'DHCP (In the Office)'. There is also a 'Provisioning Link' field which is empty.

- **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' form. It has a single field labeled 'Select Extension' with a dropdown menu showing '3000-Loc 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 | Physical Settings | **DHCP Server**

General Settings | **Advanced Settings** | Physical Settings | Physical 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.

Subnet Mask: 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 "6.223.5.5.5.5" which advertises different DNS servers to clients.

Cancel 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.



Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	3006	Jon Ball	Cisco	CUCP8945	10.10.10.10	Jon Ball	  



# 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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>
D713	10.1.73.16 or later	37.6.0.46 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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
D812	10.1.184.14 or later	37.12.0.30 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
D815	10.1.184.14 or later	37.12.0.30 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
HD100	1.0.0.3-0 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
HD101	1.0.0.3-0 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
HD350W	1.0.0.3-0 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
HD351W	1.0.0.3-0 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
HM201	1.0.0.3-0 or later	37.14.0.26 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
SP800	10.1.169.15 or later	37.17.0.60 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
PA1+	10.1.184.15 or later	37.17.0.60 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
			• Provision Link

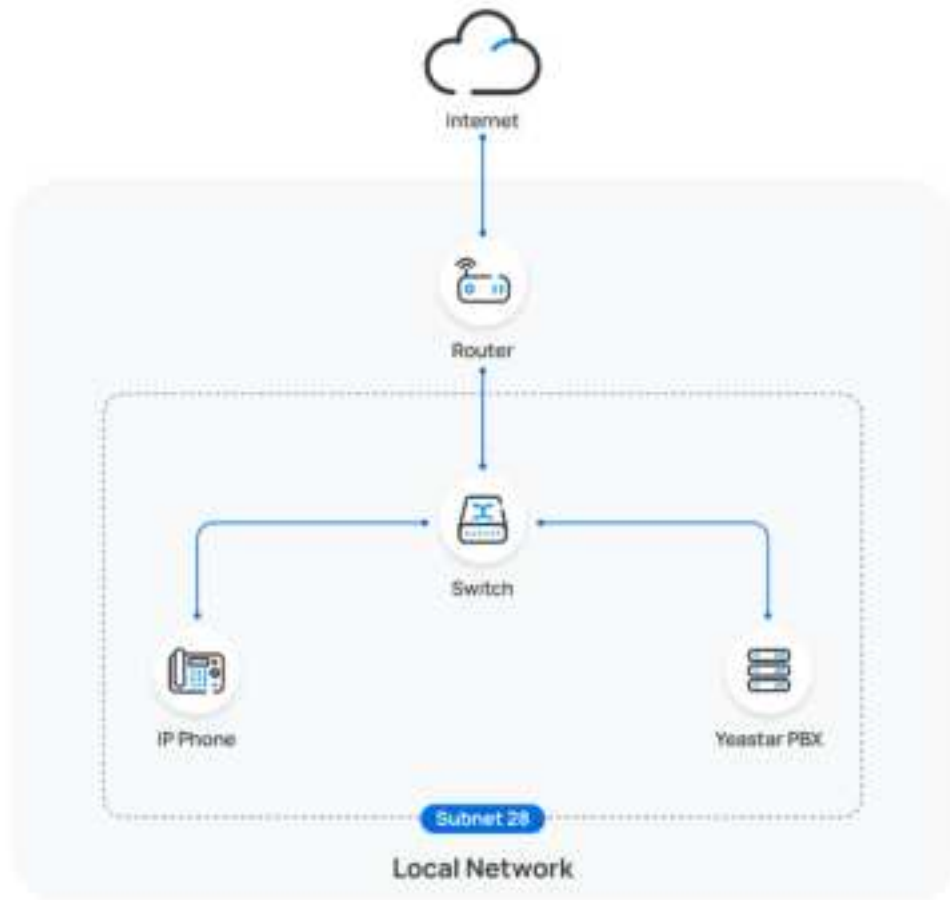
## Scenarios

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



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.

**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:**

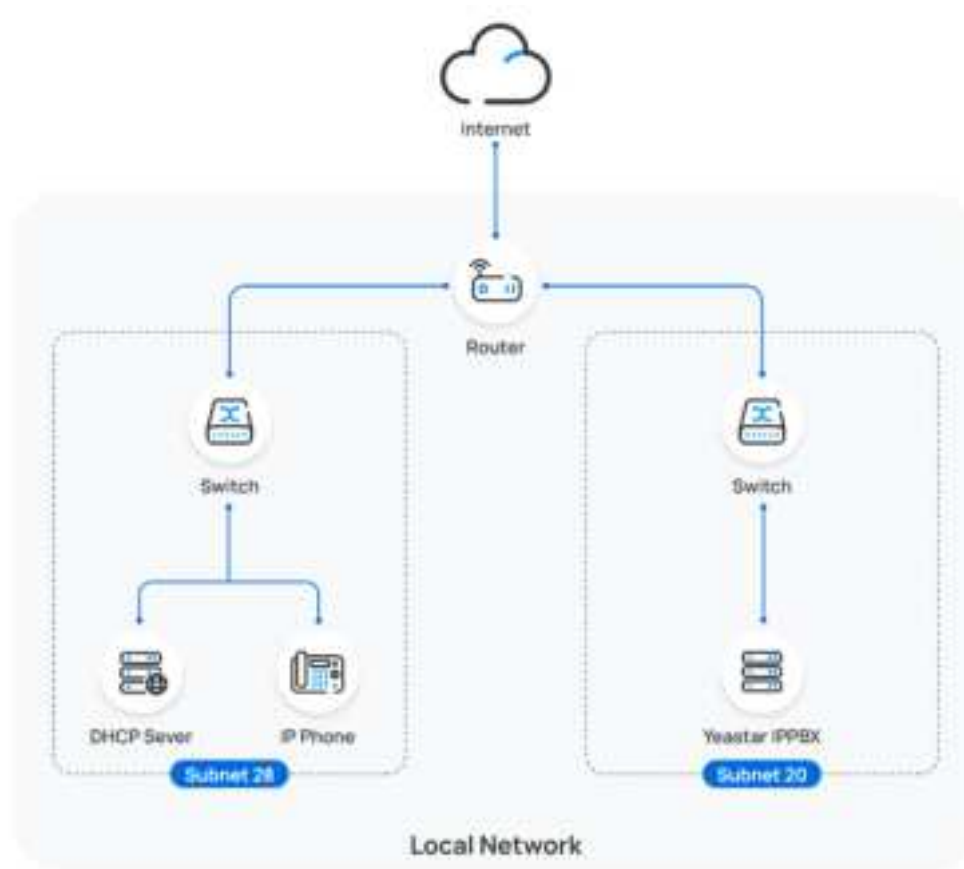
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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**.

Status	Extension	Name	Vendor	Model	IP Address	Phone Profile	Operations
	2008	Lee Hall	Snom	snom0865	192.168.28.208	+	

## 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.



The image shows a configuration form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Snom", "Model" with a dropdown menu showing "snomD865", and "MAC Address" with a text input 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.

The image shows a configuration form titled "Options". It contains three fields: "Template" with a dropdown menu showing "VSPN\_Snom", "Provisioning Method" with a dropdown menu showing "DHCP (In the Office)", and "Provisioning Link" with a text input field containing a URL.

- **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 image shows a configuration form titled "Assign Extension". It contains one field: "Select Extension" with a dropdown menu showing "3000-Lao Bai".



**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 form with the following fields:

- Options:** (Header)
- \* Extension:** (Dropdown menu)
- \* Provisioning Method:** (Dropdown menu with "DHCP (on the IPNet)" selected)
- Provisioning link:** (Text field containing a long URL, highlighted with a yellow border)

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/KZVJ3gwHjecazEQ
B/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/KZ
VJ3gwHjecazEQB/{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 **DHCP Server** Filter Settings Filter DNS Settings

General Settings **Advanced Settings** Filter Settings Filter DNS 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.

Override Netmask  Override the netmask used for clients. Normally it is calculated from the subnet that is served.

DHCP-Options  Define additional DHCP options, for example "option 66 hex 01 02 03 04 05 06 07 08" which advertises different DNS servers to clients.

Cancel Save

## Result



### Note:

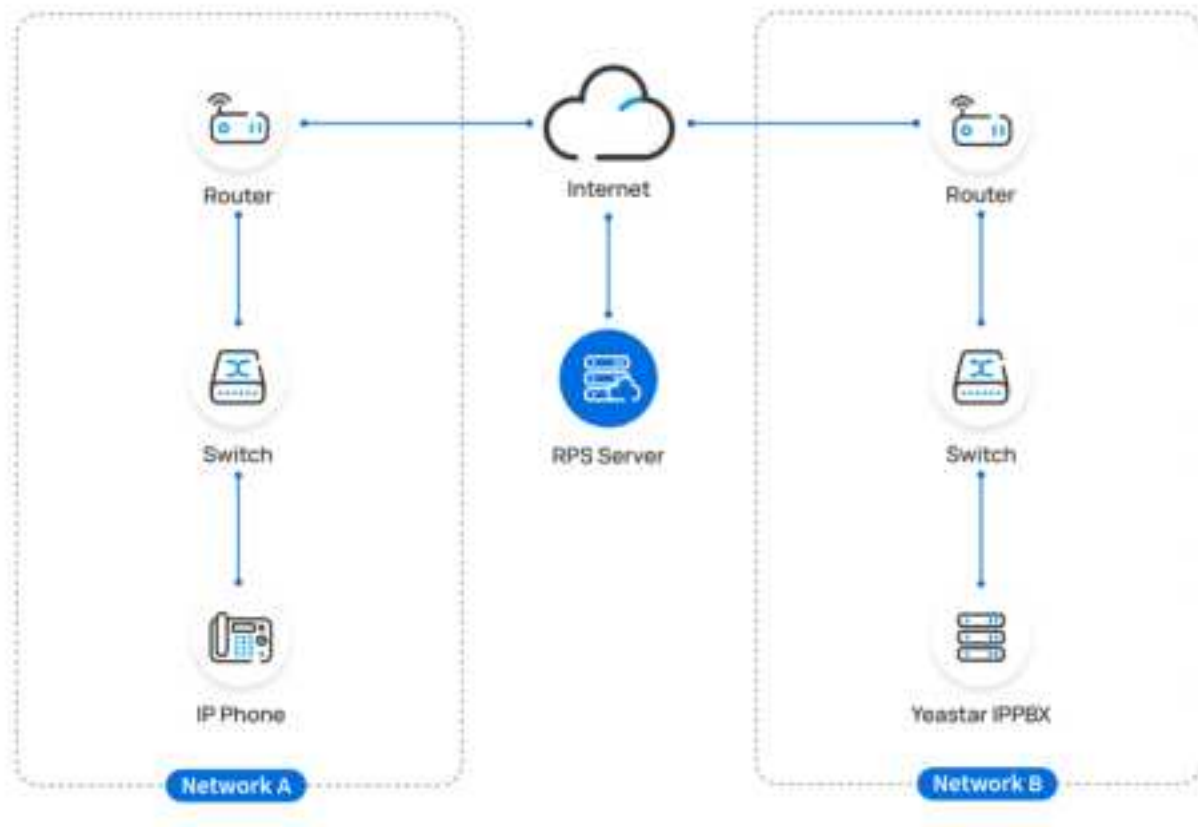
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	200	Lin Bell	Snom	snom0860			

## 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> <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> </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 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>◦ 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><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>

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.



The screenshot shows a configuration form titled 'IP Phone'. It has three fields: 'Vendor' (a dropdown menu with 'Snom' selected), 'Model' (a dropdown menu with 'snomD865' selected), and 'MAC Address' (a text input field containing '000000000000').

- **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**



The screenshot shows a configuration form titled 'Option'. It has several fields, including 'Provisioning Method' which is a dropdown menu set to 'RPS FQDN (Remote)'. Other fields like 'Template' and 'Provisioning Server' are also visible but not the focus of this figure.

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



The screenshot shows a configuration form titled 'Option'. It has several fields, including 'Provisioning Method' which is a dropdown menu set to 'RPS (Remote)'. Other fields like 'Template' and 'Provisioning Server' are also visible but not the focus of this figure.

- **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.

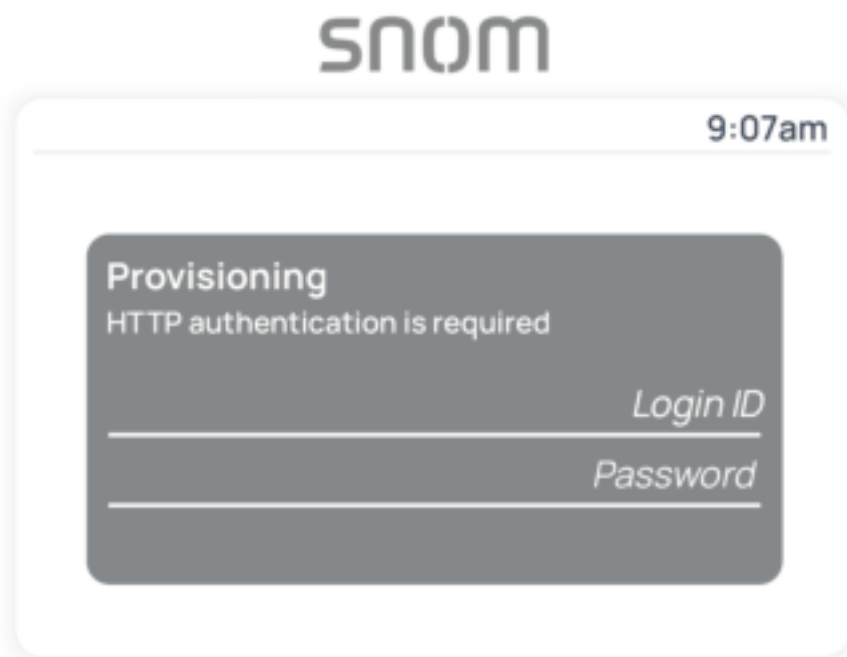
6. Click **Save**.

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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Registration
	888	Lee Lee	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	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> ).
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> 
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](#)

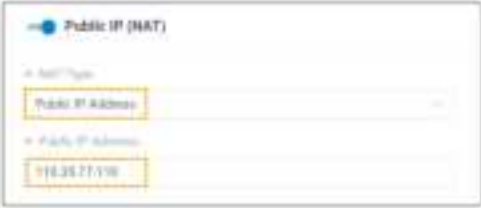


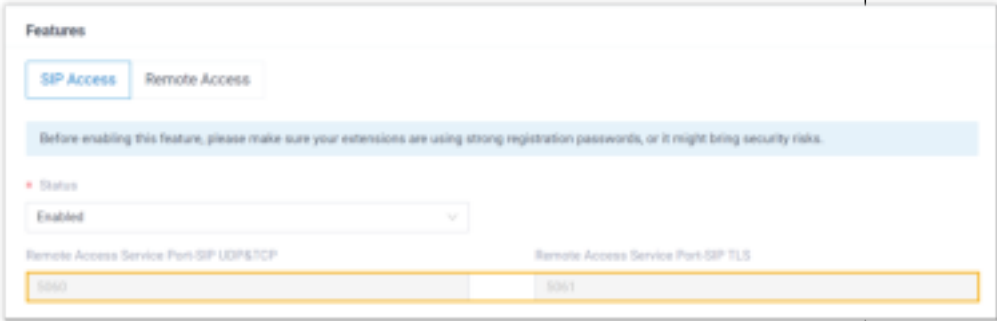
- [Step 2. Register extension on Snom IP phone](#)

## 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 &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>  <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>

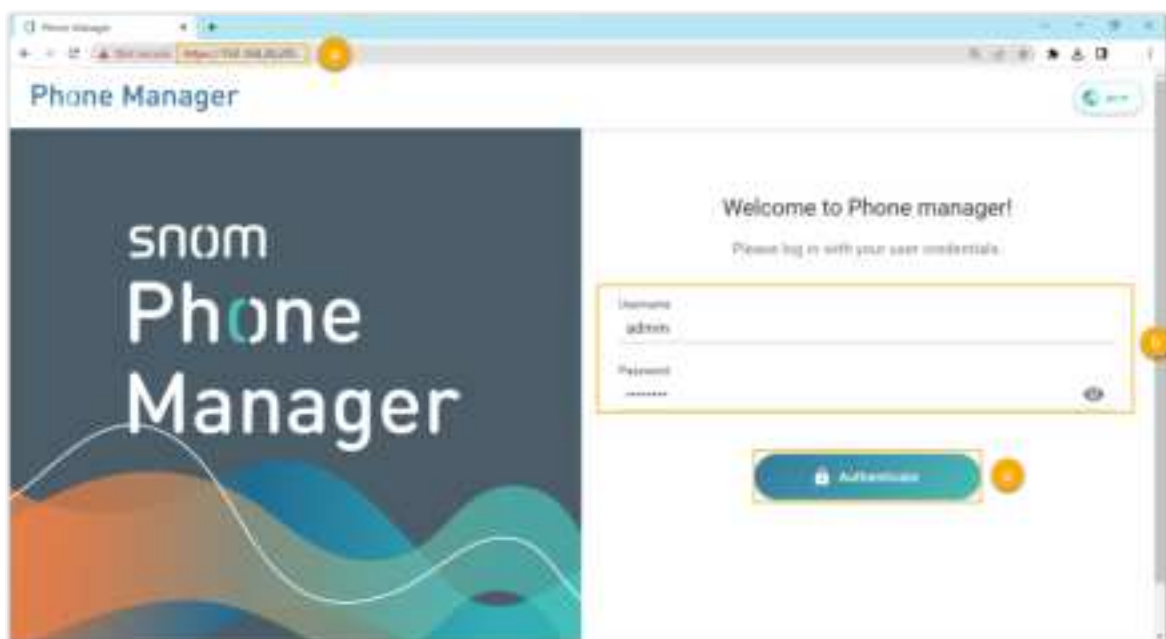
Information	Instruction
	<div></div> <div> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div> </div>
PBX IP address 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></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> </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><div>A screenshot of the 'Public IP (NAT)' configuration page. It shows fields for 'Public IP Address' and 'Public IP Subnet'. The 'Public IP Address' field contains '192.168.1.1' and the 'Public IP Subnet' field contains '192.168.1.0/24'. Both fields are highlighted with yellow boxes.</div><div>A screenshot of the 'Public IP (NAT)' configuration page. It shows fields for 'External Host' and 'External Host'. The 'External Host' field contains 'external.host.com' and the 'External Host' field contains 'external.host.com'. Both fields are highlighted with yellow boxes.</div></div>
SIP registration port	<div><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>A screenshot of the 'Service Ports' configuration page. It shows fields for 'SIP UDP' and 'SIP TCP'. The 'SIP UDP' field contains '5060' and the 'SIP TCP' field contains '5060'. Both fields are highlighted with yellow boxes.</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>A screenshot of the 'SIP Access' configuration page. It shows a 'Status' dropdown menu set to 'Enabled'. Below it, there are two input fields for 'Remote Access Service Port-SIP UDP/TCP' and 'Remote Access Service Port-SIP TLS', both containing the value '5060'. Both fields are highlighted with yellow boxes.</div>

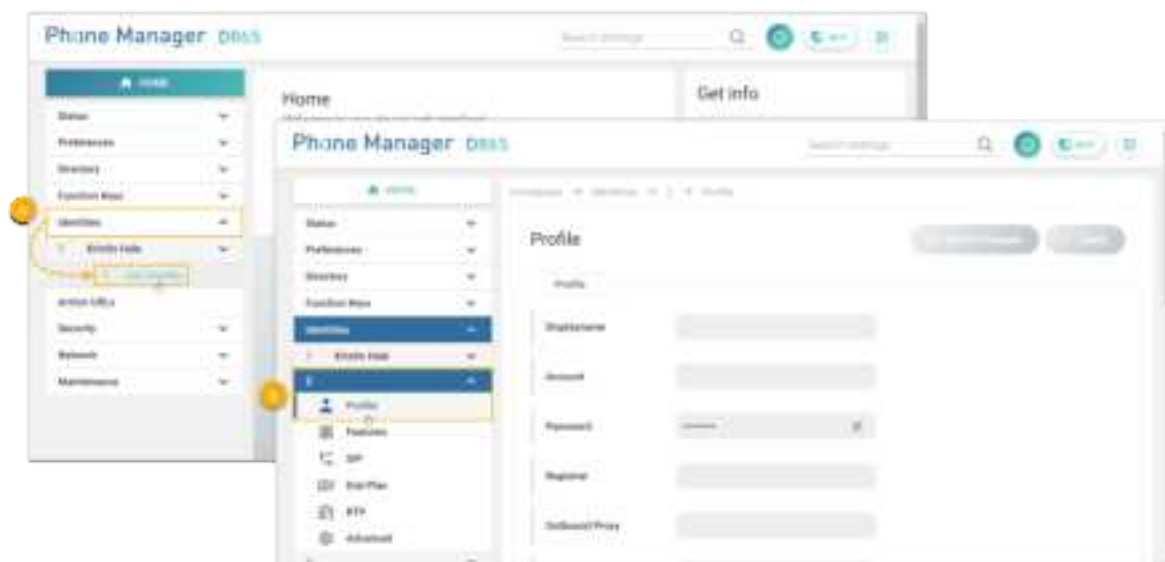
Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18285</div> </div> <div> <div>External SIP TCP Port</div> <div>18285</div> </div> <div> <div>External SIP TLS Port</div> <div>18288</div> </div> <div> <div>External Linkus Port</div> <div></div> </div> </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.



- **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:**

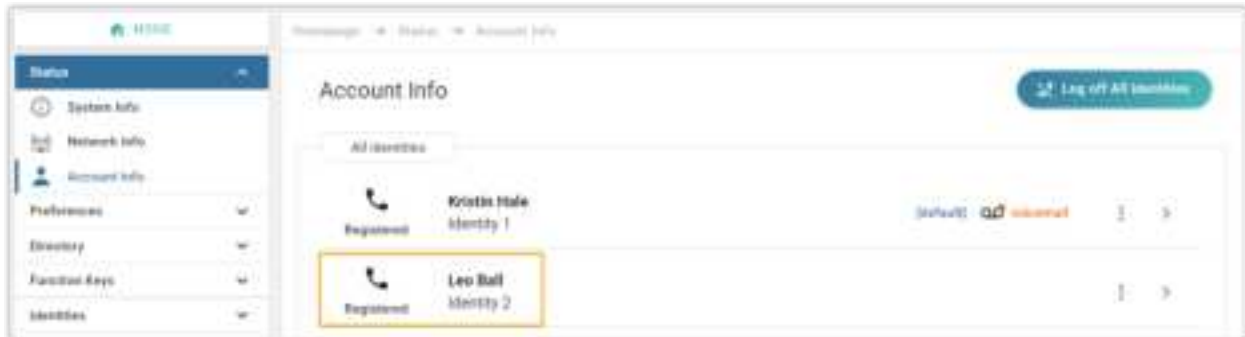
The format should be *PBX IP address / domain name:sip registration port;transport=udp/tcp/tls*.

- **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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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>

Scenario	Description
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>

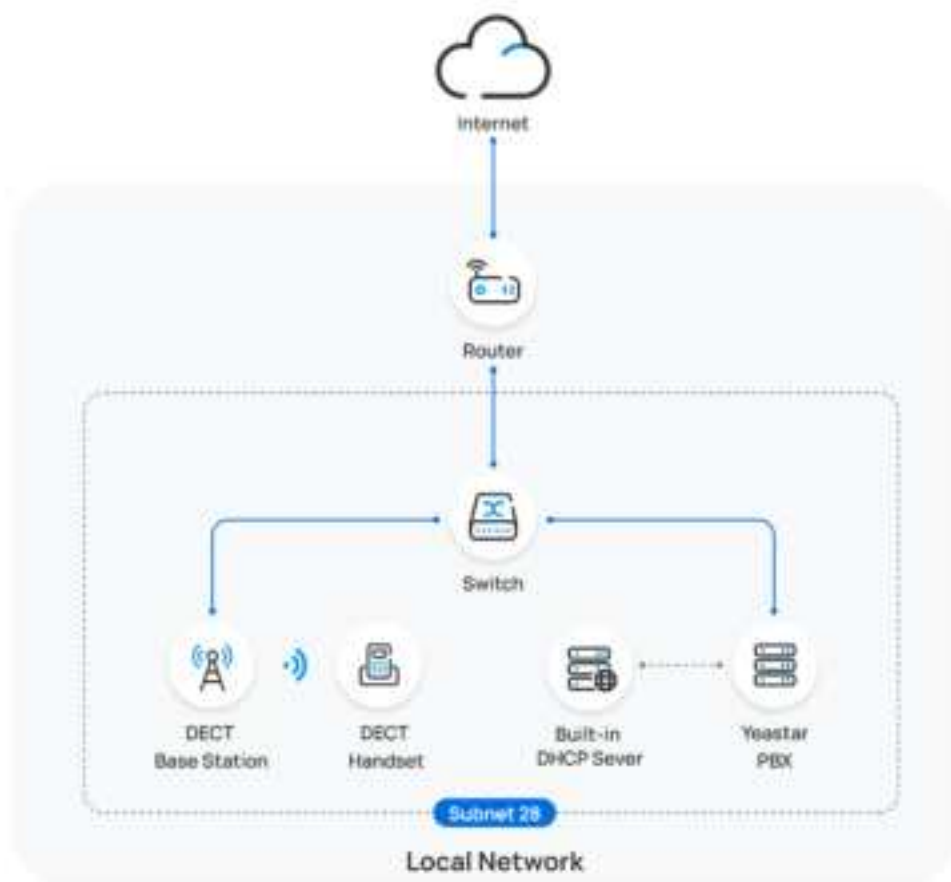
## Auto provision Gigaset DECT system in the same subnet (PnP)

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 a web portal. At the top, there are tabs for 'Basic Settings', 'Web Server', 'Service Profile', 'Master T220', 'Public IP and Ports', 'Static Routes', and 'DHCP Server'. The 'DHCP Server' tab is active. Below the tabs, there is a 'Status' dropdown menu currently set to 'On'. A large yellow box highlights the configuration fields: Gateway (192.168.20.1), Subnet Mask (255.255.255.0), Preferred DNS Server (208.8.8.8), Alternative DNS Server (194.134.174.118), DHCP Start Range (192.168.20.200), and DHCP End Range (192.168.20.255).

- **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.

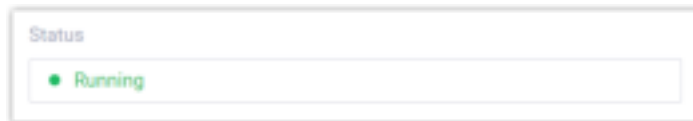
- **DHCP Address Range:** Specify the IP address range that will be allocated to DHCP clients.
- **NTP Server:** Enter the IP address of an NTP server.

**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 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.

## 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.



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.



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




**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.



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.



#### 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**.

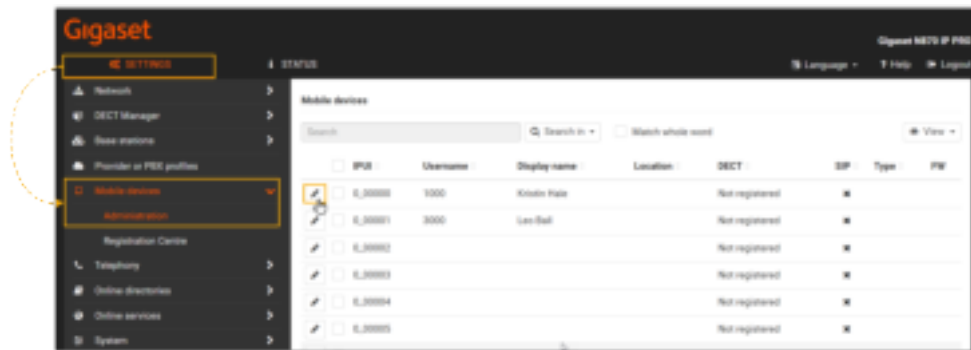
**Note:**

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**.

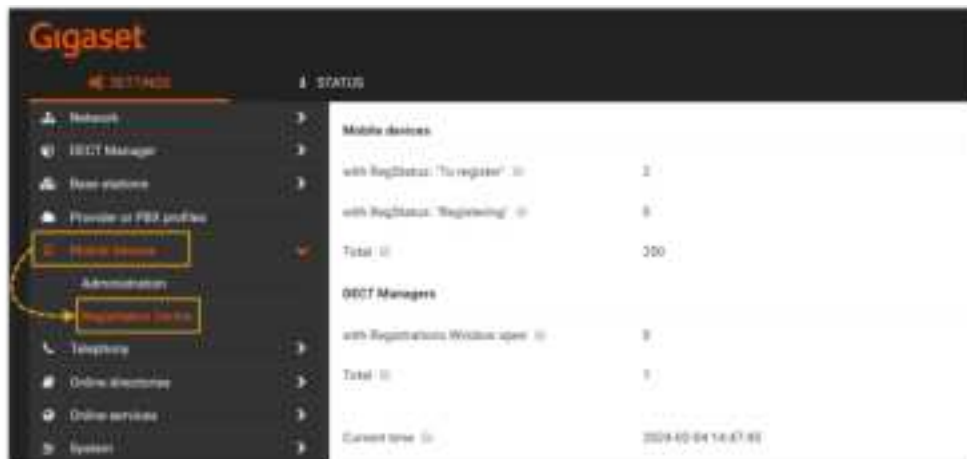
Feature key synchronization

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).

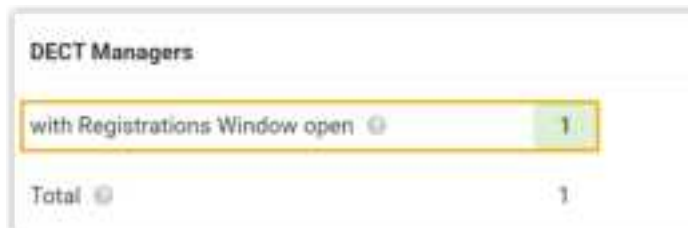
- b. In the **Registration start time** section, enable the registration mode of DECT base station.

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

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

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.



#### 6. Confirm registration on DECT handsets.

- 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 DECT 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**.



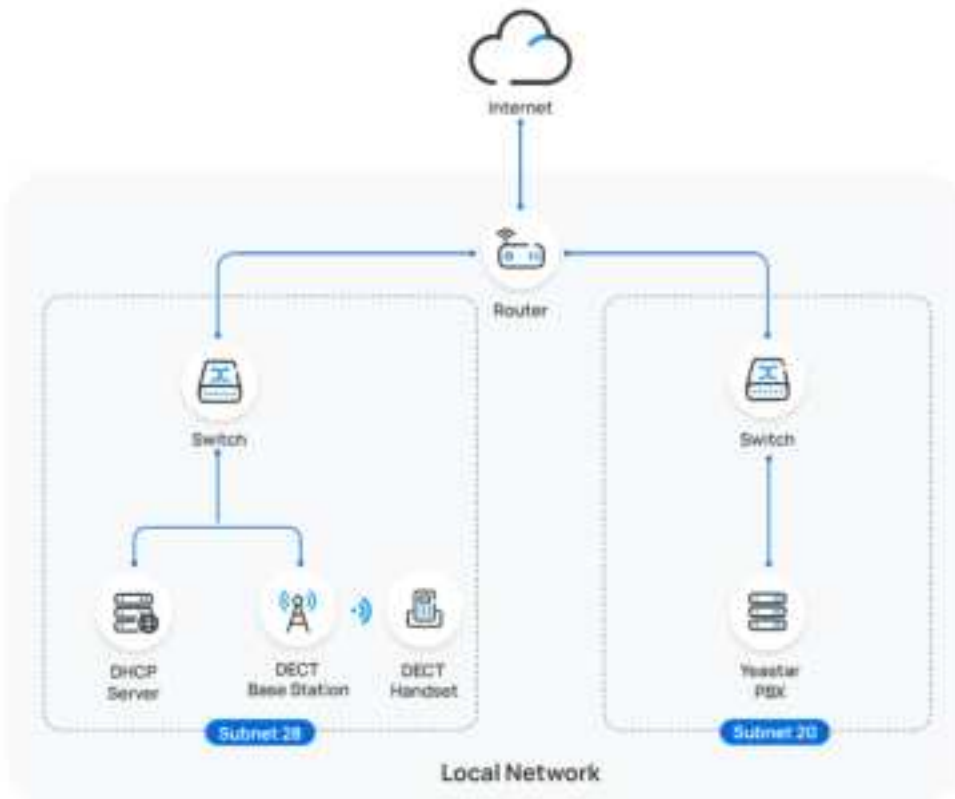
- On PBX web portal, you can check the registration status of the extensions on **Auto Provisioning > Phones**.



- 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.



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.

 A screenshot of the 'IP Phone' configuration form in the PBX web portal. The form has three main fields: 'Vendor', 'Model', and 'MAC Address'. The 'Vendor' dropdown menu is set to 'Gigaset'. The 'Model' dropdown menu is set to 'Gigaset N870 IP PRO'. The 'MAC Address' field is empty.

- **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.

- **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.

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



**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.

**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

WSP\_SignedHW20

• Processing Method

DHCP (by the Office)

Processing 1.5.6

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.

The screenshot shows the Mikrotik WinBox interface for configuring the DHCP Server on the LAN interface. The 'Advanced Settings' tab is selected. The 'Dynamic DHCP' checkbox is checked, with a note: 'Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.' The 'Force' checkbox is unchecked, with a note: 'Force DHCP on this network even if another server is detected.' The 'Pool Netmask' is set to '255.255.255.0', with a note: 'Override the netmask used for clients. Normally it is calculated from the subnet that is served.' The 'DHCP-Options' field contains the URL 'http://192.168.20.18:7778/openvpn/openvpn.ovpn', with a note: 'Define additional DHCP options, for example "http://192.168.20.18:7778/openvpn/openvpn.ovpn" which advertises different DNS servers to clients.' At the bottom right, there are 'Change' and 'Save' buttons.

#### 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**.




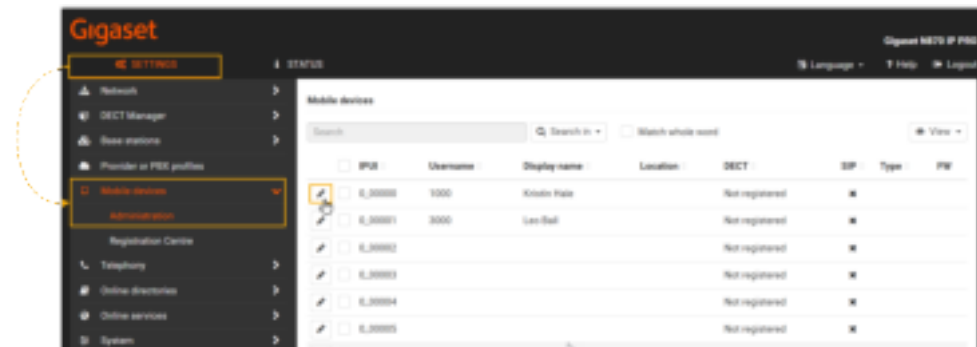
### Note:

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



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

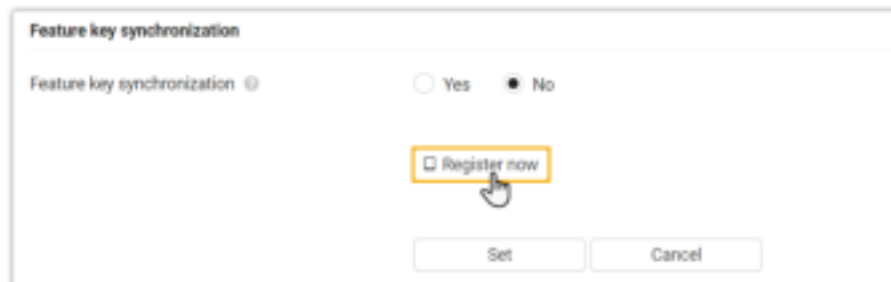
IPUI: 0\_00002

RegStatus: To register

Authentication Code (PIN): 0000

[Generate random PIN](#)

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



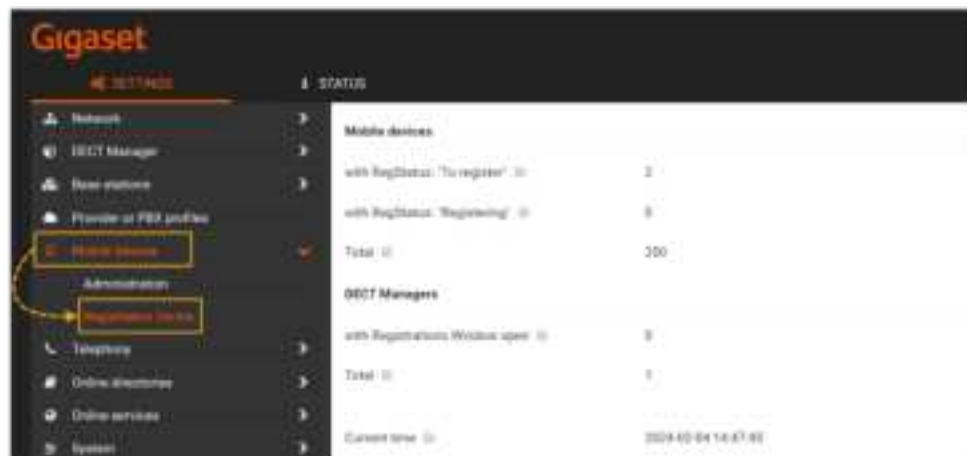
Feature key synchronization

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.



**Gigaset**

**REGISTRATION CENTRE**

**DECT Managers**

STATUS	Count
Mobile devices	
with RegStatus: 'To register'	2
with RegStatus: 'Registering'	0
Total	200
DECT Managers	
with Registrations: 'With no speed'	0
Total	0
Current time	2024-02-04 14:47:00

- 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**.

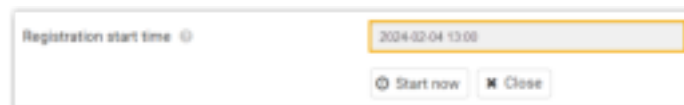


Registration start time ⓘ

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**.



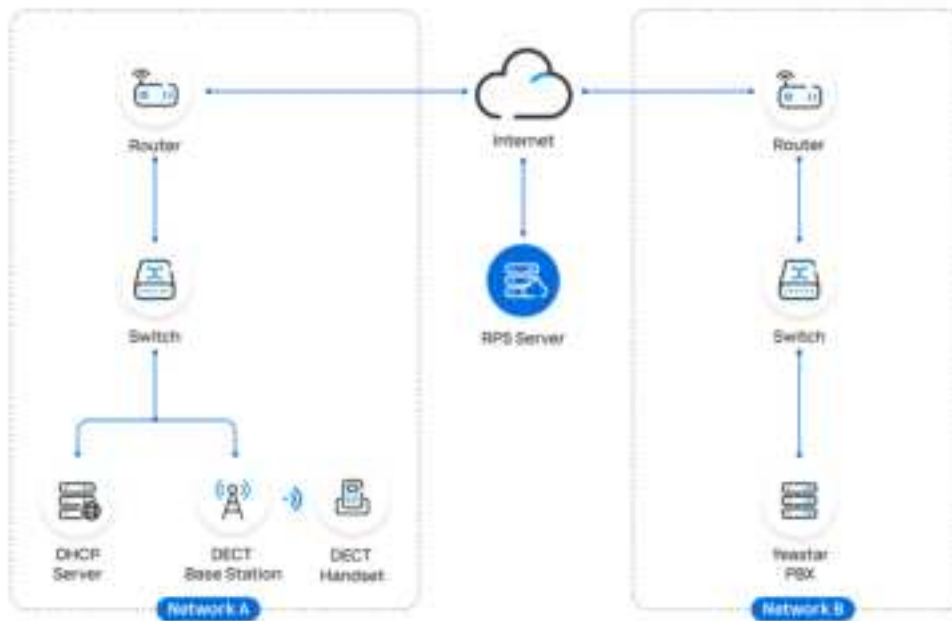
- On PBX web portal, you can check the registration status of the extensions on **Auto Provisioning > Phones**.



- 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.



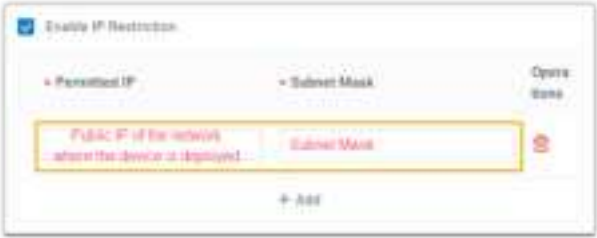

## Prerequisites

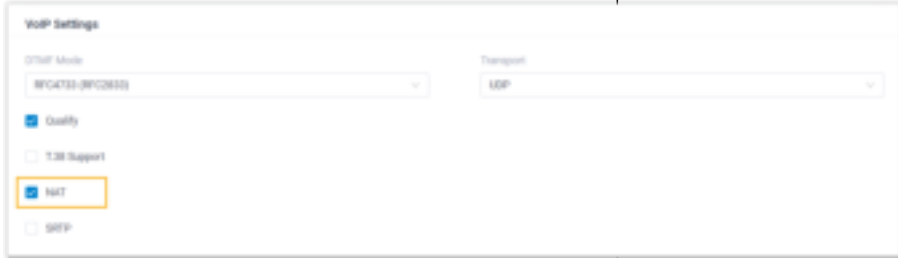


Yeastar P-Series PBX System supports to auto provision Gigaset DECT system remotely either using **Yeastar FQDN** or using **Public IP address / External Host domain name**. According to the provisioning method you intend to use, make sure that you have completed the corresponding setup shown below.

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>





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>  <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> <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
	 <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 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>

## 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 screenshot shows a configuration form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Gigaset", "Model" with a dropdown menu showing "Gigaset N870 IP PRO", and "MAC Address" with a 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 screenshot shows the "Options" section of the configuration form. It includes a "Template" dropdown menu, a "Provisioning Method" dropdown menu, and a "Provisioning Link" text input field. The "Provisioning Link" field contains a long URL.

Figure 12. **RPS using Public IP Address / External Host domain name**

The screenshot shows the "Options" section of the configuration form. It includes a "Template" dropdown menu, a "Provisioning Method" dropdown menu, and a "Provisioning Link" text input field. The "Provisioning Link" field contains a long URL.

- **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.

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



**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.



## 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 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 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**.




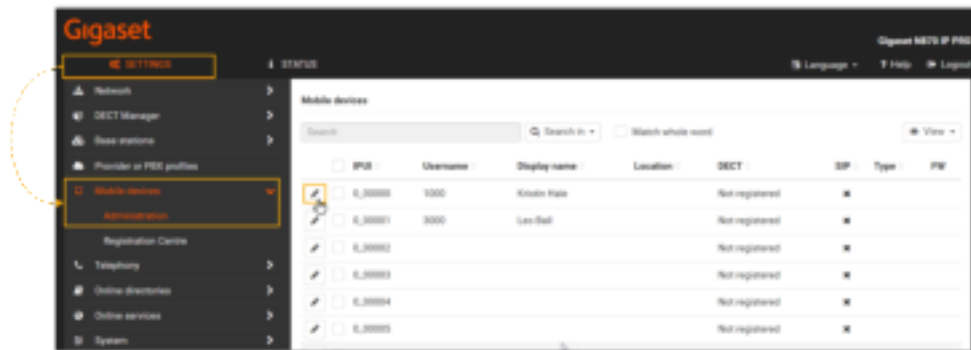
**Note:**

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**.

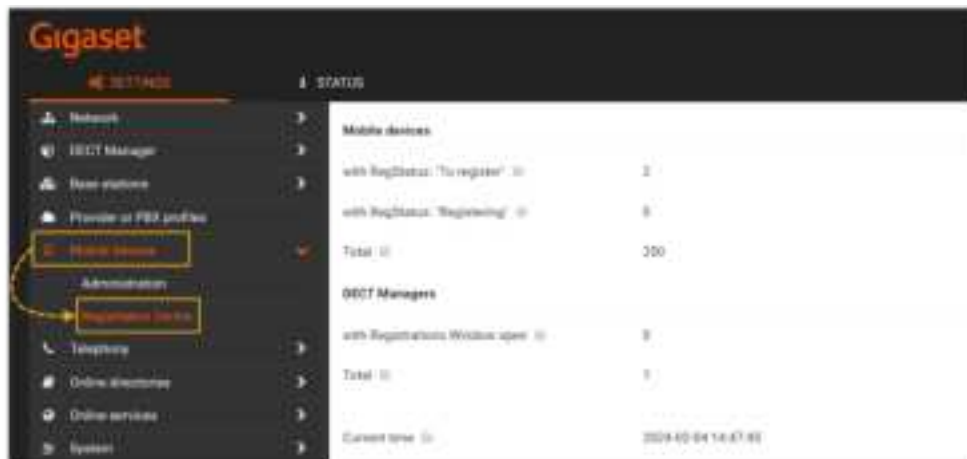
Feature key synchronization

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 screenshot shows the 'Registration duration' form. It has four 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 screenshot shows the 'Registration start time' form. It has a text input field with a placeholder 'YYYY-MM-DD HH:mm'. Below the input field are two buttons: 'Start now' (highlighted with a yellow box and a mouse 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 screenshot shows the 'Registration start time' form. The text input field contains the value '2024-02-04 13:08'. Below the input 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**.



IP	Username	Display name	Location	DECT	IP	Type	FW
192.168.1.100	100	Handset 1	Hand	Registered	192.168.1.100	Handset	1.0.0
192.168.1.101	101	Handset 2	Hand	Registered	192.168.1.101	Handset	1.0.0

- On PBX web portal, you can check the registration status of the extensions on **Auto Provisioning > Phones**.



Name	Extension	Phone	Model	IP Address	Phone Password	Extension	Phone Password	Extension	Phone Password
Handset 1	100	Handset 1	Handset 1	192.168.1.100	12345678	100	12345678	100	12345678
Handset 2	101	Handset 2	Handset 2	192.168.1.101	12345678	101	12345678	101	12345678

- 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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
GAC2500	1.0.3.45 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GAC2570	1.0.1.36 or later	37.11.0.22 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2601	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2601P	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2602	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2602P	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2602G	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2602W	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2603	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2603P	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2604	1.0.3.63 or later	37.7.0.51 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>• Provision Link</li> </ul>
GRP2604P	1.0.3.63 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2612	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2612P	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2612G	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2612W	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2613	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2614	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2615	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2616	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2624	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2634	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GRP2670	1.0.7.25 or later	37.7.0.51 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
GHP610W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GHP611W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GHP620W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GHP621W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GHP630W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
GHP631W	1.0.1.71 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>
WP825	1.0.11.67 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• PnP</li> <li>• DHCP</li> <li>• Provision Link</li> </ul>

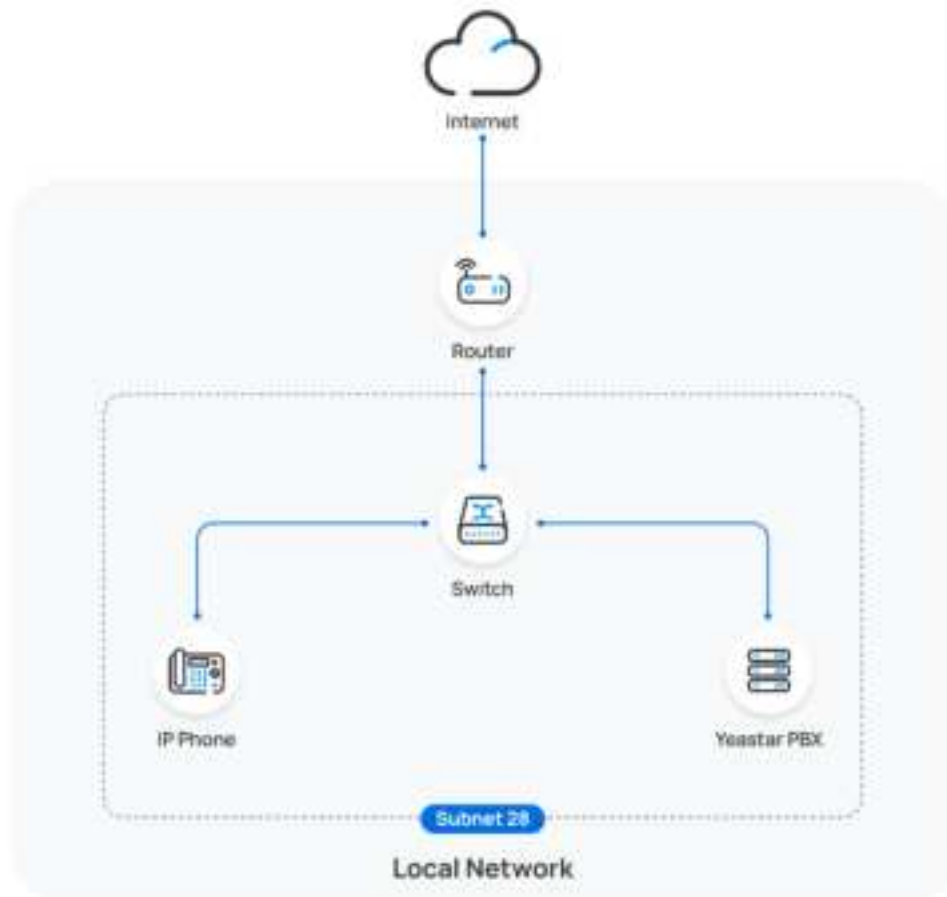
## Scenarios

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	<p>In this scenario, you can provision the Grandstream IP phone with the PBX via <a href="#">PnP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Grandstream 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 Grandstream IP phone with the PBX via <a href="#">DHCP method</a>.</p> <p>For more information, see <a href="#">Auto provision a Grandstream IP phone in different subnets (DHCP)</a>.</p>

## 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.

- Click  beside the Grandstream IP phone.



- 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.



**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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
	8008	Lee Sui	Grandstream	GXP3002	192.168.20.200	*****@	

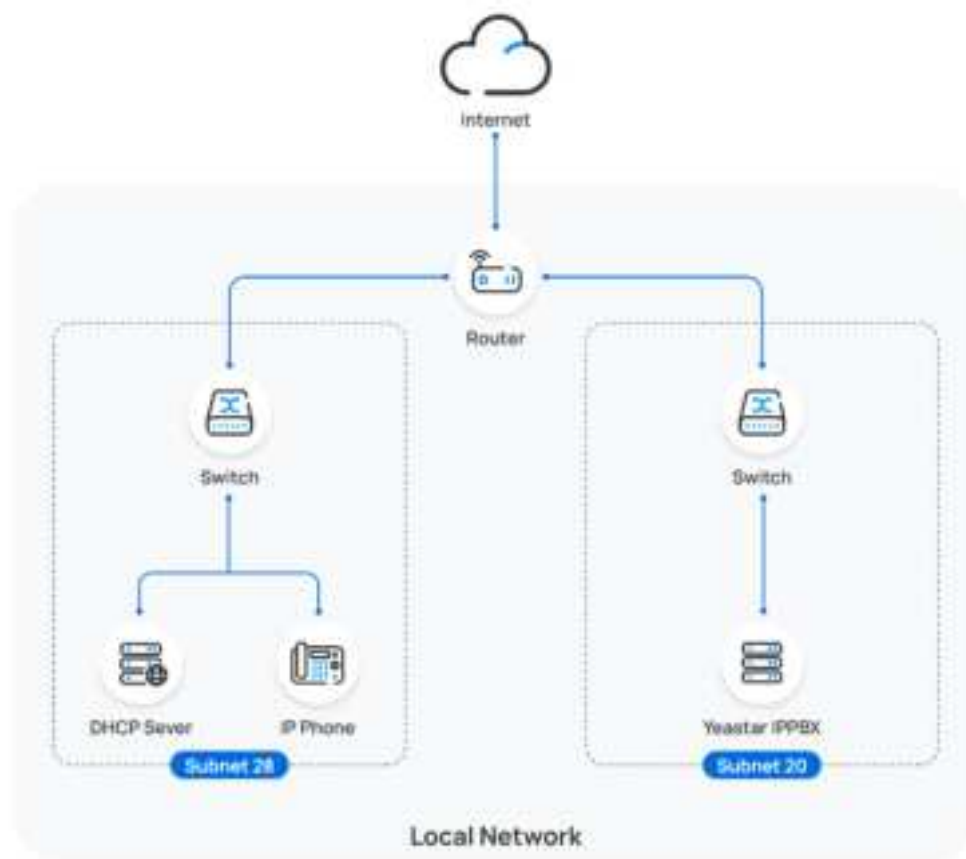
**What to do next**

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.



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.

 A screenshot of the 'IP Phone' configuration form. It contains several input fields: 'Extension' (with a dropdown arrow), 'Model' (with a dropdown arrow and 'GRP2602' selected), 'MAC Address' (with a text input field containing '001010101010'), and 'Phone Name' (with a text input field containing 'Grandstream').

- **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.



### 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

4 Template

ESP\_GrantscanESPON20

5 Processing Method

SNMP (in the SNMP)

Processing Link

[Link to the processing method](#)

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.

The screenshot shows the Mikrotik WinBox interface for configuring a DHCP server. The top navigation bar includes tabs for General Settings, Advanced Settings, Firewall Settings, and DHCP Server. The DHCP Server tab is selected. Below it, there are sub-tabs for General Settings, Advanced Settings, IPsec Settings, and IPsec Policy Settings. The Advanced Settings tab is active.

The configuration options visible are:

- Dynamic DHCP:** A checkbox that is checked. Below it, a note states: "Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served."
- Force:** An unchecked checkbox. Below it, a note states: "Force DHCP on this network even if another server is detected."
- Pool Address:** A text field containing "192.168.0.0". Below it, a note states: "Overrides the network used to clients. Normally it is calculated from the subnet that is served."
- DHCP-Options:** A text area containing "0.223.5.5.0" and "ddns-update-interval=3600". Below it, a note states: "Define additional DHCP options, for example \"0.223.5.5.0\" which advertises different DNS servers to clients."

At the bottom right, there are two buttons: "Create" and "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.

Status	Extension	Name	Vendor	Model	IP Address	Phone-Phone Operations
OK	1000	Lee Han	Grandstream	GSP1602	192.168.1.100	[Refresh] [Delete] [Edit] [Add]

### 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](#)




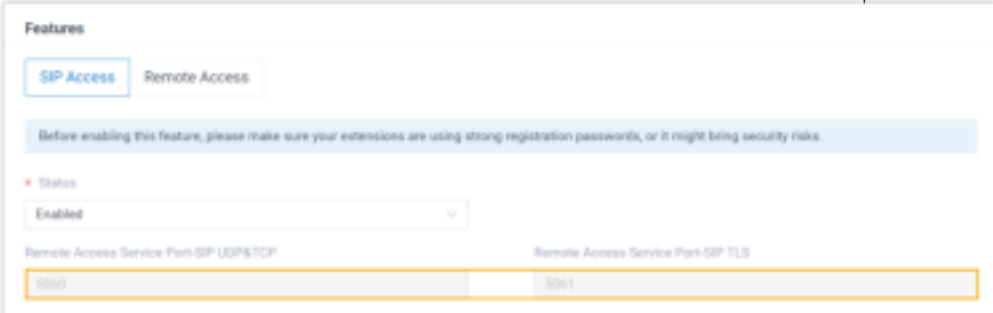
### Step 1. Gather registration information on Yeastar PBX

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> </div> <div> </div> <div> <b>Note:</b> </div> <div> <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> </div> <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> <div> </div>
PBX IP address or domain name	<div> <b>Scenario: Register extension in local network</b> </div> <div> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> </div> <div> </div> <div> <b>Note:</b> </div> <div> <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> <b>Scenario: Register extension remotely using Yeastar FQDN</b> </div> <div> <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
	 <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> 
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>  <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> 

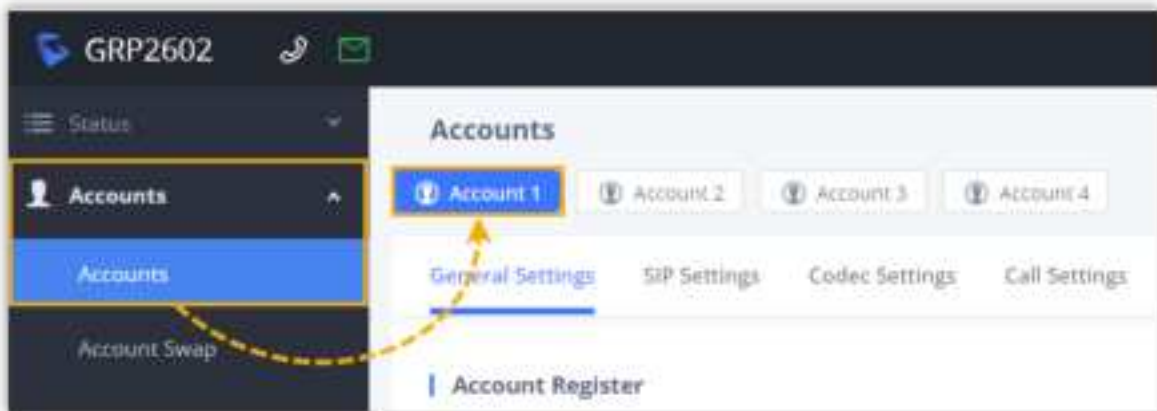
Information	Instruction
	<p><b>Scenario: Register extension remotely using Public IP address / External Host domain name</b></p> <p>Go to <b>System &gt; Network &gt; Public IP and Ports &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol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

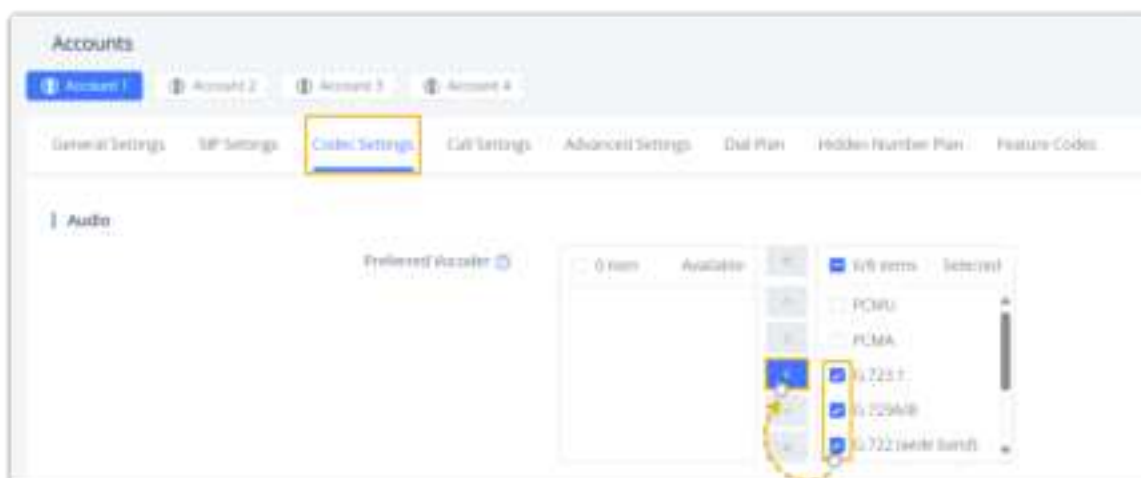
- **SIP Server:** Enter the IP address / domain name of the PBX along with the SIP registration port.
- **SIP User ID:** Enter the extension number.
- **SIP Authentication ID:** Enter the registration name of the extension.
- **SIP Authentication Password:** Enter the registration password of the extension.

4. In the **Codec Settings** tab, remove unnecessary codecs for the account.



**Note:**

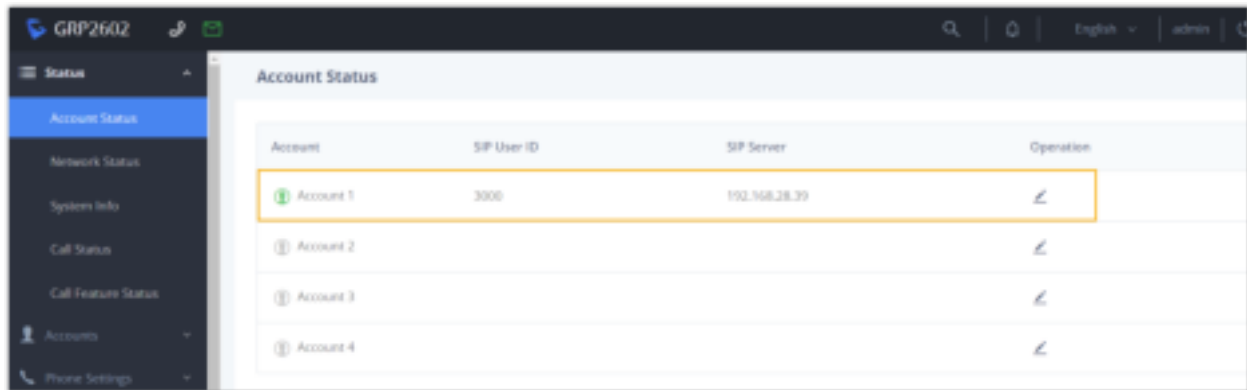
By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.



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.




## Remove Unnecessary Codecs for Grandstream IP Phone

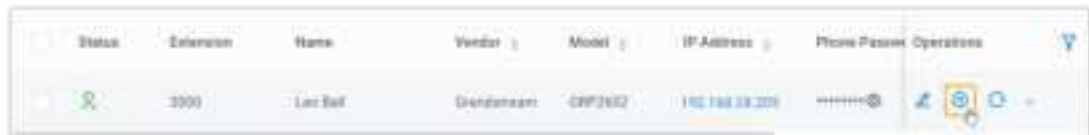
By default, Grandstream IP phone enables all available codecs for its accounts, which may lead to issues with outgoing calls. Therefore, it is recommended to remove unnecessary codecs for the account that has been registered with the PBX extension.

### 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.



- 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.

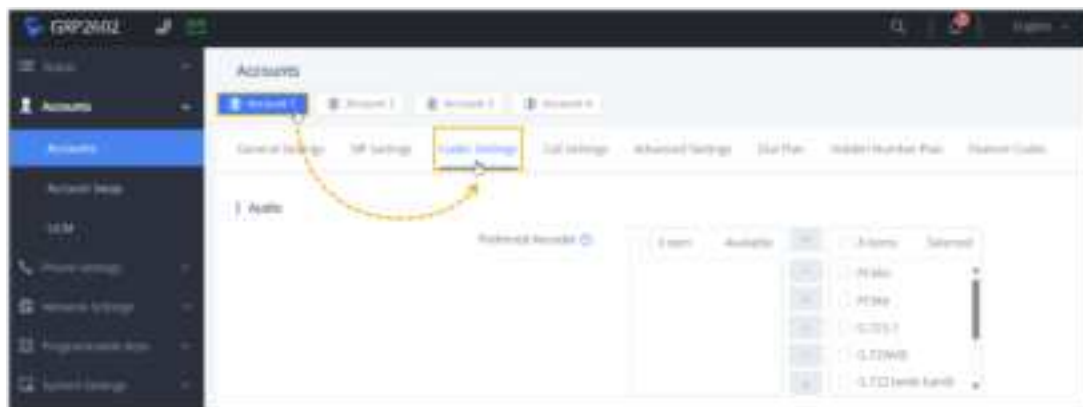


- e. Click **Save**.
2. Configure the codec settings on the IP phone.

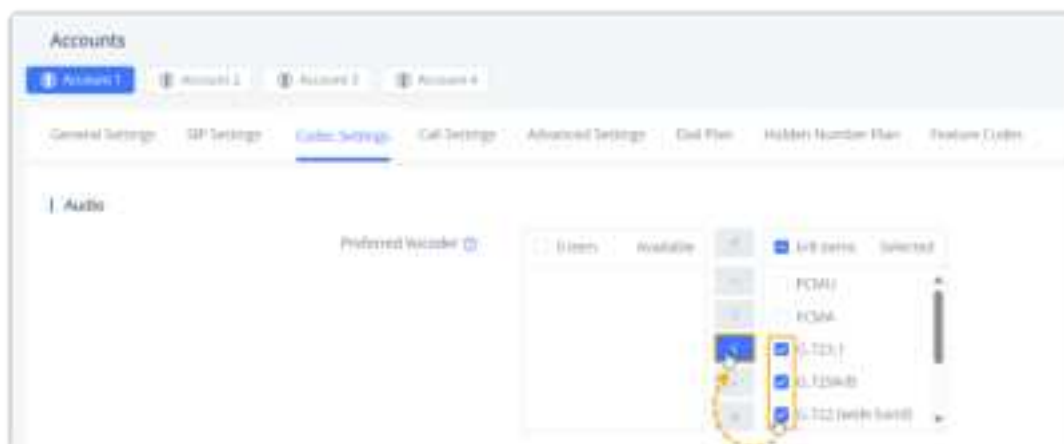
**Note:**

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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

## Scenarios

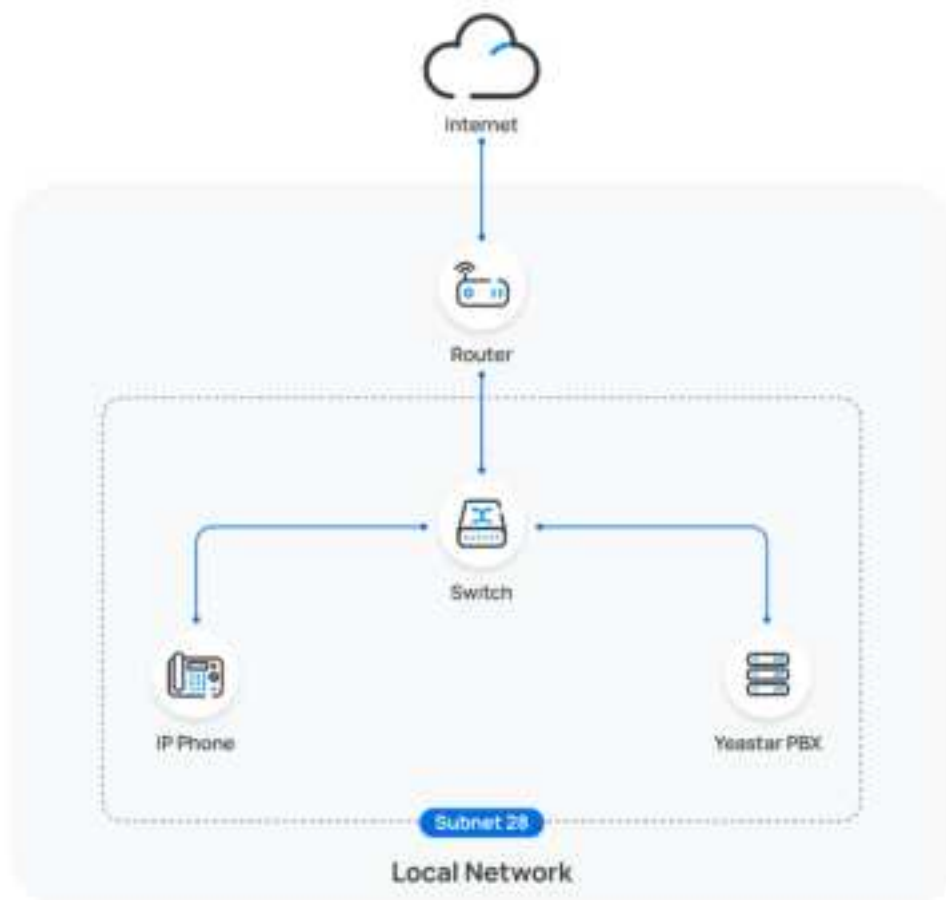
The provisioning methods and operations vary depending on the network environment of **Htek IP Phone** and **Yeastar PBX**, as the following table shows.

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>

Scenario	Description
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.



Status	Extension	Name	Vendor	Model	IP Address	Phone	Operations
Unassigned	Unassigned		Htek	UCR010	192.168.38.163		

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-Lao Bai



### 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:

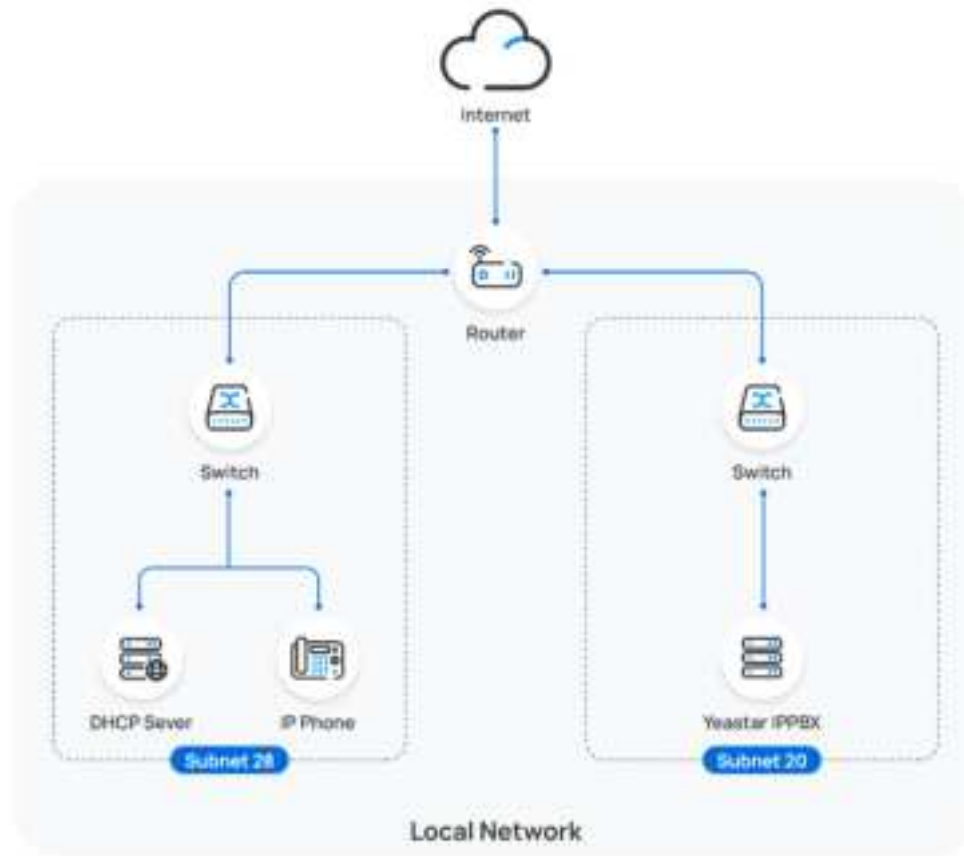
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	2000	Lin Bell	Htek	SEP200	192.168.28.123		

## 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.

 A screenshot of the 'IP Phone' configuration form. It contains three main fields: 'Vendor' with a dropdown menu showing 'Htek', 'Model' with a dropdown menu showing 'UC921G', and 'MAC Address' with a text input field containing '000000000000'. Each field has a red asterisk indicating it is required.

- **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.

 A screenshot of the 'Options' section of the IP Phone configuration form. It contains two main fields: 'Provisioning URL' with a text input field containing 'http://192.168.1.100:8080/provisioning.xml' and 'Provisioning User' with a text input field containing 'admin'. Both fields have a red asterisk indicating they are required.



- **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

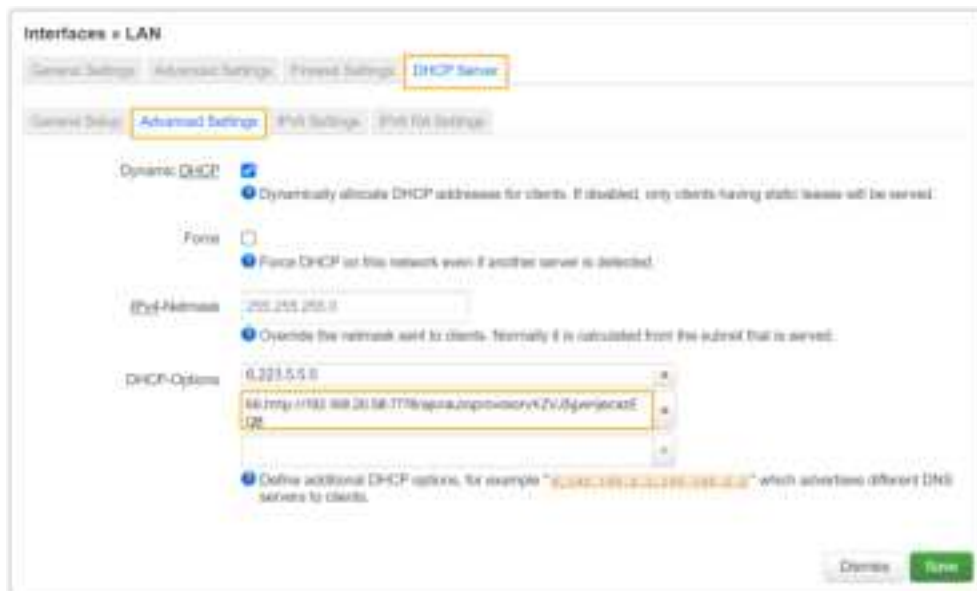
In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

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



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.



## Result



### Note:

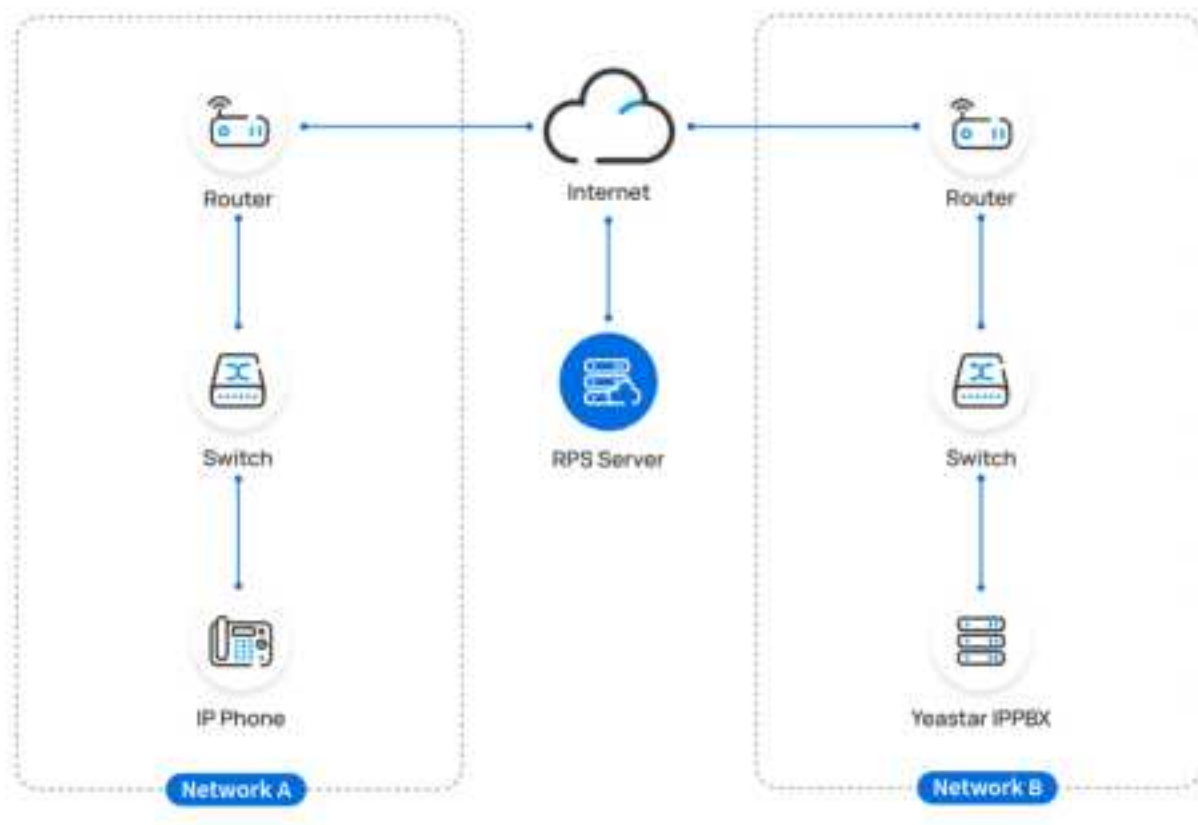
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name / Extension
	3006	Lin Bell	Htek	UCX210		

## 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</li> </ul> </li> </ul>

Method	Setting
	<p>FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</p>  <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 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>

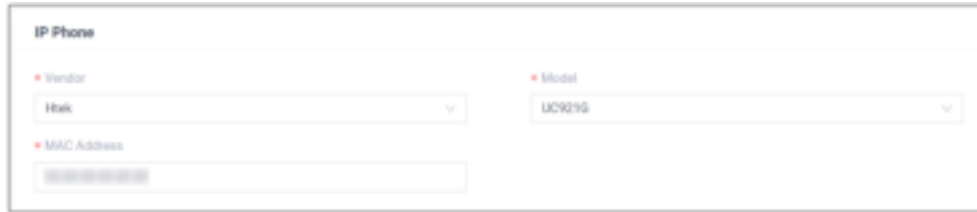
Method	Setting
	<ul style="list-style-type: none"> <li>Set up the extension for remote registration.               <ul style="list-style-type: none"> <li>Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Advanced &gt; VoIP Settings &gt; NAT</b>).</li> </ul> </li> </ul> 
	<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 Htek IP phone on PBX](#)
- [Step 2. Trigger the IP phone to complete provisioning](#)

### Step 1. Add the Htek 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 screenshot shows a configuration form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Htek", "Model" with a dropdown menu showing "UC921G", and "MAC Address" with a text input field containing "000000000000".

- **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 screenshot shows the "Options" section of the configuration form. It includes fields for "Provisioning Method" (set to "RPS (FQDN Remote)"), "Provisioning Link" (a text input field), and "Provisioning Link" (a text input field). There is also a checkbox for "Authentication for the Provisioning Link" which is checked.

Figure 14. **RPS using Public IP Address / External Host domain name**



The screenshot shows the "Options" section of the configuration form. It includes fields for "Provisioning Method" (set to "RPS (Public IP Address)"), "Provisioning Link" (a text input field), and "Provisioning Link" (a text input field). There is also a checkbox for "Authentication for the Provisioning Link" 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.



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.



## 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.





## 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> 
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](#)

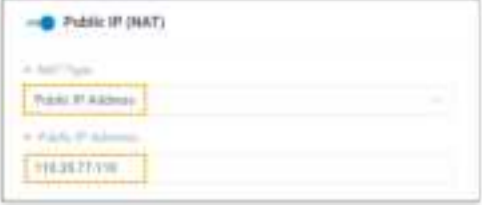


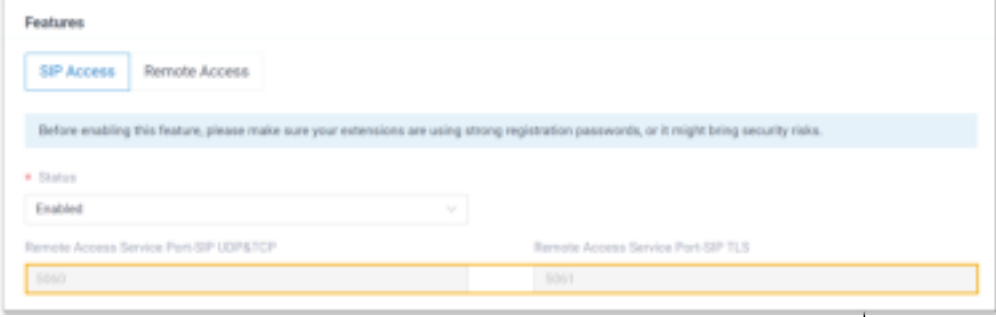
- [Step 2. Register extension on Htek IP phone](#)

## 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 &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>  <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>

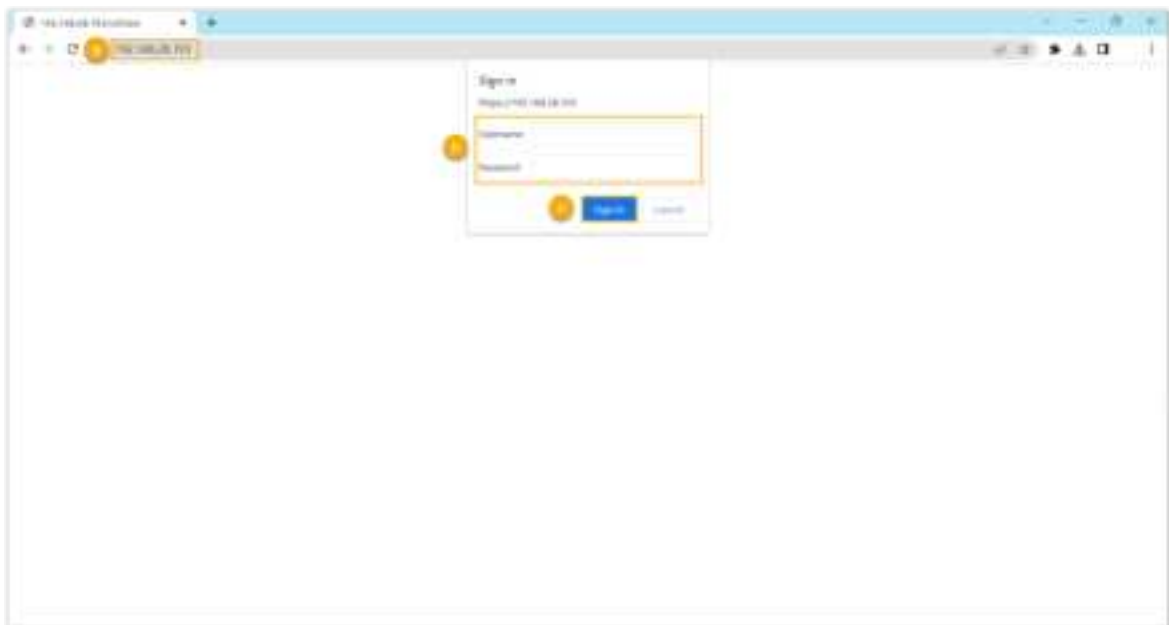
Information	Instruction
	<div></div> <div> </div> <ul style="list-style-type: none"> <li>If the extension uses TLS transport protocol, make sure that the TLS is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; TLS</b>).</li> </ul> <div> </div>
PBX IP address 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></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> </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
	 
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>  <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>  <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>

Information	Instruction
	<div> <div>Public Ports</div> <div> <div>External SIP UDP Port</div> <div>18285</div> </div> <div> <div>External SIP TCP Port</div> <div>18285</div> </div> <div> <div>External SIP TLS Port</div> <div>18288</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

The screenshot shows the Htek web interface with the 'Profile' configuration page. The 'Profile' dropdown is set to 'Profile 2'. The 'Primary SIP Server' field contains '192.168.28.38'. The 'SIP Transport' field has radio buttons for UDP (selected), TCP, and TLS. The 'RAT Traversal' field has radio buttons for No, No but send keep alive (selected), and 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.

The screenshot shows the Htek web interface with the 'Account' configuration page. The 'Account' dropdown is set to 'Account 2'. The 'Account Status' is 'Disabled'. The 'Account Active' field has radio buttons for No and Yes (selected). The 'Profile' dropdown is set to 'Profile 2'. The 'Label' field contains 'Leo Ball'. The 'SIP User ID' field contains '3000'. The 'Authenticate ID' field contains 'birkhoOmdW'. The 'Authenticate Password' field contains '\*\*\*\*\*'. The 'Local SIP Port' field contains '5060'. The 'Use Random Port' field has radio buttons for No (selected) and 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.





# 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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>

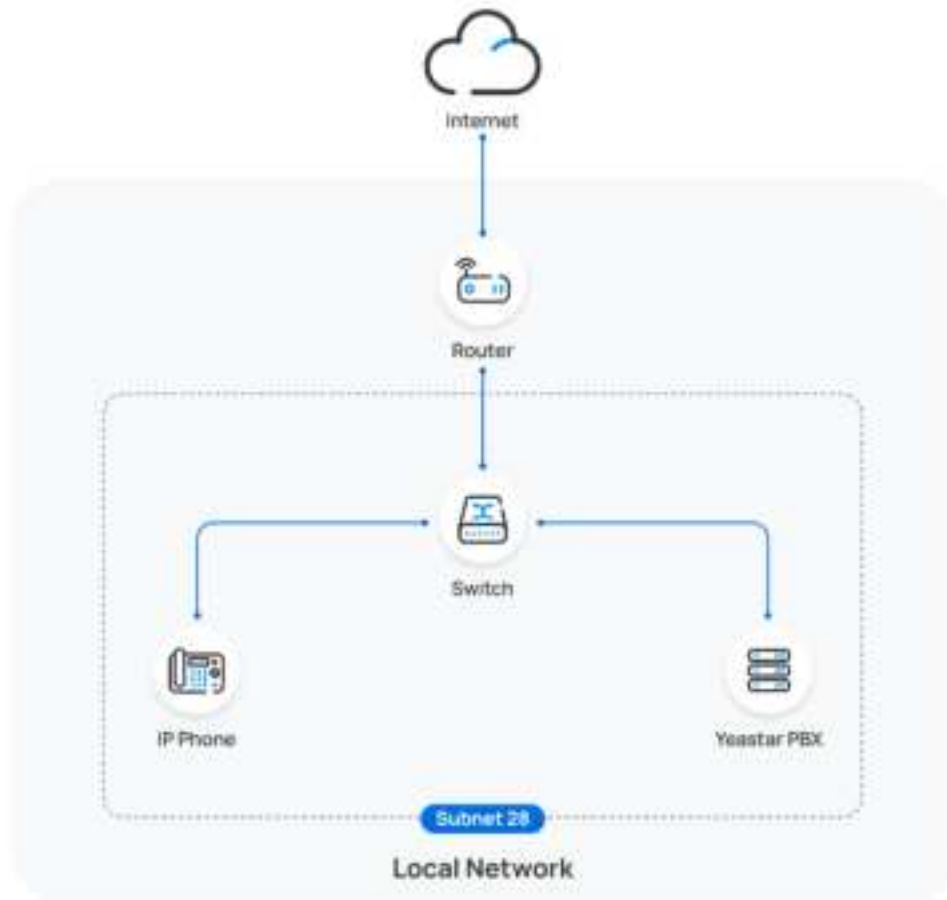
### Scenarios

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

## 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Status	Operations
✖	Unassigned	Unassigned	Tyco	3310	192.168.20.195		

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-Lao 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:**

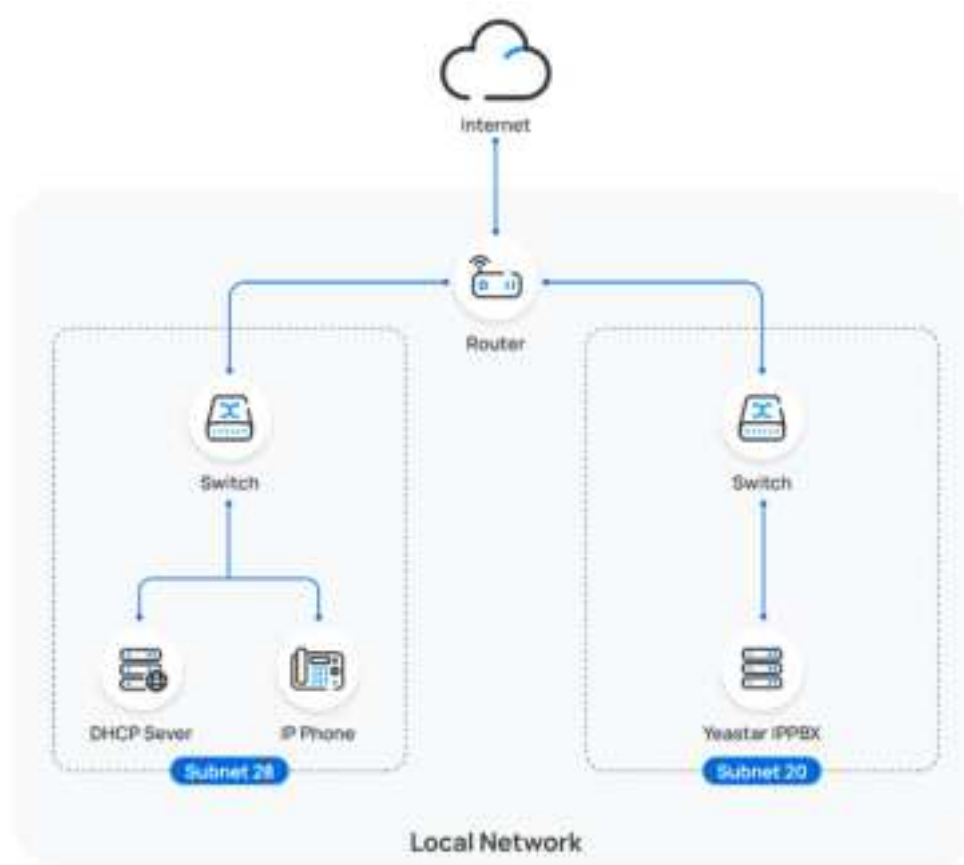
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Questions
	2000	Lee Ball	Tiptel	SD-10	192.168.20.190		

## 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.





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 form titled 'Options' with several input fields. The 'Provisioning Method' field is set to 'DHCP (to the Office)'. To the right of this field, there is a 'Provisioning Link' field containing a long URL. The URL is highlighted with a yellow border and a red box, indicating it should be copied.

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.



The screenshot shows the Mikrotik WinBox interface for configuring the DHCP server on the LAN interface. The 'Advanced Settings' tab is selected. Key configurations include:

- Dynamic DHCP:** Enabled (checkbox checked).
- Force:** Disabled (checkbox unchecked).
- (Pool) Netmask:** Set to 255.255.255.0.
- DHCP-Options:** A list containing the option "ns.tiny.cc/193.108.26.58:7788/mpeg/mpmoveriv/fv/djyemkate".

Buttons at the bottom right are 'Defaults' and 'Save'.

## Result



**Note:**

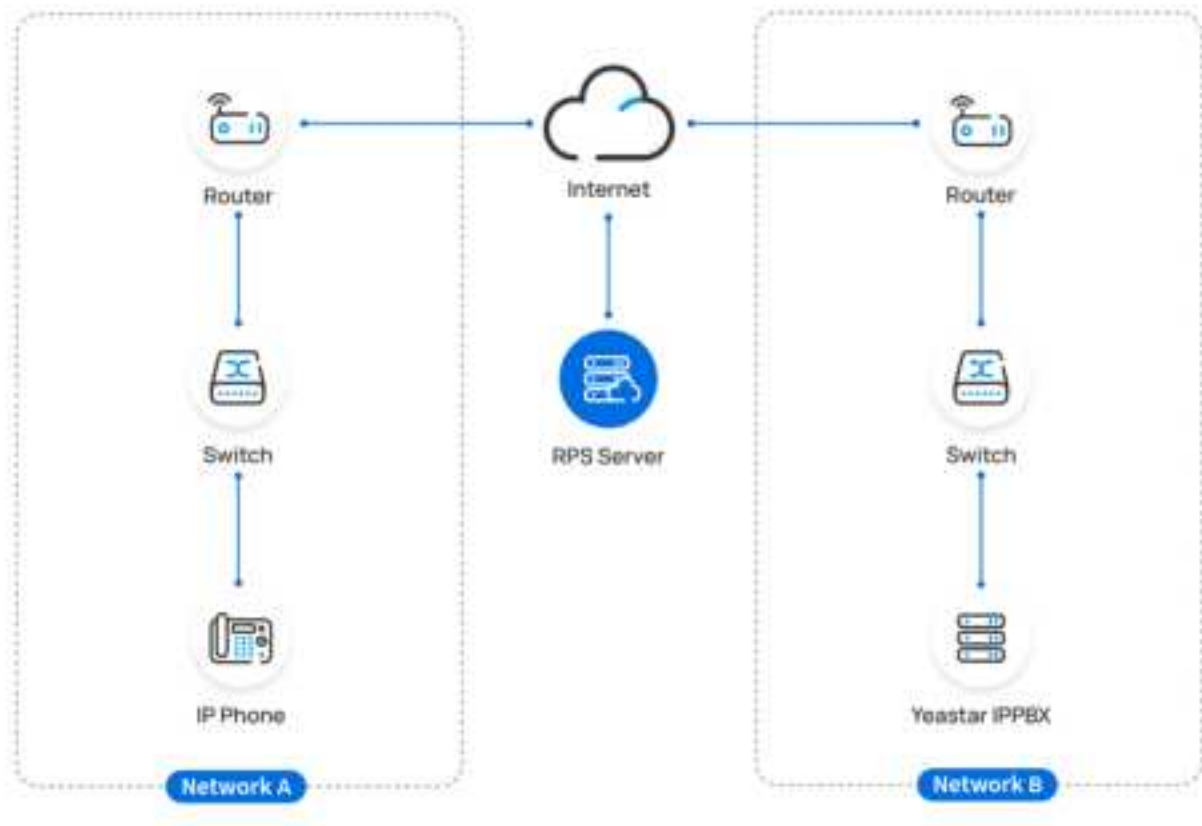
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Number	Operations
	2020	Lee Bell	Tiger	2010			   

## 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 FQDN (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> </li> </ul>

Method	Setting
	<div> </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> </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 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>◦ 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><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></div></div></div>

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

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 a configuration form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Tiptel", "Model" with a dropdown menu showing "3310", and "MAC Address" with a text input field containing "000000000000".

- **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 screenshot shows the "Options" section of the configuration form. It includes a "Provisioning Method" dropdown set to "RPS (Remote)", a "Provisioning Link" text field, and a "Provisioning Link" button. Below these fields, there is a checkbox labeled "Authentication by the Provisioning Link" which is checked.

Figure 16. **RPS using Public IP Address / External Host domain name**

The screenshot shows the "Options" section of the configuration form. It includes a "Provisioning Method" dropdown set to "RPS (Remote)", a "Provisioning Link" text field, and a "Provisioning Link" button. Below these fields, there is a checkbox labeled "Authentication by the Provisioning Link" 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.



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.



## 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.

Status	Extension	Name	Vibrator	Model	IP Address	Phone Name	Operations
	2000	Line Bell	Fixed	2010			

**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	 <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 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></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></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></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></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></div> <div></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><div><div>HTTP</div><div></div></div><div><div>SIP</div><div></div></div></div><div><div>SIP UDP</div><div></div></div><div><div>SIP TLS</div><div></div></div></div><div><div>HTTP</div><div></div></div><div><div>SIP</div><div></div></div><div><div>SIP UDP</div><div></div></div><div><div>Outbound SIP Port</div><div></div></div></div>

Features

SIP Access

Remote Access

Before enabling this feature, please make sure your extensions are using strong registration passwords, or it might bring security risks.

Status

Enabled

Remote Access Service Port-SIP UDP/TCP

5060

Remote Access Service Port-SIP TLS

5061

Public Ports

External SIP UDP Port

18205

External SIP TCP Port

18205

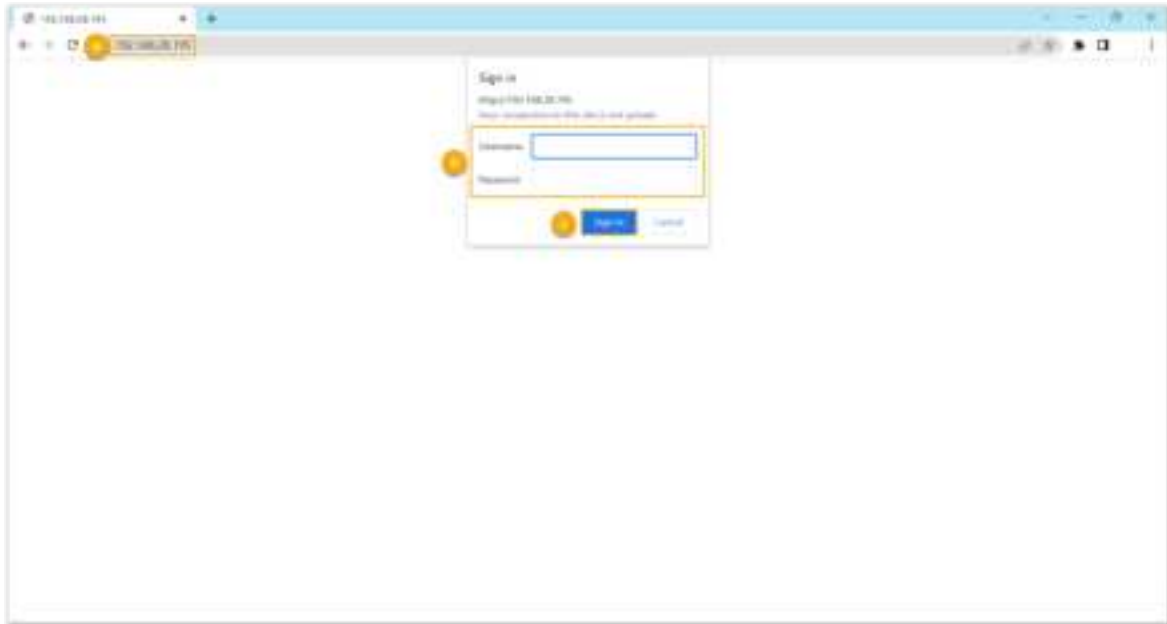
External SIP TLS Port

18208

External Linkus Port

Step 2. Register extension on Tiptel IP phone

- 1. Log in to the web interface of the Tiptel IP phone.



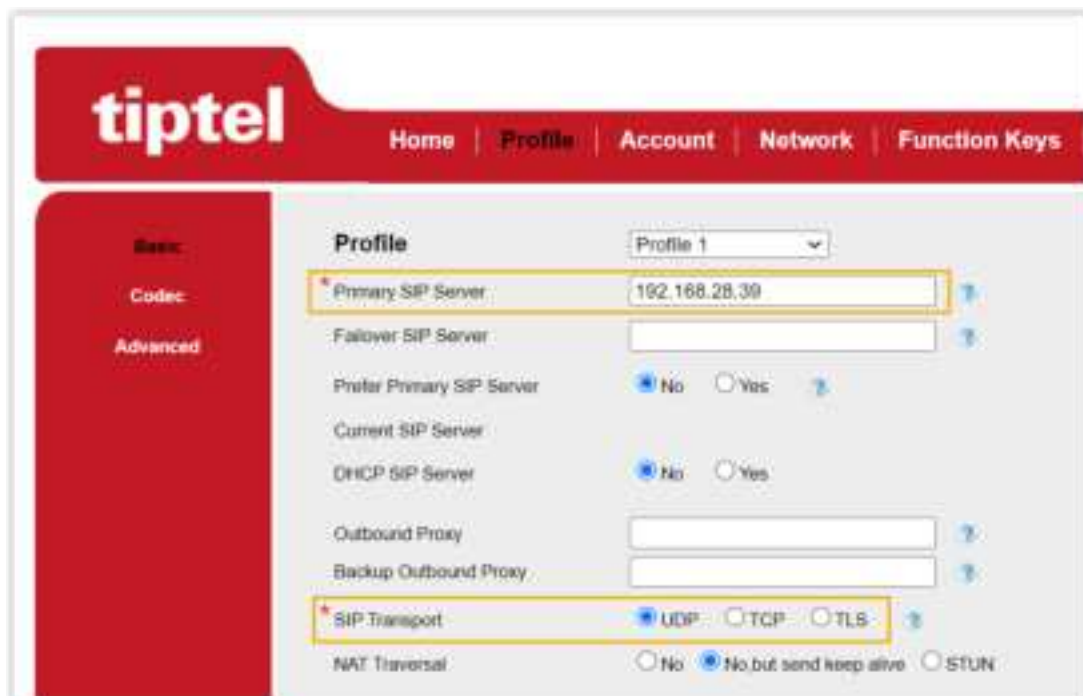
- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

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 radio buttons for 'No' and 'Yes', where 'Yes' is selected.

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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>



**Table 2. (continued)**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

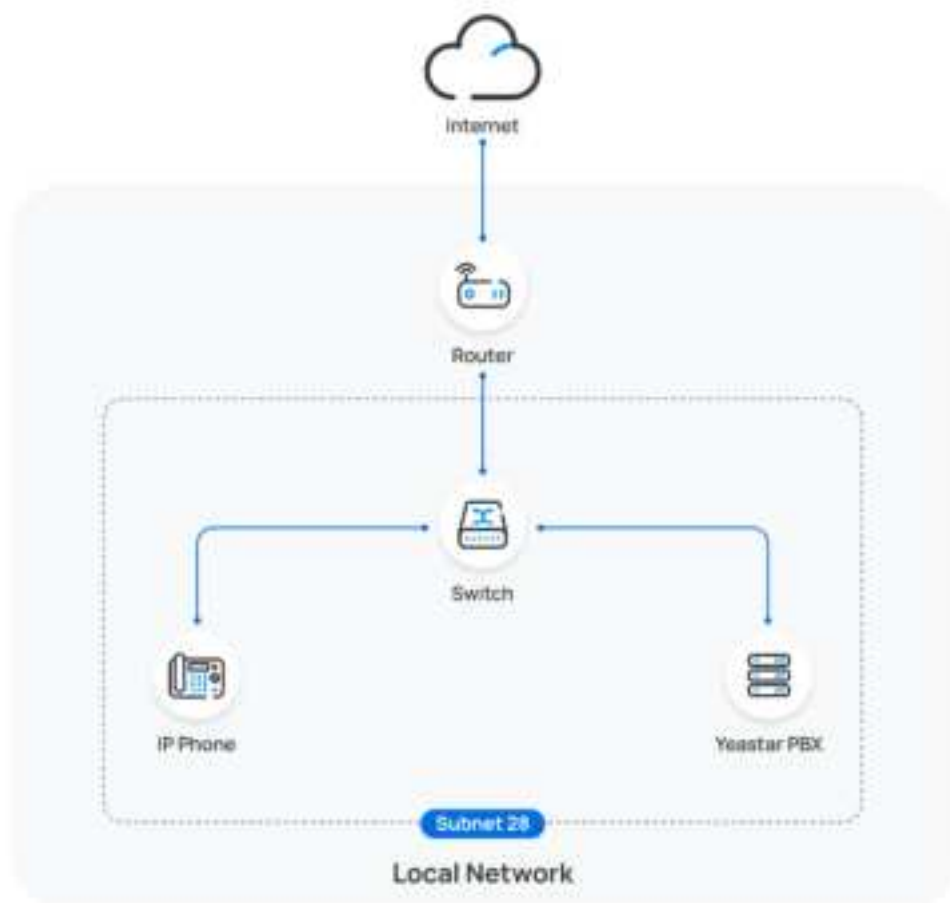
## Scenarios

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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Template	Operations
	Unassigned	Unassigned	Alcatel-Lucent Enterprise	SEP	192.168.38.205		

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:**

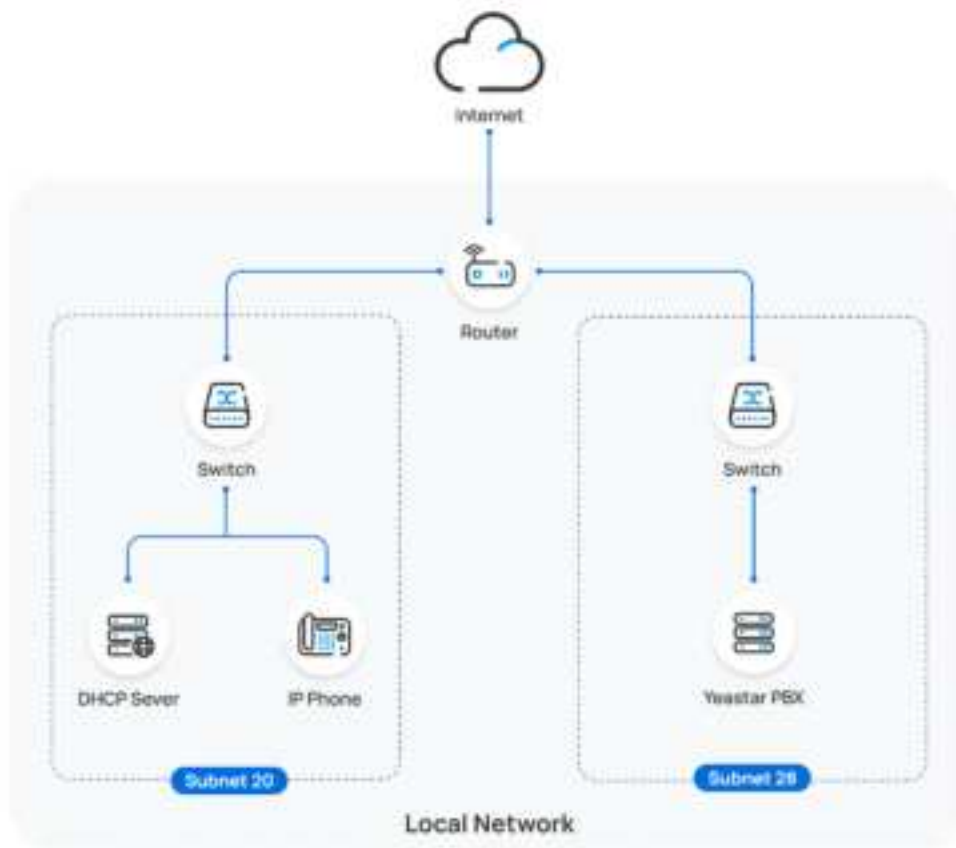
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Type	Operations
	1005	Luc Bell	Alcatel-Lucent Enterprise	602	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:

The image shows a configuration form titled "IP Phone". It contains three fields: "Vendor" with a dropdown menu showing "Alcatel-Lucent Enterprise", "Model" with a dropdown menu showing "M3", and "MAC Address" with a text input field.

- **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.

The image shows a configuration form titled "Options". It contains three fields: "Template" with a dropdown menu, "Provisioning Method" with a dropdown menu showing "DHCP (In the Office)", and "Provisioning Link" with a text input field.

- **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 image shows a configuration form titled "Assign Extension". It contains a dropdown menu labeled "Select Extension" with the value "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:  
RDP\_AdmProd

\* Processing Method:  
RDP\_Split (New)

Processing URL:  
[http://192.168.10.107/Programas/gerador/rdp/gerador.asp?ID=](#)

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

In this example, the configuration is shown below.

The screenshot shows the Mikrotik WinBox DHCP Server configuration window. The 'Advanced Settings' tab is selected. The 'Dynamic DHCP' checkbox is checked, with a note: 'Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served.' The 'Force' checkbox is unchecked, with a note: 'Force DHCP on this network even if another server is detected.' The 'IP-Netmask' field is set to '255.255.255.0', with a note: 'Override the netmask sent to clients. Normally it is calculated from the subnet that is served.' The 'DHCP-Options' field contains the URL 'http://192.168.28.110/7777/macosdpmn/macosdpmn/PIDm', with a note: 'Define additional DHCP options, for example "A:192.168.28.110/7777" which advertises different DNS servers to clients.' The 'DNS' field is empty. At the bottom right are 'Default' and 'OK' buttons.

## 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.

Phone	Extension	Name	Vendor	Model	IP Address	Phone Power	Operations
	1000	John Doe	Alcatel-Lucent Enterprise	M3	192.168.1.100	15W	  

## 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.





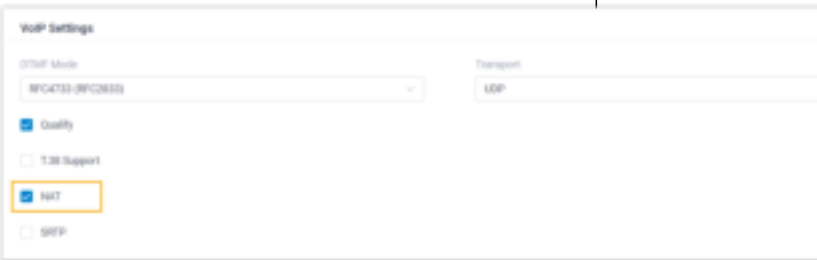
## Supported devices



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
	<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




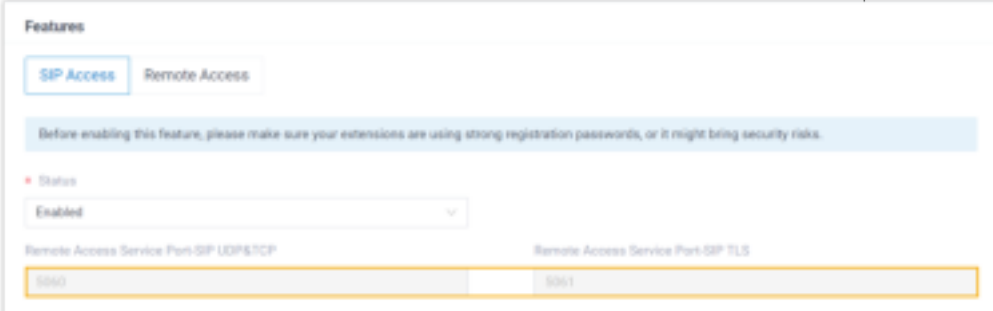
- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on ALE IP phone](#)

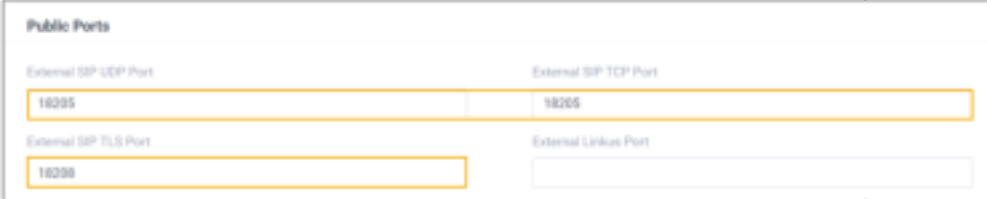
### Step 1. Gather registration information on Yeastar PBX

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>

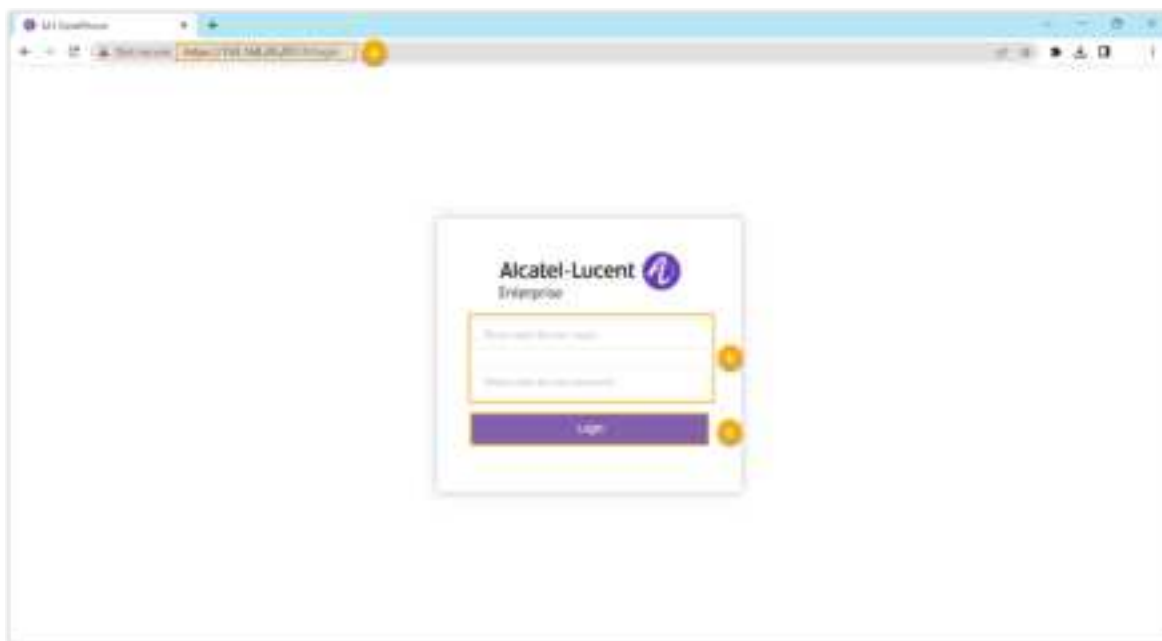
Information	Instruction
	<div> </div> <div> </div> <div> <b>Note:</b> </div> <div> <ul style="list-style-type: none"> <li>• If the extension uses TCP transport protocol, make sure that the SIP TCP port is enabled on the PBX, or the registration would fail (Path: <b>PBX Settings &gt; SIP Settings &gt; General &gt; Basic</b>).</li> </ul> </div> <div> </div> <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> <div> </div>
PBX IP address or domain name	<div> <b>Scenario: Register extension in local network</b> </div> <div> <p>In this scenario, you can directly utilize the PBX's private IP address for extension registration.</p> </div> <div> </div> <div> <b>Note:</b> </div> <div> <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> <b>Scenario: Register extension remotely using Yeastar FQDN</b> </div> <div> <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
	 <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> 
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>  <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
	<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> 

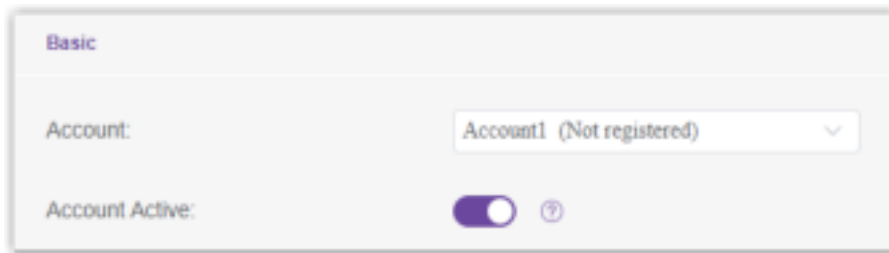
## Step 2. Register extension on ALE IP phone

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



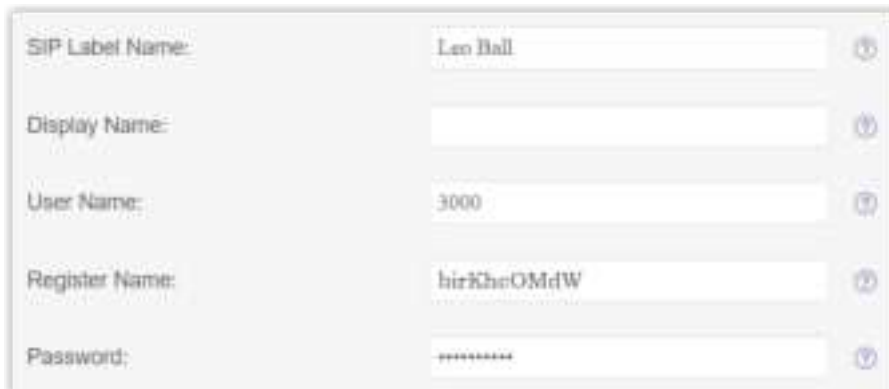
- a. In the browser's address bar, enter the IP address of the IP phone.
  - b. Enter the username `admin` and the associated password.  
In this example, enter the default password `123456`.
  - c. Click **Login**.
2. On the left navigation bar, go to **Account > Basic**, and complete the following registration configurations.

- a. In the **Account** drop-down list, select an available account, then enable the **Account Active** option.



The screenshot shows a configuration window with a tab labeled "Basic". Inside, there is a label "Account:" followed by a dropdown menu currently showing "Account1 (Not registered)". Below this, there is a label "Account Active:" followed by a toggle switch that is turned on (indicated by a blue circle) and a small question mark icon.

- b. Enter the extension information.



The screenshot shows a configuration window with five input fields, each with a question mark icon to its right. The fields are: "SIP Label Name:" with the value "Leo Ball"; "Display Name:" which is empty; "User Name:" with the value "3000"; "Register Name:" with the value "hirkheOMdW"; and "Password:" with a masked value represented by asterisks.

- **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 window with four input fields, each with a question mark icon to its right. The fields are: "SIP Server:" with the value "192.168.26.39"; "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.

The screenshot shows a configuration panel for a SIP account. It contains three fields: 'Account:' with a dropdown menu showing 'Account1 (Leo Ball : Registered)', 'Account Active:' with a toggle switch turned on and an information icon, and 'Account Status:' with a button labeled 'Registered' that is highlighted with a yellow border.

# 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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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></ul>



Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</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> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• RPS</li> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

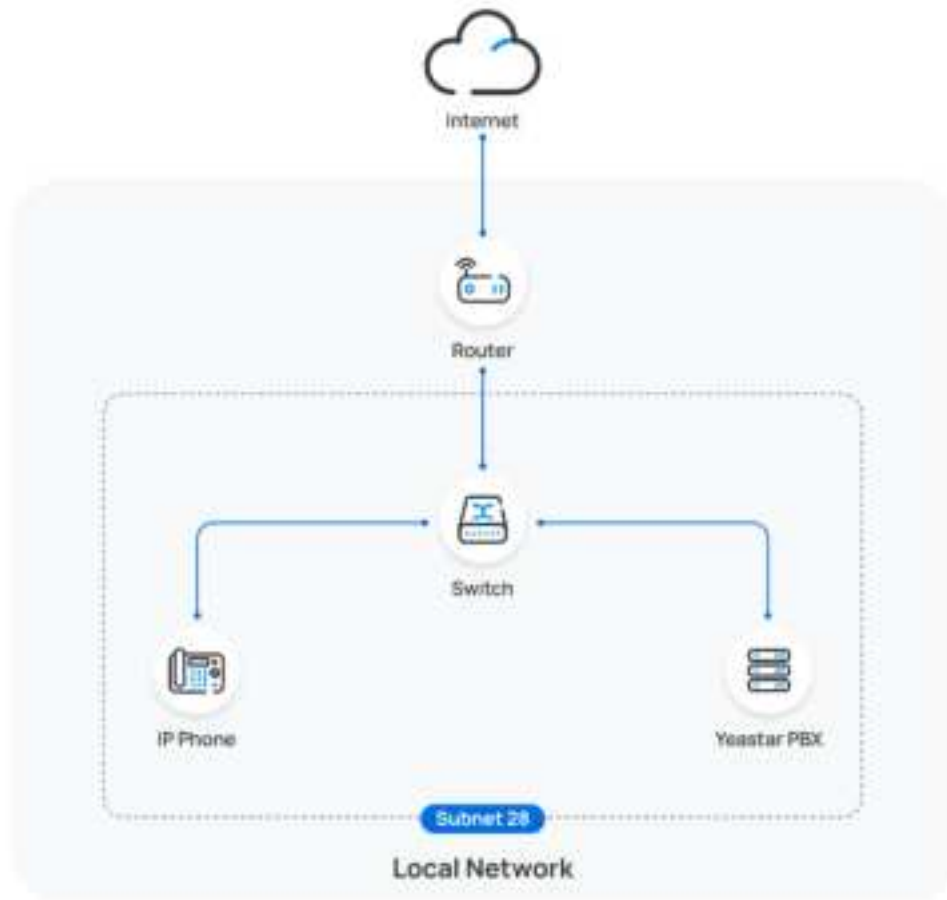
## Scenarios

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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Home	Operations
	Unassigned	Unassigned	Flyingvoice	FSIP	192.168.20.100		

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-Lao Bai



**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:**

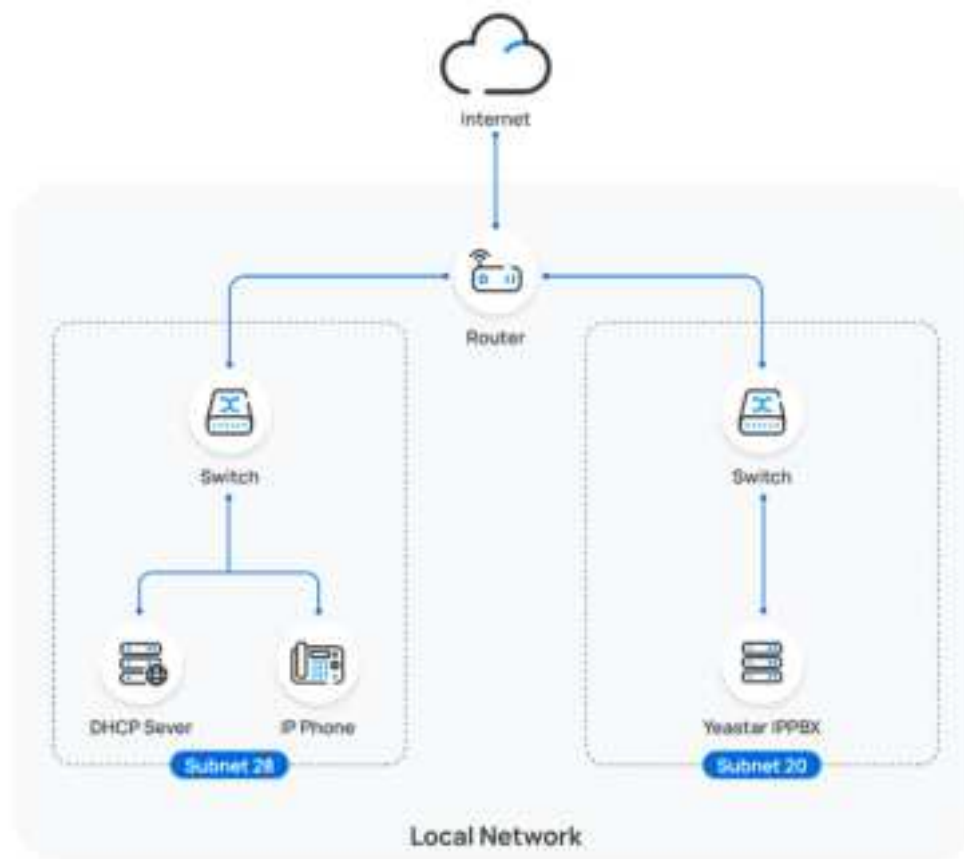
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Phone	Extension	Name	Vendor	Model	IP Address	Phone Profile	Operations
	2000	Lee Bell	Flyingvoice	FPDP	192.168.28.156		   

## 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.



- **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.

- **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.



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.

The screenshot shows the Mikrotik WinBox interface for configuring the DHCP Server on the LAN interface. The 'Advanced Settings' tab is selected. The configuration includes:

- Dynamic DHCP:** Enabled (checked).
- Force:** Disabled (unchecked).
- Pool-Name:** Set to 'pool'. The description states: 'Override the network used to clients. Normally it is calculated from the subnet that is served.'
- DHCP-Options:** Set to '6, 2, 2, 5, 5, 0'. The description states: 'Define additional DHCP options, for example "6, 2, 2, 5, 5, 0" which advertises different DNS servers to clients.'

At the bottom right, there are 'Apply' and 'Done' buttons.

## Result



**Note:**

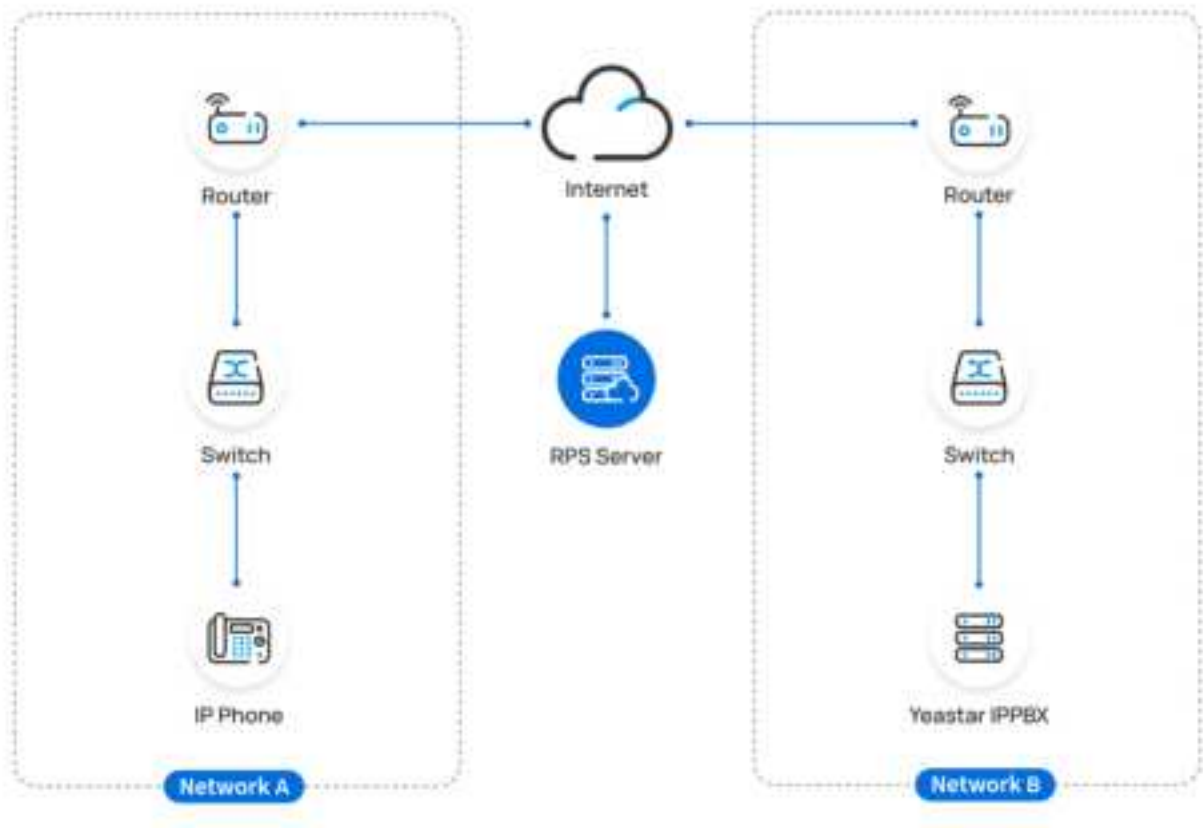
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

State	Extension	Name	Vendor	Model	IP Address	Physical Path	Operations
	300	1-sec-fail	Hygon	F20	-	-----	   

## 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> </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> </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 style="background-color: #fff9c4; padding: 10px; border: 1px solid #f0e68c;"> <p><b>! Important:</b> 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>◦ 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><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>

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 screenshot shows a configuration form for an IP Phone. It includes the following fields:

- # Phone: Flyingvoice
- # Model: P20P
- # Provision: (empty)
- # RSC Address: (empty)
- # MAC Address: (empty)

- **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 screenshot shows the 'Options' section of the configuration form. It includes the following fields:

- # Provision: RPS FlyingvoiceP
- # Provisioning Method: RPS FQDN (Remote)
- Provisioning Link: (empty)

Figure 18. **RPS using Public IP Address / External Host domain name**

The screenshot shows the 'Options' section of the configuration form. It includes the following fields:

- # Provision: RPS FlyingvoiceP
- # Provisioning Method: RPS (Remote)
- Provisioning Link: (empty)

- **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.

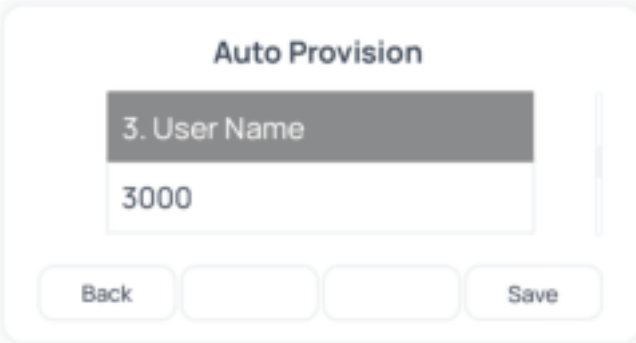
2. Press **OK**.

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.

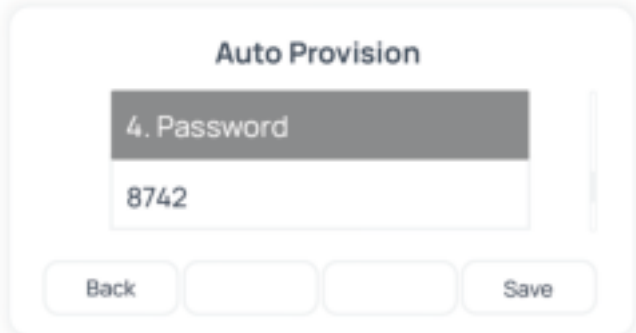


The image shows the 'Auto Provision' section of the Flyingvoice configuration interface. The '3. User Name' field is highlighted with a grey background and contains the text '3000'. Below the field are three buttons: 'Back', an empty button, and 'Save'.

- b. Scroll down to the **Password** field, enter the extension's Voicemail Access PIN.

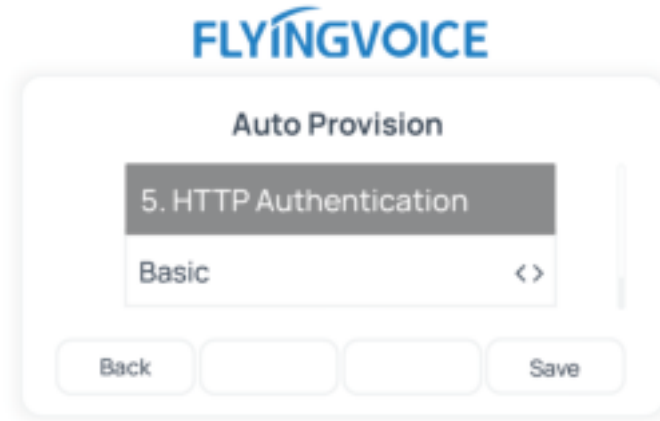
**Tip:**

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



The image shows the 'Auto Provision' section of the Flyingvoice configuration interface. The '4. Password' field is highlighted with a grey background and contains the text '8742'. Below the field are three buttons: 'Back', an 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Name	Operations
	3001	Lee Ball	Flyingvoice	P20P	-	192.168.1.100	

## 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.


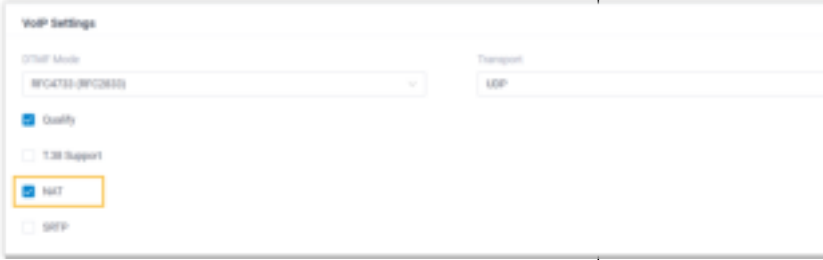


## Supported devices

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
		<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> 





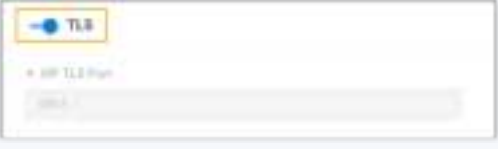
Procedure

- [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>

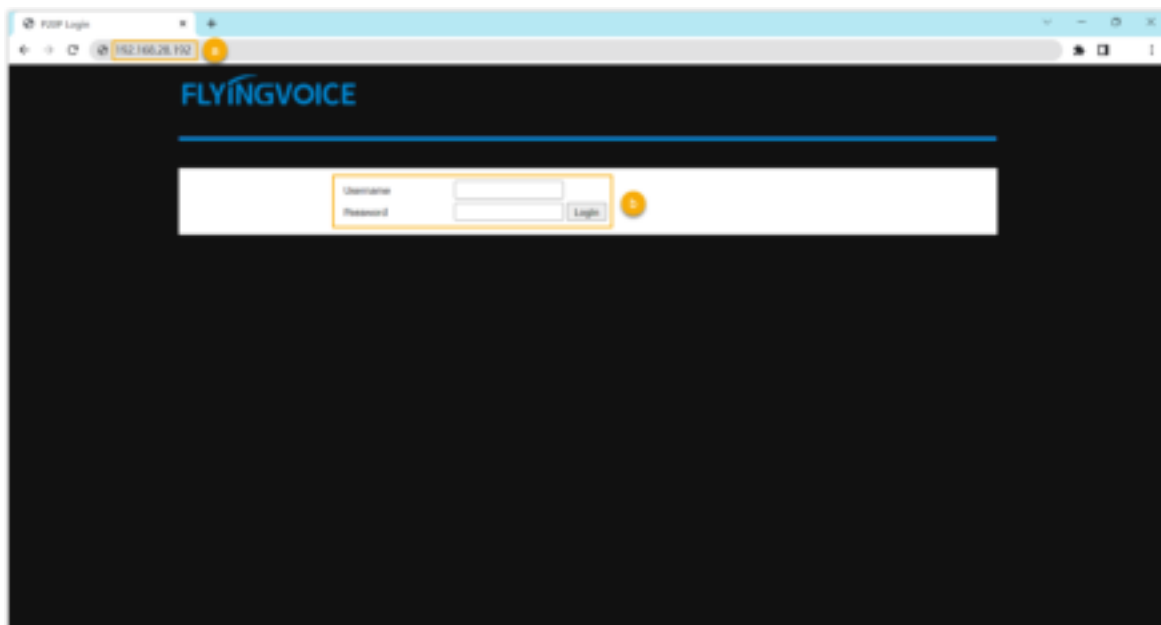
Information	Instruction
	 <p>Extension Information</p> <p>Extension Number: <input type="text" value="1001"/></p> <p>Registration Name: <input type="text" value="1001@10.10.10.10"/></p> <p>IP Phone Current Registration: 1</p> <p>Extension ID: 1001</p> <p>Registration Password: <input type="password" value="123456"/></p>
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>  <p>VoIP Settings</p> <p>Transport: <input type="text" value="UDP"/></p> <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>  <p>SIP Settings - General &gt; Basic</p> <p>SIP TCP Port: <input checked="" type="checkbox" value="checked"/> 5060</p> <p>SIP TCP Port Range: <input type="text" value="5060"/> - <input type="text" value="5060"/></p> <p>SIP UDP Port: <input checked="" type="checkbox" value="checked"/> 5060</p> <p>SIP UDP Port Range: <input type="text" value="5060"/> - <input type="text" value="5060"/></p> <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>  <p>SIP Settings - TLS</p> <p>TLS: <input checked="" type="checkbox" value="checked"/></p> <p>SIP TLS Port: <input type="text" value="5061"/></p>
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></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></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></div> <div></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></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> <p><b>Features</b></p> <p><b>SIP Access</b> 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 Enabled</p> <p>Remote Access Service Port SIP UDP/TCP: 5060 Remote Access Service Port SIP TLS: 5061</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 &gt; Public Ports</b>, note down the SIP registration port corresponding to the <a href="#">extension's transport protocol</a>.</p> <div> <p><b>Public Ports</b></p> <p>External SIP UDP Port: 18205 External SIP TCP Port: 18205</p> <p>External SIP TLS Port: 18208 External Linkus Port:</p> </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`.

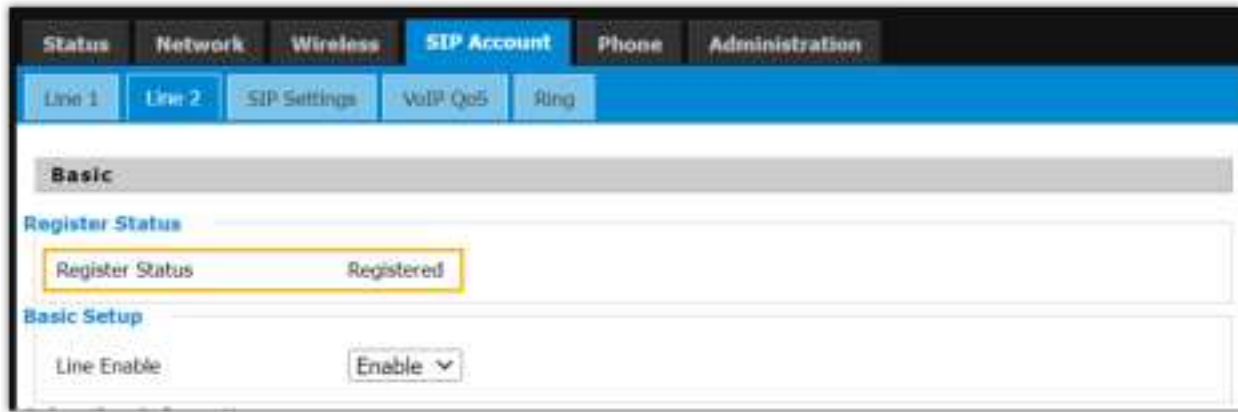
2. Go to the **SIP Account** tab, complete the registration configurations.

- 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	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6865i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6867i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6869i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6873i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6905	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
6910	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"><li>• DHCP</li></ul>

**Table 3. (continued)**


Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</li> </ul>
6915	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6920	6.3.1 SP1 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6930	6.3.1 SP1 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6940	6.3.1 SP1 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
RFP 44	9.1 or later	37.18.0.18 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
RFP 45	9.1 or later	37.18.0.18 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
RFP 47	9.1 or later	37.18.0.18 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
RFP 48	9.1 or later	37.18.0.18 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>

## Restrictions

The PBX function keys **DTMF**, **Intercom** and **Park & Retrieve** are NOT supported on the provisioned Mitel IP phones.

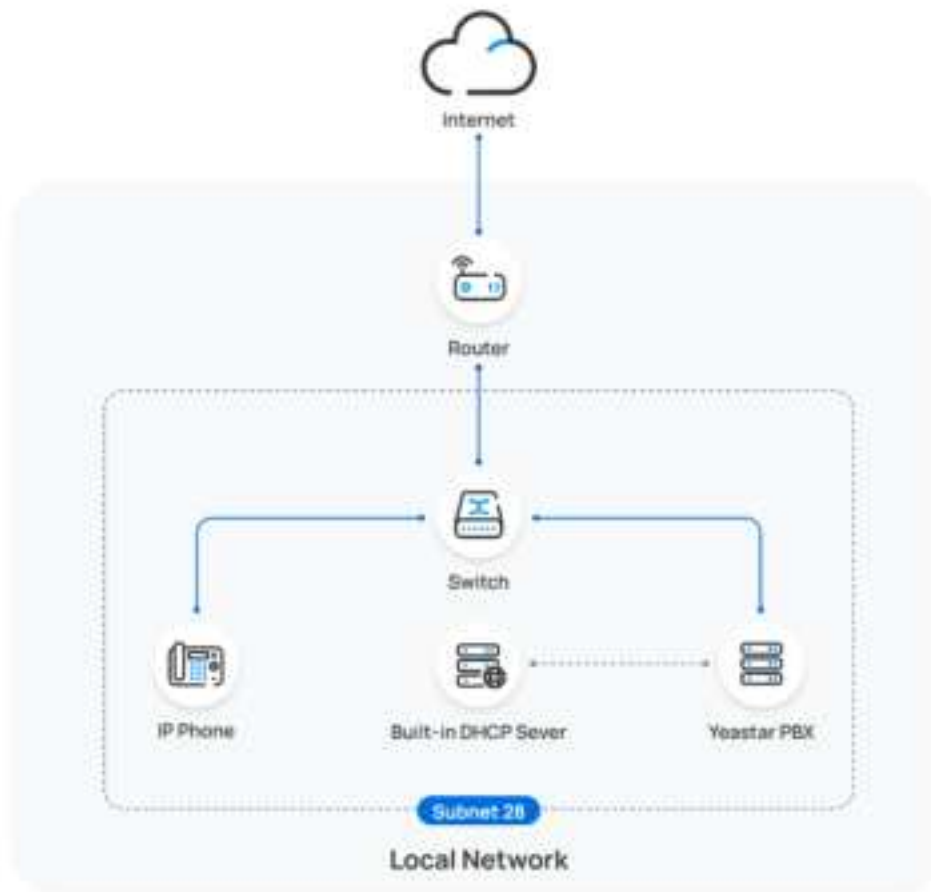
## Scenarios

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>  </div> <p><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.</p> <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.

- **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.




**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**

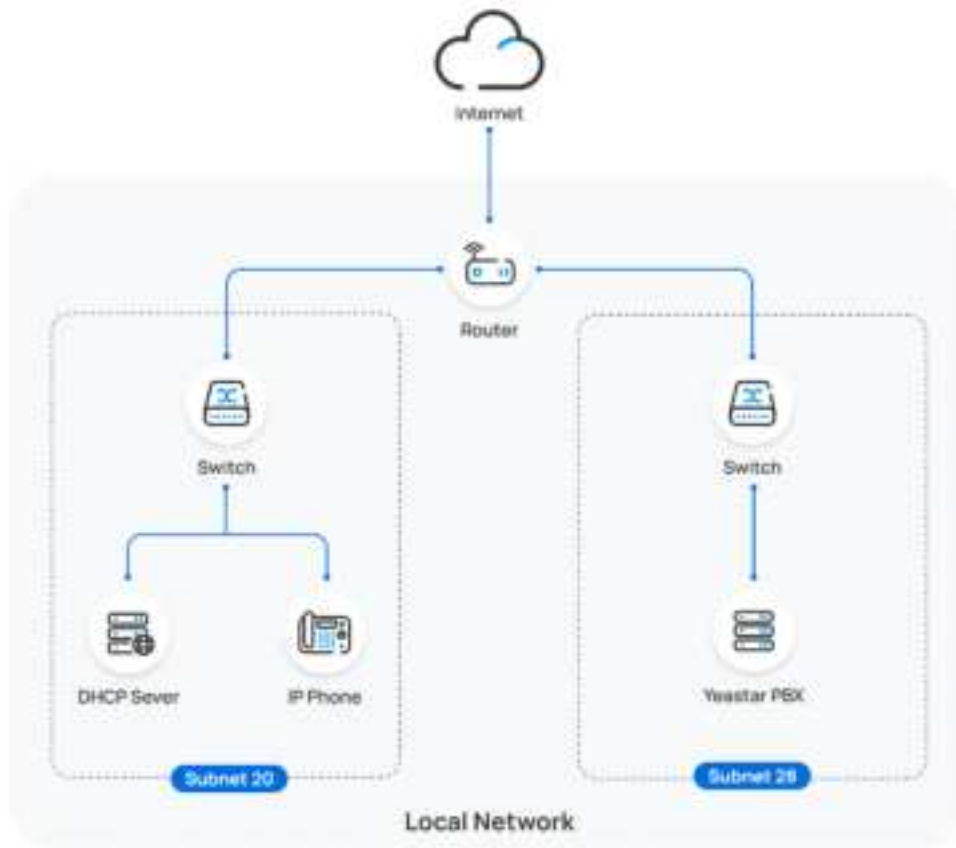
- After the phone is rebooted, it gets an IP address from the PBX built-in DHCP server, download the configurations from the PBX and applies the settings automatically.
- The extension is successfully registered on the IP phone. You can check the extension registration status on **Auto Provisioning >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

Icon	Extension	Name	Vendor	Model	IP Address	Phone Status	Operations
	3000	Lee Ball	Mitel	4803	-	Registered	  

**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.



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.

 A screenshot of the 'IP Phone' configuration form. It contains 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 '000000000000'. Each field has a red asterisk indicating it is required.

- **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

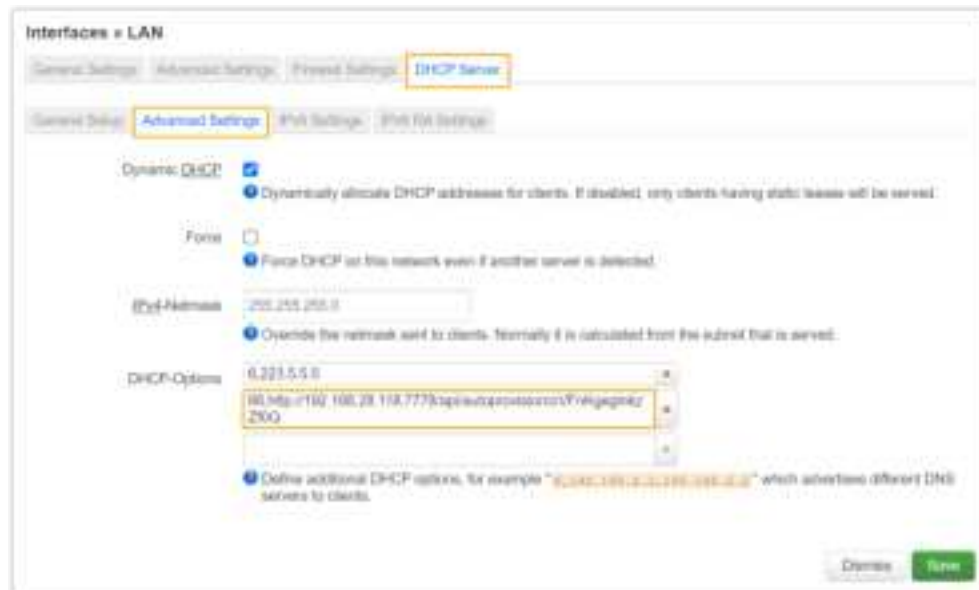
In the subnet where the IP phone is deployed, use the generated provisioning link to configure option 66 on the DHCP Server.

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.

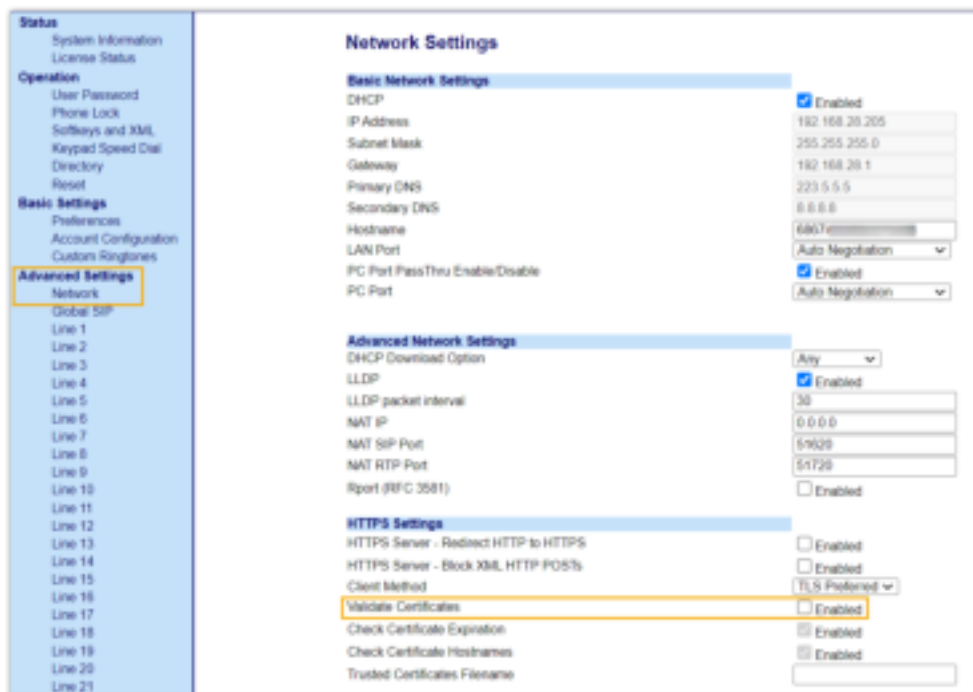


- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Provision Operations
Active	3000	John Bell	Mitel	6883	192.168.1.100	Refresh, Delete, Add

## Related information

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

[Provision Mitel DECT System with Yeastar P-Series PBX System](#)

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

This topic describes how to provision Mitel 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 Mitel IP phone models for different expansion modules, as well as the required phone provisioning templates.

Expansion Module	Phone model	Phone provisioning template
M685	6865i, 6867i, 6869i, 6873i	YSDP_Mitel68XX (1.0.5 or later)
M695	6920, 6930, 6940	YSDP_Mitel69XX (1.0.5 or later)

## Prerequisites

- The Mitel expansion module is connected to a Mitel IP phone.

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

## Supported methods

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

### Provision function keys for Mitel 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, Mitel 6869i supports 44 programmable keys, then the function key settings starting from the 45th key will take effect on the expansion module.

Function Key	Type	Value	Label	Operations	Sort
Key 1	Speed Dial	1004-Philip ruff	Philip ruff		
Key 2	Check Group Voicemail	8100-6100	Setup MP 8100		
Key 3					
Key 40	Port & Password	2020	Port 4020		
Key 40	Check Voicemail	My Voicemail	My Voicemail		

- **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 Mitel 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\_Mitel68XX**.
  - **Template Type:** Select **Advanced**.
  - **Remark:** Optional. Add a note for the template.
- d. **Optional:** In the **Preference**, **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 configuration 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, Mitel 6869i supports 44 programmable keys, then the function key settings starting from the 45th key will take effect on the expansion module.



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**.

## Provision Mitel 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 Mitel DECT base station with Yeastar P-Series PBX System, so that the Mitel 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 **Mitel DECT base station** and **Yeastar PBX** meet the following requirements.

**Table 4.**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
6863i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6865i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6867i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6869i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6873i	R5.1.0SP6 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6905	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6910	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6915	6.3 SP3 or later	37.17.0.17 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
6920	6.3.1 SP1 or later	37.9.0.103 or later	<ul style="list-style-type: none"> <li>• DHCP</li> </ul>

**Table 4. (continued)**




Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			• Provision Link
6930	6.3.1 SP1 or later	37.9.0.103 or later	• DHCP • Provision Link
6940	6.3.1 SP1 or later	37.9.0.103 or later	• DHCP • Provision Link
RFP 44	9.1 or later	37.18.0.18 or later	• DHCP • Provision Link
RFP 45	9.1 or later	37.18.0.18 or later	• DHCP • Provision Link
RFP 47	9.1 or later	37.18.0.18 or later	• DHCP • Provision Link
RFP 48	9.1 or later	37.18.0.18 or later	• DHCP • Provision Link


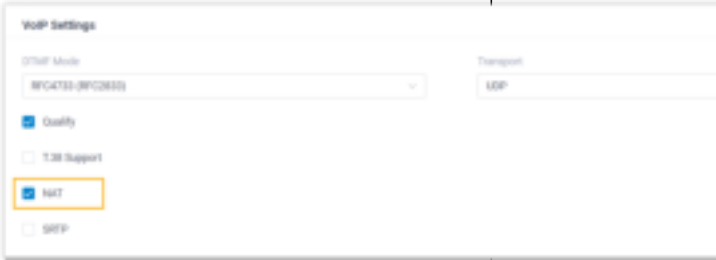


The device model and firmware version of the Mitel DECT system used in this example are shown in the table below.

Device Model	Firmware Version
<b>Mitel DECT base station</b>	
RFP 44	v9.1
<b>Mitel DECT handset</b>	
732d	v9.0.3.33

## Prerequisites

- You have configured IP address for the DECT base station and are able to access the web interface using the IP address.
- Gather information of the DECT base station, including Vendor, Model, and MAC address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Make sure that you have completed the corresponding settings shown below according to the network environment of **Mitel DECT base station** and **Yeastar PBX**.

Network Environment	Setting	Setting
Local Network	Provision a base station in the same subnet	/
	Provision a base station in different subnets	<ul style="list-style-type: none"> <li>◦ Make sure that the two subnets can communicate with each other.</li> <li>◦ Enable the Remote Registration feature for the extension to be assigned to a DECT handset (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</b>).</li> </ul> 
Remote Network	Remotely provision a base station using Yeastar FQDN	<ul style="list-style-type: none"> <li>◦ Subscribe to <b>Enterprise Plan</b> or <b>Ultimate Plan</b> for the PBX to ensure that the FQDN is available.</li> <li>◦ <a href="#">Grant remote SIP access permission</a> for the extension to be assigned to a DECT handset (Path: <b>System &gt; Network &gt; Yeastar FQDN &gt; Features &gt; SIP Access</b>).</li> </ul> 
	Remotely provision a base station 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 to be assigned to a DECT handset for remote registration. <ul style="list-style-type: none"> <li>▪ Enable NAT for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;</b></li> </ul> </li> </ul>

Network Environment	Setting
	<p> &gt; <b>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. Configure Mitel DECT base station on PBX](#)
- [Step 2. Configure provisioning URL on Mitel DECT base station](#)
- [Step 3. Register a Mitel DECT handset to the DECT base station](#)

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

**IP Phone**

• Vendor: Mitel

• Model: RFP 44

• MAC Address:

- **Vendor:** Select **Mitel**.
  - **Model:** Select the device model. In this example, select **RFP 44**.
  - **MAC Address:** Enter the MAC address of the DECT base station.
4. In the **Options** section, configure the following settings.

**Options**

• Template: VSCP\_MitelDECT

• Provisioning Method: DHCP (In the Office)

Provisioning Link:

- **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 the provisioning method according to your needs.

Provisioning Method	Description
DHCP (In the Office)	Suitable for provisioning the DECT base station that is located in the local network, either in the same subnet or in different subnets.
Provision Link (Remote)	Suitable for provisioning the DECT base station located in a remote network, and the base station will access the PBX using public IP address / external host name to retrieve configuration files.
Provision Link - FQDN (Remote)	Suitable for provisioning the DECT base station located in a remote network, and the base station will access the PBX using Yeastar FQDN to retrieve configuration files.

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.



**Note:**

Note down the provisioning link, as you will use it later.

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.

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



**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. In the **Preference** section, select a time zone in the **Time Zone** drop-down list.
7. Complete other settings according to your needs.
8. Click **Save**.

## Step 2. Configure provisioning URL on Mitel DECT base station

Manually configure provisioning URL for the Mitel DECT base station using the provisioning link provided by the PBX.

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



- a. In the browser's address bar, enter the IP address of the DECT base station
  - b. Enter the username and the associated password.
  - c. Click **OK**.
2. On the top menu, select the checkbox of **Advanced** to show the advanced settings.





3. At the left navigation bar, go to **System > Provisioning & Software Update**.

4. In the **Provisioning URL** section, do as follows:

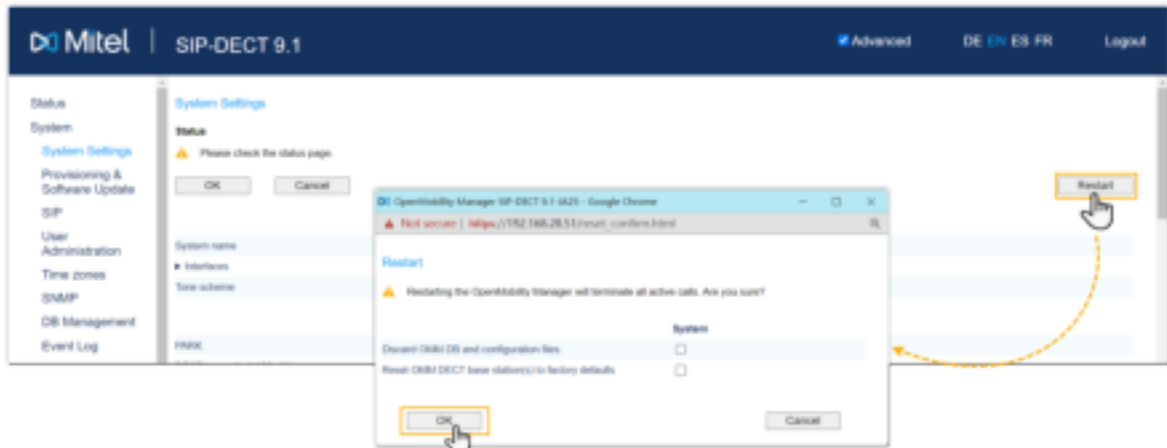
- a. Select the checkbox of **Active**.
- b. Complete the following settings with the [provisioning link obtained from the PBX](#).




- **Protocol:** Select **HTTP** or **HTTPS** according to the prefix of the link.
- **Server:** Enter the server address (IP address or domain name).
- **Port:** Enter the server port.
- **Path:** Enter the file path (e.g. `api/autoprovision/lgjnRL8CkoYFXWJd`).

5. At the top of the configuration page, click **OK**.

6. Go to **System > System Settings**, click **Restart** and **OK** to trigger provisioning.

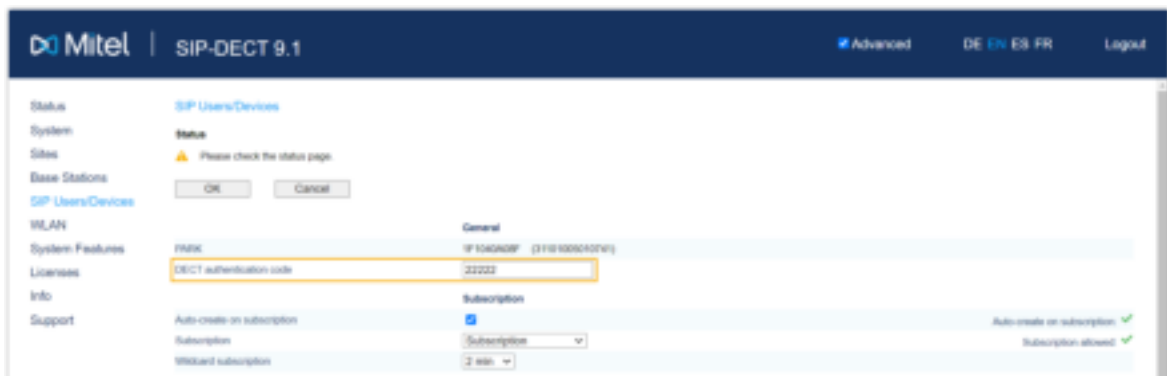


After restarting and waiting for a few minutes, the subscription status on **SIP Users/Devices > Subscription** will display , indicating that the base station has successfully downloaded configuration file from the PBX.



7. In **SIP Users/Devices > General > DECT authentication code**, set an authentication code and note it down.

This authentication code will be used later when registering the handset to the base station.



### Step 3. Register a Mitel DECT handset to the DECT base station

Subscribe to the DECT base station and log in to the DECT handset, so that the DECT handset can be used as a PBX extension.

#### 1. Subscribe to the DECT base station.

- a. On the handset, go to **System > Subscription**.

The DECT handset starts to search for a base station. When it finds the base station, there is a prompt asking you to enter an authentication code.

- b. Enter the [authentication code](#), then press **Next** and **Ok**.

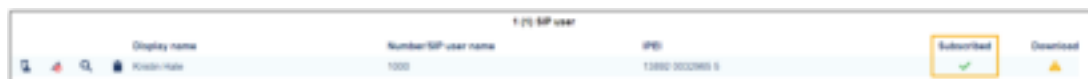
The DECT handset prompts "success", indicating that the handset has successfully subscribed to the base station.

#### 2. Log in to the DECT handset.

- a. On the handset, press **Log in**.
- b. In the **Number** page, enter the extension number assigned to the handset, then press **Ok**.
- c. In the **User login** page, enter the extension number again, then press **Ok**.

### Result

- The handset is successfully subscribed to the DECT base station, and associated with the assigned PBX extension via the base station.
  - On the web interface of DECT base station, you can check the registration status of the handset on **SIP Users/Devices > SIP user**.



- On PBX web portal, you can check the registration status of the extension on **Auto Provisioning > Phone**.



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

# 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.



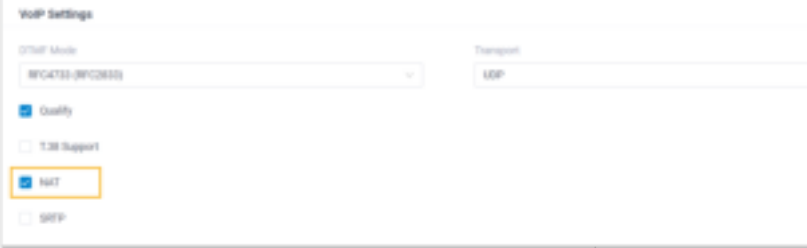


## Supported devices

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	<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


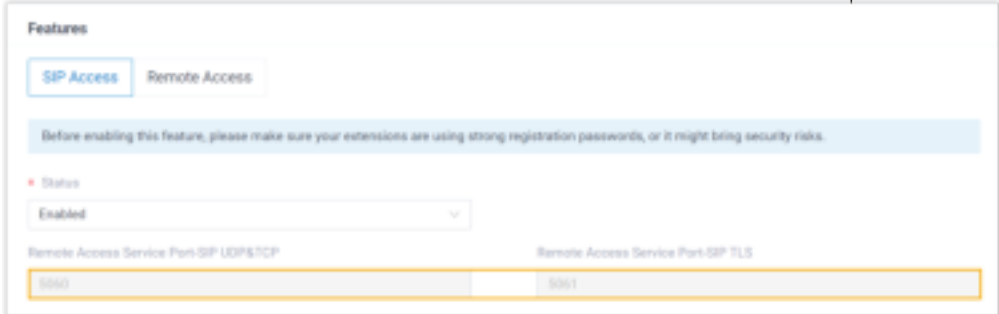
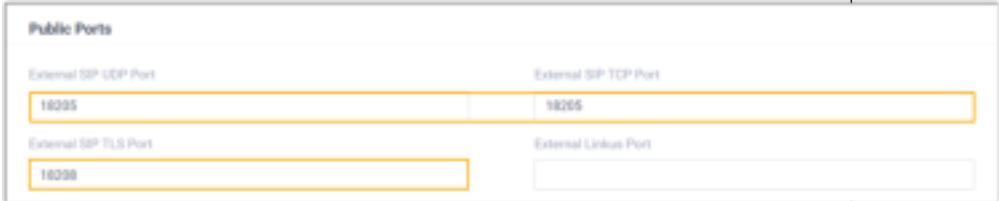
- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Mitel IP phone](#)

## 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> &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>• Caller ID</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></div> <div> </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> </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></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> </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> </div> <div> </div>

Information	Instruction
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>  <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> 
	<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 extension's transport protocol.</p> 

## Step 2. Register extension on Mitel IP phone

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

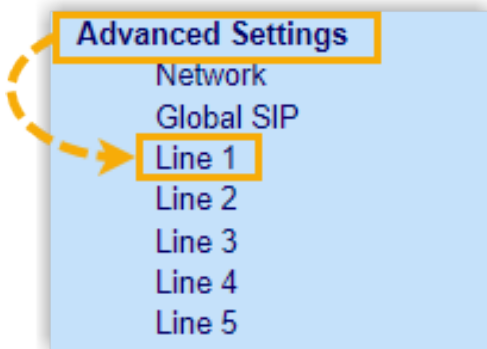




- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

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	birKhcQMdW
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 5.**

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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</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><li>• Provision Link</li></ul>

**Table 5. (continued)**

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
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> <li>• Provision Link</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> <li>• Provision Link</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> <li>• Provision Link</li> </ul>

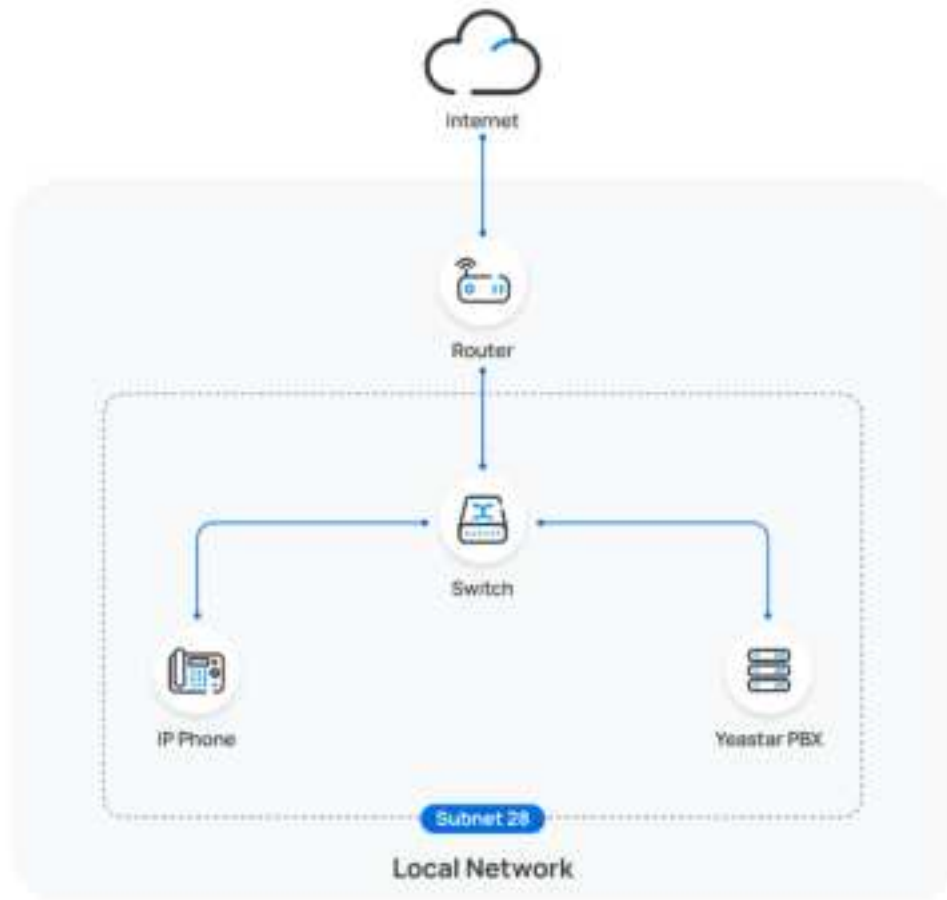
## Scenarios

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.



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.

**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:**

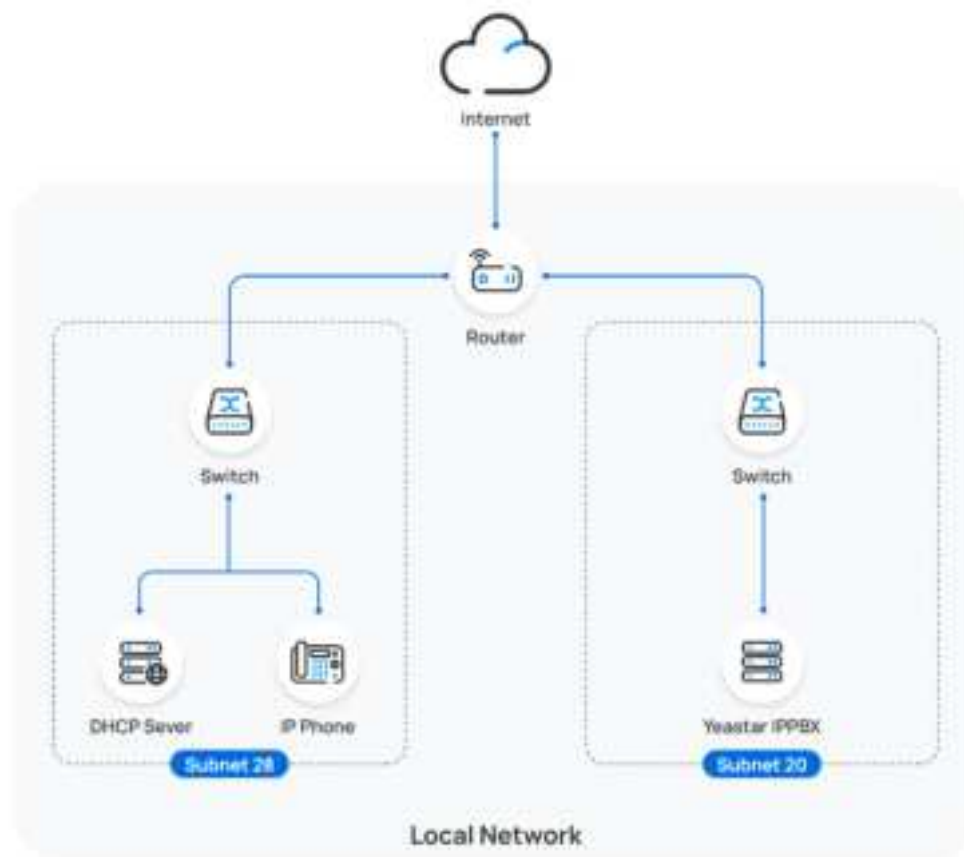
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Passwd	Operations
	2000	Lee Ball	Dinstar	CP00	192.168.28.102		

## 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:

The screenshot shows the 'IP Phone' configuration section. It contains three main fields: 'Vendor' with a dropdown menu showing 'Dinstar', 'Model' with a dropdown menu showing 'C60S', and 'MAC Address' with a text input field.

- **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.

The screenshot shows the 'Options' configuration section. It contains two main fields: 'Template' with a dropdown menu showing 'VOSIP\_Default' and 'Provisioning Method' with a dropdown menu showing 'DHCP (In the Office)'. There is also a 'Provisioning Link' field with a text input field.

- **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' section. It contains a single field: 'Select Extension' with a dropdown menu showing '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 on a router's DHCP server is shown below.

The screenshot shows the Mikrotik WinBox interface for configuring the DHCP server. The top navigation bar includes tabs for General Settings, Advanced Settings, Firewall Settings, and DHCP Server. The DHCP Server tab is active. Below it are sub-tabs for General Setup, Advanced Settings, IPv6 Settings, and IPv6 RA Settings. The Advanced Settings tab is selected.

- Dynamic DHCP:** A checkbox that is checked. A tooltip explains: "Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served."
- Force:** An unchecked checkbox. A tooltip explains: "Force DHCP set this network even if another server is detected."
- IP-Netmask:** A text field containing "255.255.255.0". A tooltip explains: "Override the netmask used to clients. Normally it is calculated from the subnet that is served."
- DHCP-Options:** A multi-line text area containing:
 

```
0.203.5.5 0  
66.http://192.168.20.167/mpegaserver/vr/djwengeract  
.QZ
```

 A tooltip explains: "Define additional DHCP options, for example \"0.203.5.5 0.203.5.5 0\" which advertises different DNS servers to clients."

At the bottom right, there are two buttons: "Defaults" and "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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Number	Operations
	2000	Joe Ball	Starco	C400			   

## 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	<div> </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> <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> </div>

## 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 &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


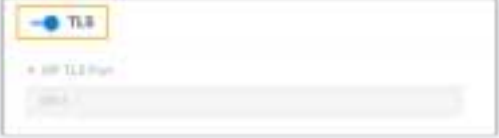


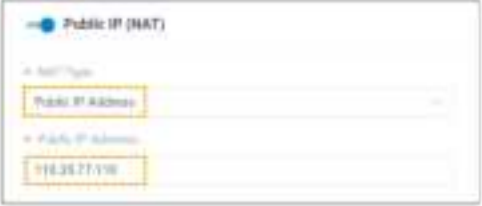

Go to **Extension and Trunk > Extension >  > Advanced > VoIP Settings > Transport**, note down the transport protocol of the extension. In this example, the extension use UDP transport protocol.




### Note:

- 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: **PBX Settings > SIP Settings > General > Basic**).



Information	Instruction
	<div></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></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></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></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></div> <div></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> <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> <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>

## Step 2. Register extension on Dinstar IP phone

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

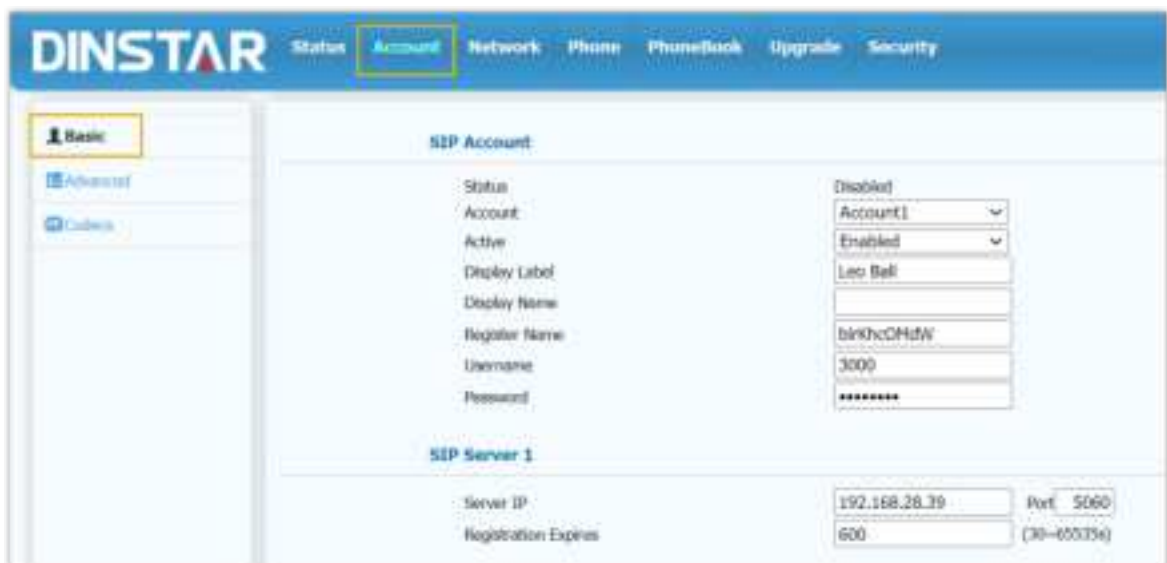


- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Enter the username `admin` and the associated password.

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

- c. Click **Login**.

2. Go to **Account > Basic**, complete the registration configurations.



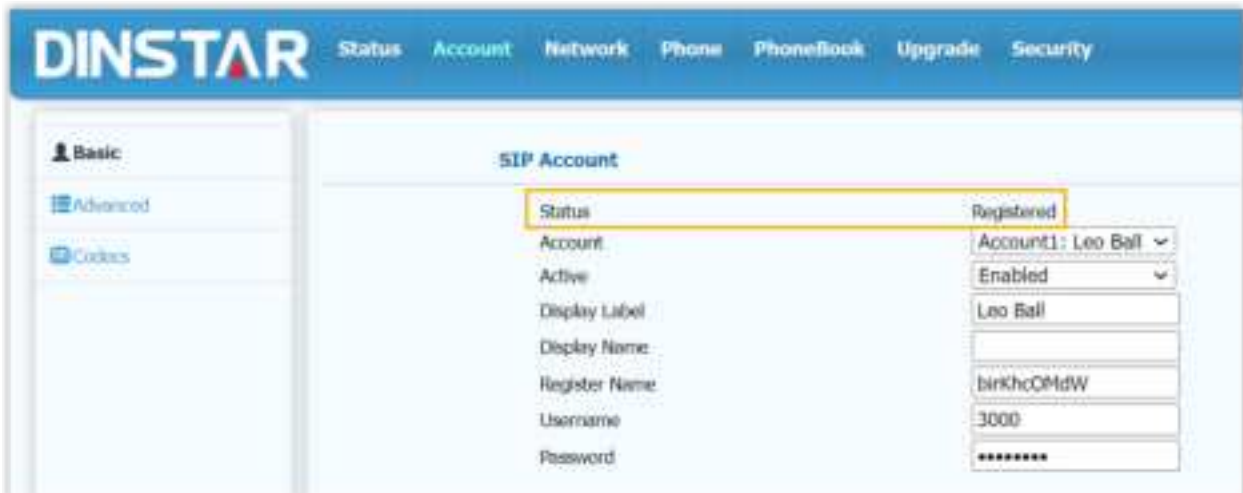
- a. In the **Account** drop-down list, select an available account.
- b. In the **Active** drop-down list, select **Enabled**.
- c. Enter the extension information.

- **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.



SIP Account	
Status	Registered
Account	Account1: Leo Ball
Active	Enabled
Display Label	Leo Ball
Display Name	
Register Name	binkhoCMdW
Username	3000
Password	*****

# Poly

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

This topic takes Poly VVX\_450 (firmware: 6.4.6.2494) as an example to describe how to auto provision Poly IP phones with Yeastar P-Series PBX System.

### Requirements

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


Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
Edge_E100	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E220	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E300	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E320	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E350	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E400	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E450	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>
Edge_E500	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• RPS</li><li>• Provision Link</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
Edge_E550	8.0.0.15602 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_101	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_201	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_301	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_310	5.9.8 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_311	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_401	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_410	5.9.8 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_411	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_501	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_601	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_150	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_250	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> </ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
			<ul style="list-style-type: none"> <li>• Provision Link</li> </ul>
VVX_350	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>
VVX_450	6.4.3.5059 or later	37.15.0.22 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• RPS</li> <li>• Provision Link</li> </ul>

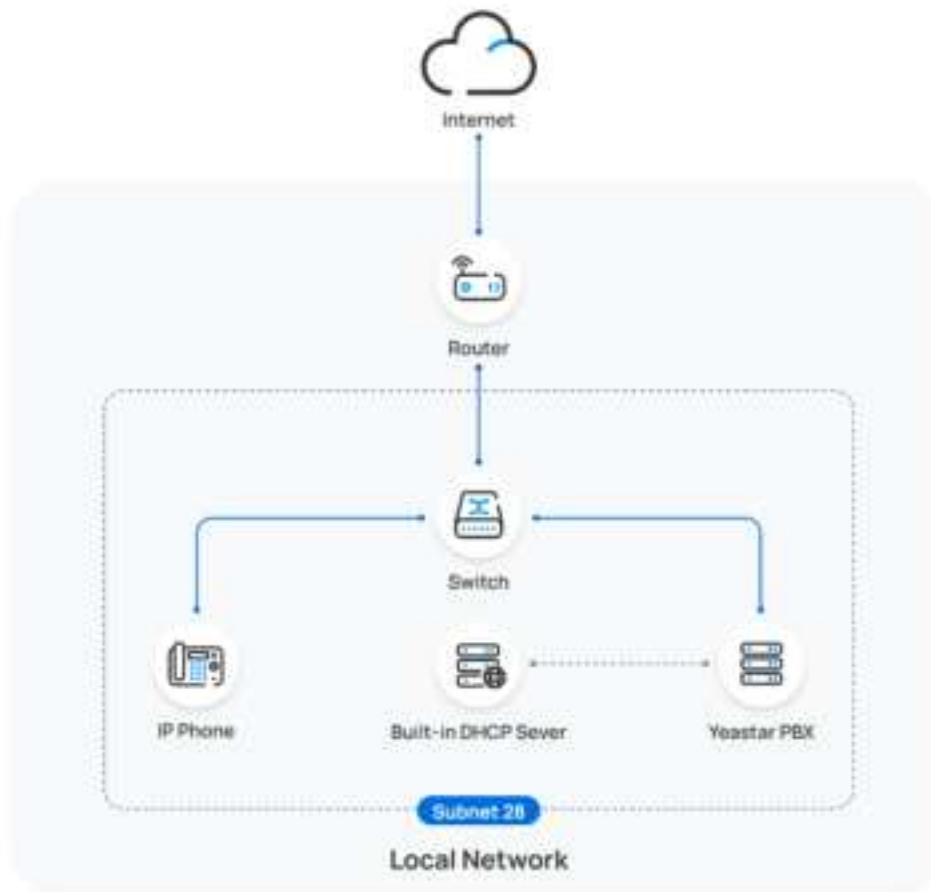
## Scenarios

The provisioning methods and operations vary depending on the network environment of **Poly 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 Poly IP phone using the PBX built-in DHCP server to deliver a PBX-provided provisioning link to the IP phone. In this way, the phone 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 Poly IP phone in the same subnet</a>.</p>
IP Phone and PBX are in DIFFERENT subnets (LAN)	<p>In this scenario, you can provision the Poly IP phone using DHCP option 66 of a third-party DHCP server to deliver a PBX-provided provisioning link to the IP phone. In this way, the phone can retrieve configurations from the PBX using the given link.</p> <p>For more information, see <a href="#">Auto provision a Poly IP phone in different subnets</a>.</p>
IP Phone and PBX are in DIFFERENT network	<p>In this scenario, you can provision the Poly IP phone with the PBX via <a href="#">RPS method</a>.</p> <p>For more information, see <a href="#">Auto provision a Poly IP phone in remote network</a>.</p>

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

In this example, the Poly IP phone and the Yeastar PBX (IP: 192.168.28.39) 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 Poly 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.

- **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. Add the Poly 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.

- **Vendor:** Select **Poly**.
  - **Model:** Select the phone model. In this example, select **VWX\_450**.
  - **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.



The 'Assign Extension' dialog box features a 'Select Extension' dropdown menu. The selected option is '3000-Lao 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**.

**Result****Note:**

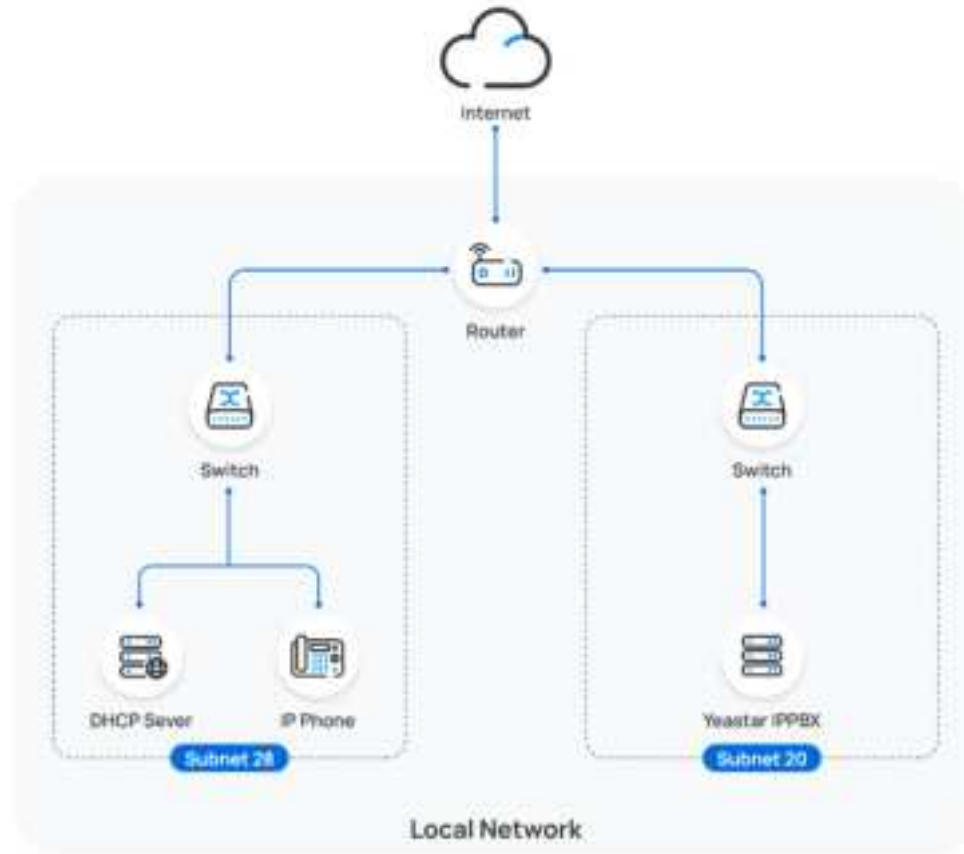
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Picked	Operations
	3000	Lao Ball	Poly	VVL380			  

## Auto provision a Poly IP phone in different subnets

In this example, the Poly 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 Poly 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 Poly 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 in the PBX web portal. The form has three main fields: 'Vendor' with a dropdown menu showing 'Poly', 'Model' with a dropdown menu showing 'VWX\_450', and 'MAC Address' with a text input field. Each field is preceded by a red asterisk indicating it is required.

- **Vendor:** Select **Poly**.
- **Model:** Select the phone model. In this example, select **VWX\_450**.
- **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**.

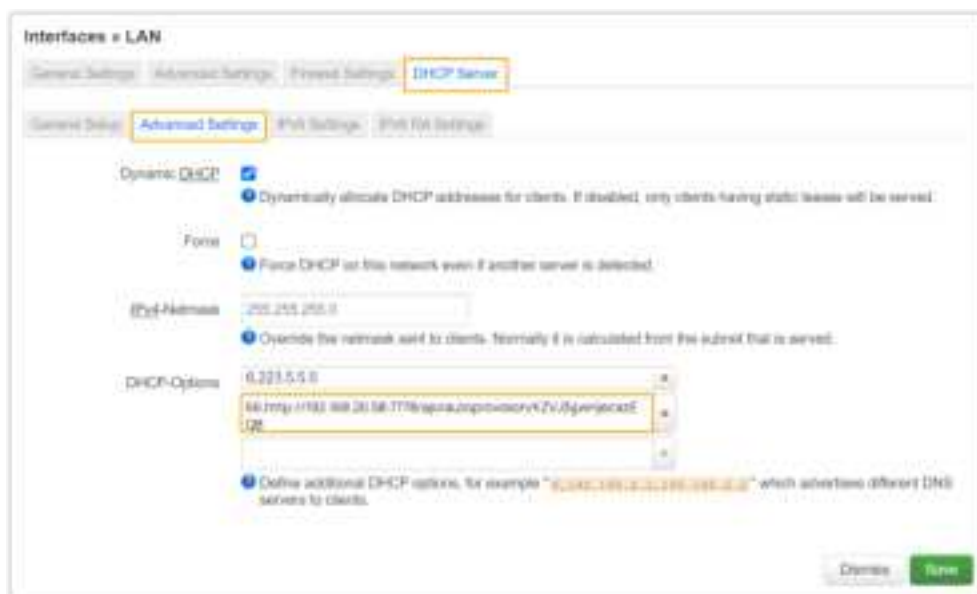
### Step 3. Configure DHCP option 66 on DHCP server

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.



2. On the DHCP server, set up option 66 with the provisioning link.  
In this example, the configuration is shown below.



### Result

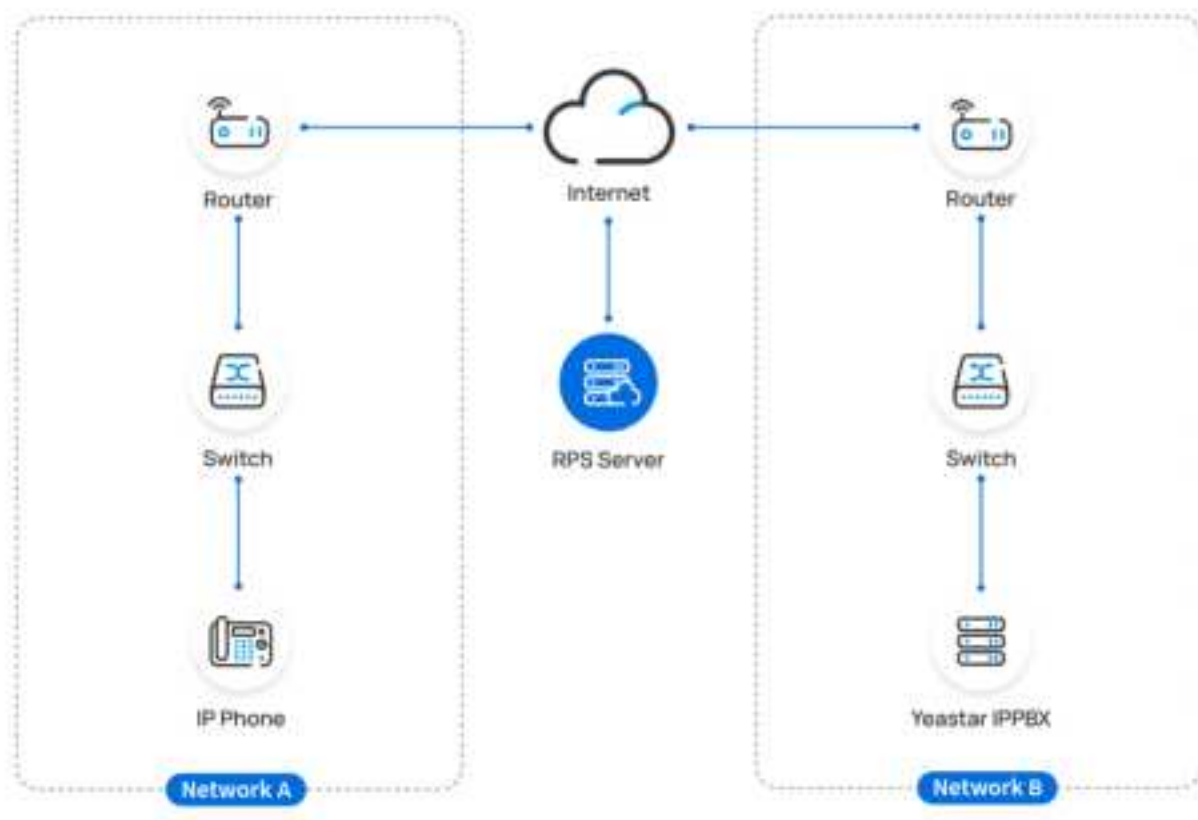
- After the IP phone is rebooted, it gets an IP address from the DHCP server, downloads the configurations from the PBX via the provisioning link, and applies the settings automatically.

- 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.

Status	Extension	Name	Vendor	Model	IP Address	Phone Passed	Operations
	1000	Joe Bell	Poly	VVX-690			




## Auto provision a Poly IP phone in remote network

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



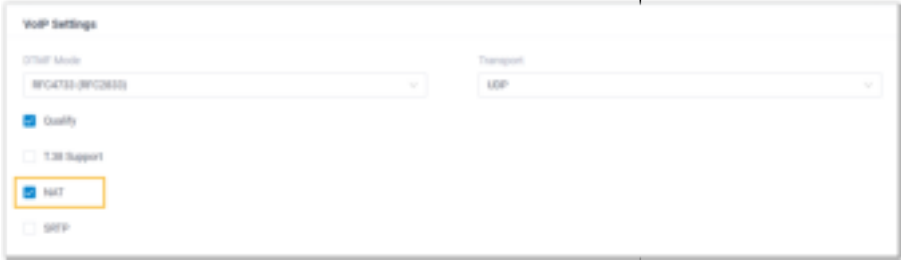




## Prerequisites

Yeastar P-Series PBX System supports to auto provision a Poly 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	<div><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></div> <div></div> <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> <div></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	<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></ul></div> <div><div> <b>Important:</b></div></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

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 section. It contains three fields: 'Vendor' with a dropdown menu showing 'Poly', 'Model' with a dropdown menu showing 'VWX\_450', and 'MAC Address' with an empty text input field.

- **Vendor:** Select **Poly**.
- **Model:** Select the phone model. In this example, select **VWX\_450**.
- **MAC Address:** Enter the MAC address of the IP phone.

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

Figure 19. **RPS using Yeastar FQDN**

The screenshot shows the 'Options' section. It includes a 'Template' dropdown menu, a 'Provisioning Method' dropdown menu set to 'RPS (Remote)', and a 'Provisioning Link' text field containing a long URL. There is also a 'Reset' button next to the provisioning link.

Figure 20. **RPS using Public IP Address / External Host domain name**

The screenshot shows the 'Options' section. It includes a 'Template' dropdown menu, a 'Provisioning Method' dropdown menu set to 'RPS (Remote)', and a 'Provisioning Link' text field containing a URL. There is also a 'Reset' button next to the provisioning link.

- **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 an extension to the IP phone.



The 'Assign Extension' dialog box features a 'Select Extension' label above a dropdown menu. The dropdown menu is open, showing '3000-Lao Ball' as the selected option.

**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**.

## 7. Manually reboot the IP phone.

**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 extension registration status on **Auto Provisioning > Phones** on the PBX web portal.

Status	Extension	Name	Vendor	Model	IP Address	Phone Passed	Operations
	3000	Lao Ball	Poly	VVX-350			  

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



This topic takes Poly VVX\_450 (firmware: 6.4.6.2494) as an example to introduce how to manually register an extension on a Poly IP phone.






## Supported devices

The Poly 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 **Poly IP phone** and **Yeastar PBX**.

Network Environment		Setting
Local Network	Register extension in the same subnet	/
	Register extension in different subnets	<div>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>).</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>







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> 


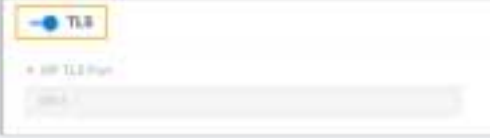


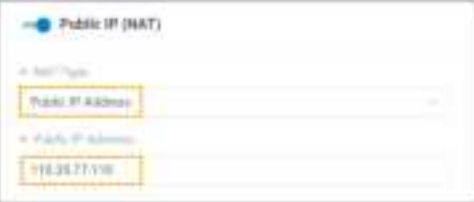

## Procedure

- [Step 1. Gather registration information on Yeastar PBX](#)
- [Step 2. Register extension on Poly 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> <div></div>
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></div> <div><div></div><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></div></div></div>

Information	Instruction
	<div></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></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></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></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></div> <div></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><div><div>HTTP</div><div></div></div><div><div>SIP</div><div></div></div><div><div>SIP UDP</div><div></div></div><div><div>SIP TLS</div><div></div></div></div><div><div>HTTP</div><div></div></div><div><div>SIP TCP</div><div></div></div><div><div>Outbound SIP Port</div><div></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><div>Features</div><div><div>SIP Access</div><div>Remote Access</div></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><div>Status</div><div>Enabled</div></div><div><div>Remote Access Service Port-SIP UDP/TCP</div><div>5060</div></div><div><div>Remote Access Service Port-SIP TLS</div><div>5061</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></div></div>

Step 2. Register extension on Poly IP phone

1. Enable the web server on the IP phone.
- a. Press  on the phone to access the **Main Menu**.


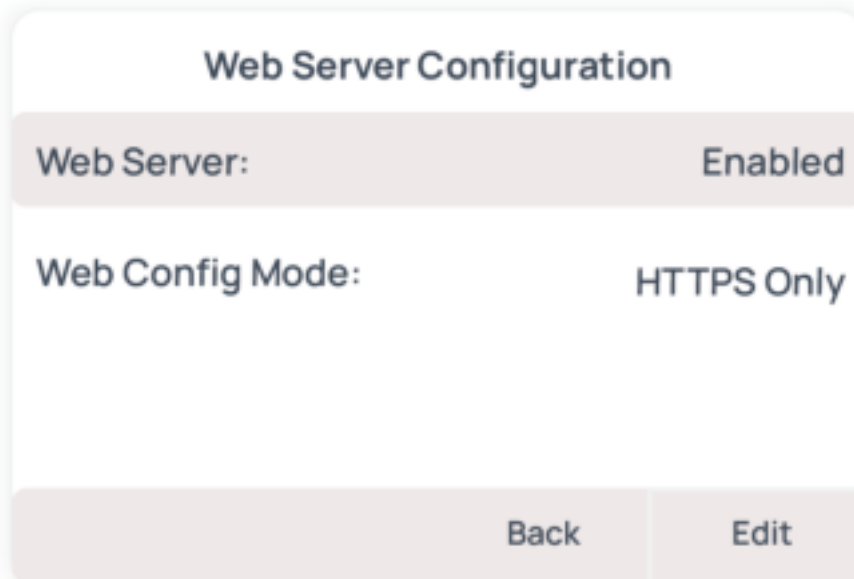
b. Go to **Settings > Advanced**.



- c. In the **Enter Password** field, enter the administrator password, then press **Enter**.

In this example, enter the default administrator password 456.

- d. Go to **Administration Settings > Web Server Configuration**, and complete the following settings.

The image shows a screenshot of the 'Web Server Configuration' screen on a Poly IP phone. At the top is the Poly logo. Below it, the title 'Web Server Configuration' is centered. The screen displays two settings: 'Web Server:' set to 'Enabled' and 'Web Config Mode:' set to 'HTTPS Only'. At the bottom, there are two buttons: 'Back' and 'Edit'.

- **Web Server:** Select **Enabled**.
- **Web Config Mode:** Select the protocol according to your network requirements.



**Note:**

If you select **HTTPS Only**, you need to add a prefix `https://` to the beginning of the IP address when accessing the phone's web interface.

- e. Press the **Back** button, and select **Save Config**.

The phone reboots automatically. After that, you can access the web interface of the phone.

2. Log in to the web interface of the Poly IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
- b. Log in to your phone account.

In this example, select the **Admin** account and enter the default administrator password 456.

- c. Click **Submit**.
3. At the top navigation bar, go to **Settings > Lines**.
4. Select a Line and complete the following settings.
  - a. In the **Identification** section, enter the basic information of the extension.



- **Address:** Enter the extension number.
- **Label:** Enter the name associated with the account, which will be displayed on the phone screen.

- b. In the **Authentication** section, enter the registration information of the extension.



- **User ID:** Enter the registration name of the extension.
- **Password:** Enter the registration password of the extension.


- c. In the **Server 1** section, enter the PBX information.



- **Special Interop:** Select **Standard**.
- **Address:** 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.

5. At the bottom of the webpage, click **Save**.

## Result

The extension is registered successfully. You can see  displayed at the extension account on the phone screen.

# Wildix

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

This topic takes Wildix WP480R3 (firmware: 63.145.10.168) as an example to describe how to auto provision Wildix IP phones with Yeastar P-Series PBX System.

### Requirements

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

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
WP410R2	50.145.6.169 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
WP480R2	55.145.6.111 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
WP480R3	63.145.10.168 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
WP480R4	65.145.6.38 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
WP490R2	59.145.6.148 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
WP490R3	67.145.8.107 or later	37.15.0.22 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>

### Scenarios

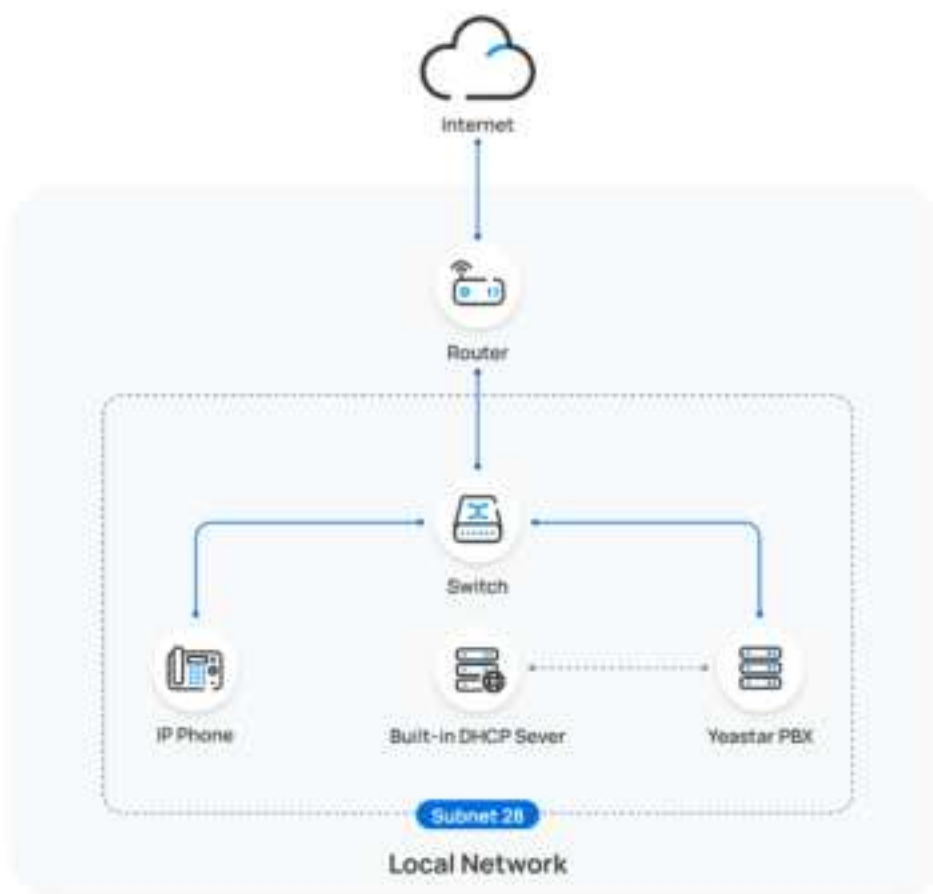
Yeastar P-Series PBX System supports to auto provision Wildix IP phone via [DHCP method](#) in the local network. The provisioning operations vary depending on the network environment of **Wildix IP phone** and **Yeastar PBX**, as the following table shows.

Scenario	Description
IP Phone and PBX are in the SAME subnet	In this scenario, you can provision the Wildix IP phone using the PBX built-in DHCP server to deliver a PBX-provided provisioning link to the IP phone. In this way, the phone can retrieve configurations from the PBX using the given link.

Scenario	Description
	<p><b>Note:</b></p> <p>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.</p> <p>For more information, see <a href="#">Auto provision a Wildix IP phone in the same subnet</a>.</p>
IP Phone and PBX are in DIFFERENT subnets	<p>In this scenario, you can provision the Wildix IP phone using DHCP option 66 of a third-party DHCP server to deliver a PBX-provided provisioning link to the IP phone. In this way, the phone can retrieve configurations from the PBX using the given link.</p> <p>For more information, see <a href="#">Auto provision a Wildix IP phone in different subnets</a>.</p>

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

In this example, the Wildix IP phone and the Yeastar PBX (IP: 192.168.28.39) 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 Wildix 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.

- **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.

A screenshot of a web interface showing a 'Status' label above a text box containing a green dot icon followed by the word 'Running'.

## Step 2. Add the Wildix 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 a web form titled 'IP Phone'. It contains three fields: 'Vendor' with a dropdown menu showing 'Wildix', 'Model' with a dropdown menu showing 'WP480R3', and 'MAC Address' with an empty text input field.

- **Vendor:** Select **Wildix**.
  - **Model:** Select the phone model. In this example, select **WP480R3**.
  - **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**.



## Result



### Note:

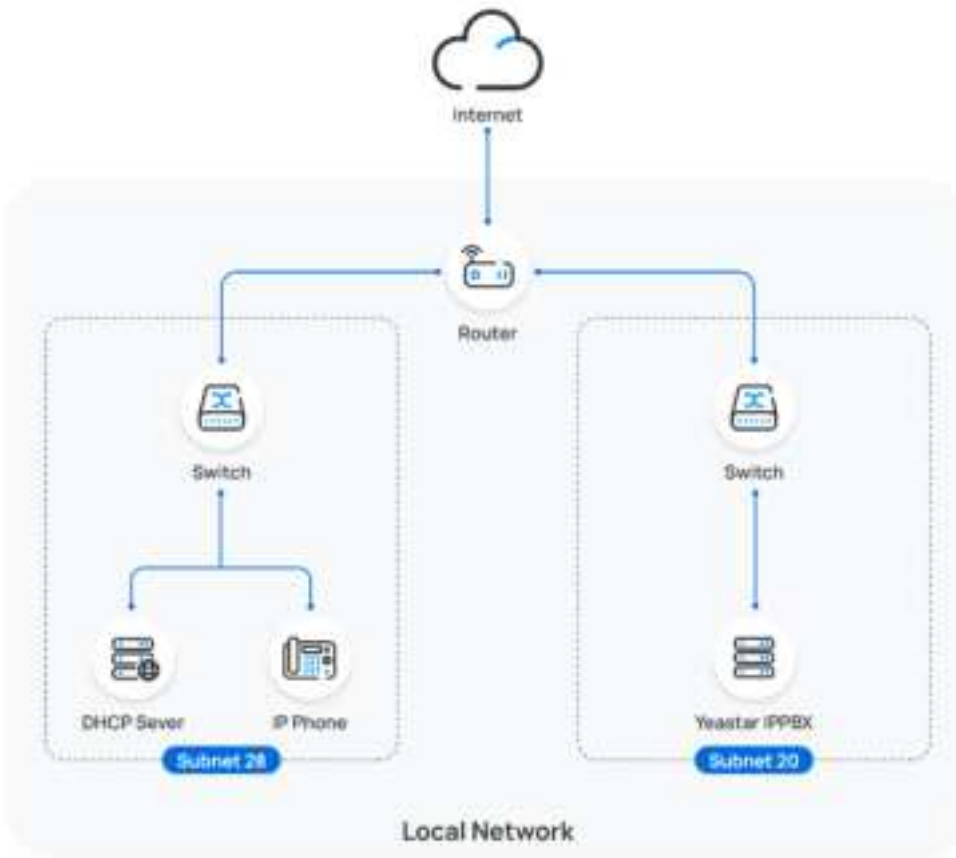
Some IP phones will reboot automatically. If not, you need to manually reboot the phone to make the configurations take effect.

- After the 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.

State	Extension	Name	Vendor	Model	IP Address	Phone Status	Operations
	200	Joe Bell	Wildix	WP10002	192.168.20.58	Online	

## Auto provision a Wildix IP phone in different subnets

In this example, the Wildix 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 Wildix 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 Wildix 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' with a dropdown menu showing 'Wildix', 'Model' with a dropdown menu showing 'WP480R3', and 'MAC Address' with an empty text input field. Each field has a red asterisk indicating it is required.

- **Vendor:** Select **Wildix**.
  - **Model:** Select the phone model. In this example, select **WP480R3**.
  - **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:**

☐ Terminate  
☐ Kill  
☐ Kill and wait for completion  
☐ Kill and wait for completion and log

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

In this example, the configuration is shown below.

The screenshot shows the Mikrotik WinBox interface for configuring a DHCP server. The top navigation bar includes tabs for General Settings, Advanced Settings, Firewall Settings, and DHCP Server. The DHCP Server tab is selected. Below this, there are sub-tabs for General Settings, Advanced Settings, IPsec Settings, and IPsec Policy Settings. The Advanced Settings tab is active.

The configuration options visible include:

- Dynamic DHCP:** A checkbox that is checked. Below it, a note states: "Dynamically allocate DHCP addresses for clients. If disabled, only clients having static leases will be served."
- Force:** An unchecked checkbox. Below it, a note states: "Force DHCP on this network even if another server is detected."
- Pool Address:** A text field containing "192.168.0.0". Below it, a note states: "Overrides the network used to clients. Normally it is calculated from the subnet that is served."
- DHCP-Options:** A text area containing "0.223.5.5.0" and "ddns-update-interval=3600". Below it, a note states: "Define additional DHCP options, for example \"0.223.5.5.0=ddns-update-interval=3600\" which advertises different DNS servers to clients."

At the bottom right, there are two buttons: "Create" and "Save".

## 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.

State	Extension	Name	Vendor	Model	IP Address	Phone Name	Operation
	300	Joe Bell	Wildix	WP480R3		30000000	

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

This topic takes Wildix WP480R3 (firmware: 63.145.10.168) as an example to introduce how to manually register an extension on a Wildix IP phone.

## Supported devices






The Wildix 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 **Wildix 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> ).
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>




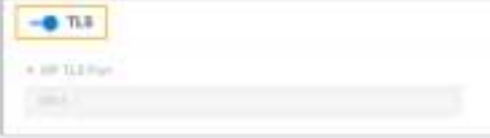


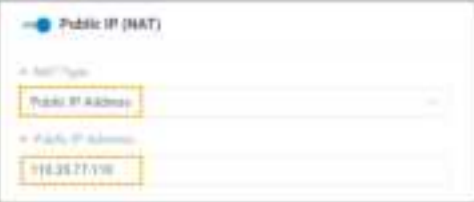

Network Environment	Setting
Register extension using Public IP address / External Host domain name	 <ul style="list-style-type: none"> <li>• Configure PBX network for remote access <a href="#">by a public IP address</a> or <a href="#">by an external host domain name</a>.</li> <li>• Set up the extension 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 Wildix IP phone](#)





Information	Instruction
	<div></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></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></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></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></div> <div></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><div>HT SIP</div><div></div><div>SIP UDP</div><div></div><div>SIP TLS</div><div></div></div><div><div>HT SIP</div><div></div><div>SIP TCP</div><div></div><div>Outbound SIP Port</div><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>Status</div><div>Enabled</div><div>Remote Access Service Port SIP UDP/TCP</div><div>5060</div><div>Remote Access Service Port SIP TLS</div><div>5061</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>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>

Step 2. Register extension on Wildix IP phone

- 1. Log in to the web interface of the Wildix IP phone.



- a. In the browser's address bar, enter the IP address of the IP phone.
  - b. Enter the username and the associated password.  
 In this example, enter the default username `admin` and password `admin`.
  - c. Click **Login**.
2. At the left navigation bar, go to **Account > Basic**, then complete the following settings.
    - a. In the **SIP Account** section, configure an account.



- **Account:** Select an idle account.
- **Account Active:** Select **Enable** to activate the account.

- **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.
- **User Name:** Enter the extension number.
- **Password:** Enter the registration password of the extension.

b. In the **SIP Server 1** section, enter the PBX information.

SIP Server 1		
Server IP	192.168.28.39	Port 5060
Registration Period	1800	(30~65535s)

- **Server IP:** Enter the IP address / domain name of the PBX server.
- **Port:** Enter the SIP registration port.

c. In the **Transport Type** section, select the transport protocol of the extension.

Transport Type	
Transport Type	UDP

3. At the bottom of the page, click **Submit**.

## Result

The extension is registered successfully. You can check the registration status on **SIP Account > Status**.

Account-Basic	
SIP Account	
Status	Registered
Account	Account 3
Account Active	Enabled
Display Label	Leo Ball
Display Name	
Register Name	birKhcOMdW
User Name	3000
Password	*****

# Huawei

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

This topic takes HUAWEI eSpace 8950 as an example to describe how to auto provision Huawei IP phone with Yeastar P-Series PBX System.

### Requirements

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

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
eSpace 7910	V200R003C30SPCf00 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
eSpace 7950	V200R003C00SPCs00 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
IP Phone 7920	V600R019C10SPC200 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
IP Phone 7960	V600R019C10SPC202 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
eSpace 8950	V200R003C00SPCg00 B015 or later	37.16.0.25 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
eSpace 8950HK	V200R003C30SPCh20 or later	37.17.0.17 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>

### Prerequisites






- Set up a DHCP server in the same subnet as the IP phone to assign it an IP address.


**Note:**

Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.






- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.

- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Make sure that you have completed the corresponding settings shown below according to the network environment of **Huawei IP phone** and **Yeastar PBX**.




Network Environment		Setting
Local Network	Provision an IP phone in the same subnet	<p>Set the registration name to the same as the extension number for the extension that will be assigned to the IP phone (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</p> <div>  <b>Important:</b>            Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.         </div> 
	Provision an IP phone in different subnets	<ul style="list-style-type: none"> <li>◦ Make sure that the two subnets can communicate with each other.</li> <li>◦ Complete the following settings for the extension to be assigned to the IP phone:               <ul style="list-style-type: none"> <li>▪ Set the registration name to the same as the extension number for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</li> </ul> </li> </ul> <div>  <b>Important:</b>            Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.         </div>

Network Environment		Setting
		<div><div><div>Extension Information</div><div><div>Extension Number</div><div>9000</div></div><div><div>Registration Name</div><div>9000</div></div></div><div><div>Display ID</div><div>9000</div></div><div><div>Registration Password</div><div></div></div></div> <div><div>Trunk &gt; Extension &gt;  &gt; Security &gt; SIP Security &gt; Allow Remote Registration</div></div> <div><div>SIP Security</div><div><div>Allow Remote Registration</div></div></div>

- Enable the Remote Registration feature for the extension (Path: **Extension and Trunk > Extension >  > Security > SIP Security > Allow Remote Registration**)

Network Environment		Setting	
			
Remotely provision an IP phone 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>◦ Complete the following settings for the extension to be assigned to the IP phone:<ul style="list-style-type: none"><li>▪ Set the registration name to the same as the extension number for the extension (Path: <b>Extension and Trunk &gt; Extension &gt;  &gt; User &gt; Extension Information</b>).</li></ul></li></ul>	<div><div> <b>Important:</b> Due to the IP phone's limitation, the extension's <b>Registration Name</b> must be the same as the <b>Extension Number</b>; otherwise, the registration will FAIL.</div></div>	
		<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>	



Network Environment	Setting
	 <ul style="list-style-type: none"> <li>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>)</li> </ul> 

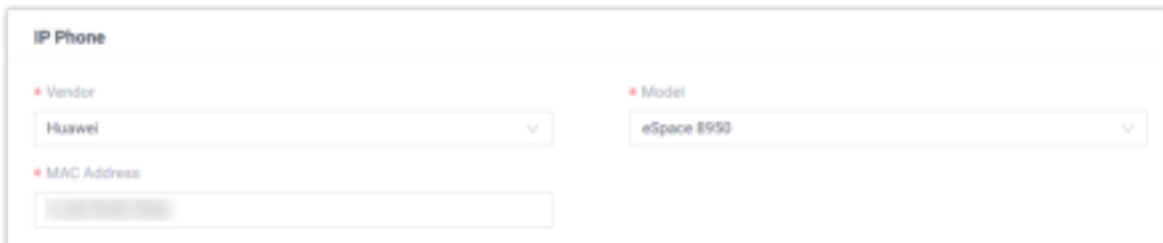
## Procedure

- [Step 1. Add the Huawei IP phone on PBX](#)
- [Step 2. Configure DHCP option 246 on DHCP server](#)

### Step 1. Add the Huawei 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.



**IP Phone**

• Vendor:

• Model:

• MAC Address:



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

## Step 2. Configure DHCP option 246 on DHCP server

Configure DHCP option 246 to point to the PBX. This allows the Avaya IP phone to automatically retrieve its configuration files from the PBX.

The following instructions take Tftpd64 DHCP server as an example to show how to configure the option 246.

1. On the running [Tftpd64](#) software, go to **Settings > DHCP > DHCP Options**.
2. Add option 246 and define the location of the configuration files.

Tftpd64: Settings

GLOBAL | TFTP | DHCP | SYSLOG | DNS |

DHCP Pool definition

IP pool start address: 192.168.28.190

Size of pool: 16

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: 246 | cfg.address=https://yeastardocs.ras.yeast

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

- a. In the **Additional Option** field, enter 246.
- b. In the string value field, enter the [provisioning link obtained from the PBX](#) in the following format:

```
cfg.address={provisioning_link}/
```



### Important:

The slash / at the end of the string is REQUIRED. Omitting this slash will cause the provisioning to fail.

For example:

```
cfg.address=https://yeastardocs.ras.yeastar.com:443/api/autoprov  
ision/lgjnRL8CkoYFXWJd/
```

3. Click **OK** to save the settings.

## Results

- After rebooting the IP phone, 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.



The screenshot shows a table with the following columns: Status, Extension, Name, Vendor, Model, IP Address, Phone Password, and Operations. A single row is displayed with the following data: Status is 'Registered' (indicated by a green checkmark icon), Extension is '3000', Name is 'Leo Bell', Vendor is 'Huawei', Model is 'eSpace 3550', IP Address is '192.168.1.100', Phone Password is '12345678', and the Operations column contains icons for refresh, delete, and other actions.

Status	Extension	Name	Vendor	Model	IP Address	Phone Password	Operations
Registered	3000	Leo Bell	Huawei	eSpace 3550	192.168.1.100	12345678	  

# NEC

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

This topic takes NEC DT900 ITK-12D-1P (firmware: 05.03.04.03 ) as an example to describe how to auto provision NEC IP phone with Yeastar P-Series PBX System.

### Requirements

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

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
DT700 ITL-2E-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-6DE-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-12D-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-24D-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-8LD-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-8LDE-1P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-12DG-3P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT700 ITL-12CG-3P	03.01.64.00 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT820 ITY-6D-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT820 ITY-8LDX-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>
DT820 ITY-8LCGX-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"><li>• DHCP</li><li>• Provision Link</li></ul>

Model	Phone Requirement	PBX Requirement	Supported Auto Provisioning Method
DT820 ITY-6DG-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT820 ITY-32LDG-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT820 ITY-32LCG-1P	04.04.28.14 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-6D-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-12D-1P	05.03.04.03 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-8LCX-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-8TCGX-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-6DG-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-12DG-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-32LCG-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900 ITK-32TCG-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900S ITK-6DGS-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900S ITK-32LCGS-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>
DT900S ITK-32TCGS-1P	05.03.04.99 or later	37.17.0.53 or later	<ul style="list-style-type: none"> <li>• DHCP</li> <li>• Provision Link</li> </ul>

## Scenarios

The provisioning methods and operations vary depending on the network environment of **NEC IP Phone** and **Yeastar PBX**.

- [Auto provision an NEC IP phone in the local network](#)
- [Auto provision an NEC IP phone in a remote network](#)

## Auto provision an NEC IP phone in the local network

In this scenario, you can provision the NEC IP phone by using a third-party DHCP server to deliver a PBX-provided provisioning link to the IP phone. This allows the phone to retrieve configurations from the PBX using the given link.


### Prerequisites

- Set up a DHCP server in the same subnet as the IP phone to assign it an IP address.



#### Note:

Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.

- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- If the IP phone and PBX are located in different subnets, make sure the following conditions are met:
  - The two subnets can communicate with each other.
  - Enable the Remote Registration feature for the extension to be assigned to the IP phone (Path: **Extension and Trunk > Extension >  > Security > SIP Security > Allow Remote Registration**).



### Procedure

- [Step 1. Add the NEC IP phone on PBX](#)
- [Step 2. Configure DHCP option 66 on DHCP server](#)

#### Step 1. Add the NEC 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 **NEC**.
  - **Model:** Select the phone model. In this example, select **DT900 ITK-12D-1P**.
  - **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.

**Note:**

Note down the provisioning link, as you will use it later.

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

The screenshot shows a web interface titled 'Assign Extension'. Below the title is a label 'Select Extension' followed by a dropdown menu. The dropdown menu is open, showing a list of extensions, with '3000-Lao Ball' selected and highlighted.

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

## Step 2. Configure DHCP option 66 on DHCP server

On the DHCP server, configure DHCP option 66 with the [provisioning link obtained from the PBX](#).

The following instructions take Tftpd64 DHCP server as an example to show how to configure the option 66.

1. On the running [Tftpd64](#) software, go to **Settings > DHCP > DHCP Options**.
2. Add option 66 and define the location of the configuration files.

The screenshot shows the 'Tftp64: Settings' dialog box with the 'DHCP' tab selected. The 'DHCP Pool definition' section includes fields for 'IP pool start address' (192.168.28.190), 'Size of pool' (6), 'Lease (minutes)' (2880), and 'Boot File'. The 'DHCP Options' section includes fields for '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)', and 'Domain Name (15)'. The 'Additional Option' field is highlighted with a yellow box, showing '66' and the URL 'http://192.168.28.39:7778/api/autoprovi'. The 'DHCP Settings' section includes checkboxes for 'Ping address before assignation' (checked), 'Persistent leases' (checked), 'Double answer if relay detected' (unchecked), and 'Bind DHCP to this address' (checked) with a dropdown menu showing '192.168.28.25'. At the bottom are buttons for 'OK', 'Default', 'Help', and 'Cancel'.

- a. In the **Additional Option** field, enter 66.
  - b. In the string value field, enter the [provisioning link obtained from the PBX](#).
3. Click **OK** to save the settings.

## Results

- After rebooting the IP phone, 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.



## Auto provision an NEC IP phone in a remote network

In this scenario, you can use the public IP address / external host domain name of the PBX to provision an IP phone. By configuring a third-party DHCP server to deliver a PBX-provided provisioning link to the IP phone, the phone can retrieve configurations from the PBX using the given link.



### Important:

Due to NEC phone limitations, if using an **external host domain name**, the length of the domain name must NOT exceed **17** characters (excluding the prefix `https://`). Otherwise, the provisioning will fail.


## Prerequisites

- Set up a DHCP server in the same subnet as the IP phone to assign it an IP address.




### Note:

Make sure that there is only one DHCP server running in the subnet, or the IP phone would fail to obtain an IP address.

- RESET the IP phone if it is previously used.
- Gather information of IP phone, including Vendor, Model, and MAC address.
- Make sure that you have [downloaded the template](#) for the desired phone model (Path: **Auto Provisioning > Resource Repository > Default Templates**).
- Make sure that you have completed the corresponding settings on PBX:
  - Configure PBX network for remote access [by a public IP address](#) or [by an external host domain name](#).
  - Complete the following settings for the extension to be assigned to the IP phone:
    - Enable NAT for the extension (Path: **Extension and Trunk > Extension >  > Advanced > VoIP Settings > NAT**).



- Enable the Remote Registration feature for the extension  
(Path: **Extension and Trunk > Extension >  > Security > SIP Security > Allow Remote Registration**).



## Procedure

- [Step 1. Add the NEC IP phone on PBX](#)
- [Step 2. Configure DHCP options on DHCP server](#)

### Step 1. Add the NEC 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 **NEC**.
- **Model:** Select the phone model. In this example, select **DT900 ITK-12D-1P**.
- **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 **Provision Link (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.



**Note:**

Note down the provisioning link, as you will use it later.

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

## Step 2. Configure DHCP options on DHCP server

On the DHCP server, configure DHCP option 42 and option 66.

The following instructions take Tftpd64 DHCP server as an example to show how to configure the options.

1. On the running [Tftpd64](#) software, go to **Settings > DHCP > DHCP Options**.
2. Configure the following DHCP options.

Tftp64: Settings

GLOBAL | TFTP | DHCP | SYSLOG | DNS

DHCP Pool definition

IP pool start address: 192.168.28.190

Size of pool: 6

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): 192.168.28.39

SIP server (Opt 120):

Domain Name (15):

Additional Option: 66 https://110.35.77.110:18207/api/autoproc

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

- **NTP server (Opt 42):** Enter the IP address of an NTP server.
- **Additional Option:** Enter 66, then enter the [provisioning link obtained from the PBX](https://110.35.77.110:18207/api/autoproc).

3. Click **OK** to save the settings.

## Results

- After rebooting the IP phone, 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.



Status	Extension	Name	Version	Model	IP Address	Phone Password	Template	Network Address	MAC	Operations
	2000	Lee Bell	100	CP120-110 730-00	---	*****	1000-000001	---	00:00:00:00:00:00	   