

OVERVIEW & REQUIREMENTS

This guide walks through configuring the **Cisco 7821** IP phone to register with **the PBX platform** — from physical installation through manual configuration, auto provisioning (DHCP, TFTP, HTTP), and registration verification.



Cisco 7821 IP phone

CISCO 7821 QUICK CODES

From the phone, press the **Settings** / menu button, then type:

- **61** — Show software (firmware) version
- **62** — Show the phone's IP address
- **55** — Reset to factory settings

BEFORE YOU BEGIN

- **Phone model** — Confirm the exact model printed on the back of the phone. Similar models can have significantly different setup procedures.
- **Firmware** — Version **11.0.1**
- **DHCP** — A fully configured, operational DHCP server
- **PBX version** — Confirm your release under **Settings > About**

CHECK PHONE FIRMWARE

- 1 Press the menu button on the phone
- 2 Type **61** — the software version is displayed
- 3 Confirm it shows version **11.0.1**

CHECK PBX VERSION

- 1 Log in to the PBX platform
- 2 Navigate to **Settings > About**

The top of the About page shows a code similar to:

```
Edition: Business, Release: 4.1.3 (041373f),  
Running: 1.4.24-gc-75ee203
```

Release denotes the current version of your PBX.

INSTALLATION

CONNECT NETWORK & POWER

- 1 Connect the DC plug on the power adapter to the DC port on the phone, and the other end into an electrical outlet
- 2 Connect an Ethernet cable between the **Internet** port on the phone and a network port on your router or switch to access the LAN

FIND THE PHONE'S IP ADDRESS

- 1 Press the **Settings** button
- 2 Type **62**
- 3 The IP address is displayed on the phone

TWO WAYS TO REGISTER

- **Manual configuration** — set line credentials directly in the phone's web interface (page 3)
- **Auto provisioning** — the phone pulls its configuration from the PBX via DHCP, TFTP, or HTTP (pages 4–5)

RESET TO FACTORY SETTINGS

Not required for brand-new, out-of-the-box phones — but a **must** for any phone that has been used before.

- 1 Press the **Settings** button
- 2 Type **55**
- 3 Confirm with **OK** to factory reset the phone
- 4 Allow time for the phone to reboot

WARNING: Do not unplug or remove power while the phone is updating firmware or configuration.

MANUAL CONFIGURATION

1 UAD SETTINGS

- 1 Browse to the PBX platform, e.g. `http://192.168.1.10`, and log in with your e-mail address and password
- 2 Navigate to **Settings > UAD**
- 3 Click the **Edit** icon for the Cisco 7821
- 4 Set **Status** = **Active**, **Auto provisioning** = **No**, **DHCP** = **Yes**
- 5 Click **Save**

UAD settings — manual configuration

2 CREATE THE EXTENSION

- 1 **Extensions > Add Extension**
- 2 Select the **Cisco 7821** phone model in the **UAD** select box
- 3 Select Location: **Local** (LAN) or **Remote** (WAN / Internet)
- 4 Click **Next step**

Creating the extension

EXTENSION FIELDS

- **Name** — e.g. John Smith
- **E-mail** — receives all system notifications, e.g. john.smith@yourdomain.com
- **Extension (optional)** — auto-generated sequential number, e.g. 1003
- **Secret (optional)** — auto-generated; do **not** change it to a simple value like "1234"
- **PIN (optional)** — auto-generated; grants access to voicemail and Online Self Care

Click **Save** — or **Save & E-mail** to send the account details to the extension's e-mail address.

3 REGISTER THE PHONE

- 1 Browse to the phone's IP, e.g. `http://192.168.1.22`
- 2 Click **Admin Login**, then **Advanced** (top right)
- 3 Click **Voice** in the main menu, then **Ext 1**
- 4 **Proxy** (Proxy and Registration) — the PBX hostname or IP, e.g. voip.yourdomain.com or 192.168.1.10
- 5 **User ID** (Subscriber Information) — the Extension number, e.g. 1003
- 6 **Password** — the extension Secret from the e-mail, e.g. _%Z4M3*Ts9y7
- 7 Scroll to **Dial Plan**, clear the field, and paste the value below
- 8 Click **Submit** and allow the phone to reboot

DIAL PLAN VALUE

```
(*x.|**x.|*xx|[3469]11|0|00|[2-9]xxxxxx|1xxx[2-9]xxxxxx|xxxxxxxxxxxxxx.)
```

AUTO PROVISIONING — DHCP & TFTP

1 UAD SETTINGS

- 1 Log in to the PBX platform and navigate to **Settings > UAD**
- 2 Click the **Edit** icon for the Cisco 7821
- 3 Set **Status** = **Active**, **Auto provisioning** = **Yes**, **DHCP** = **Yes**, then **Save**

UAD settings — auto provisioning

2 CREATE THE EXTENSION

- 1 **Extensions** > **Add Extension** > UAD = Cisco 7821, Location = Local or Remote > **Next step**

REQUIRED EXTENSION FIELDS

- **Name** — e.g. John Smith
- **E-mail** — e.g. john.smith@yourdomain.com
- **Auto Provisioning** — set to **Yes**
- **MAC Address** — from the back of the phone, e.g. 0002FDDFF1536

Click **Save**.

Creating the extension with auto provisioning

3A REGISTER VIA DHCP (OPTION 66)

- 1 Configure your DHCP router to use **option 66** to automatically hand devices the auto-provisioning URL (refer to your router documentation or network administrator)
- 2 On the phone's first boot — or a user-initiated reboot — the DHCP server tells the phone where to pick up its configuration file, and the phone registers automatically

3B REGISTER VIA TFTP

- 1 Browse to the phone's IP and click **Admin Login** > **Advanced**
- 2 Click **Voice** > **Provisioning**
- 3 In the **Profile Rule** field enter `tftp:// + hostname or IP + /$MA.cfg`
- 4 Click **Submit** and wait ~35 seconds — the phone may reboot and picks up its configuration file

TFTP PROFILE RULE EXAMPLES

- `tftp://voip.yourdomain.com/$MA.cfg`
- `tftp://10.1.70.150/$MA.cfg`

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HTTP PROVISIONING

REGISTER VIA HTTP

NOTE: The PBX must be configured for HTTP provisioning — the HTTP username and password must be set in the auto-provisioning section under

Settings > Servers/Tenants > Server/Tenant Name > Edit.

Contact your PBX administrator if these values have not been configured.

- 1 Browse to the phone's IP and click **Admin Login** > **Advanced**
- 2 Click **Voice** > **Provisioning**
- 3 In the **Profile Rule** field, enter one of the formats at right — replacing hostname or IP address with your PBX's values
- 4 Replace **username** and **password** with your server's HTTP username and password
- 5 Click **Submit** and wait ~35 seconds — the phone may reboot and picks up its configuration file during boot

HTTP PROFILE RULE FORMATS

- **HTTP (hostname)**

```
[--uid username --pwd password]http://voip.yourdomain.com/prov/$MA.cfg
```
- **HTTP (IP)**

```
[--uid username --pwd password]http://10.1.70.150/prov/$MA.cfg
```
- Replace **username** / **password** with your server's HTTP username and password

PROVISIONING SUMMARY

After a successful reboot with any of the three methods (DHCP, TFTP, or HTTP), the phone picks up its configuration file from the PBX and registers automatically.

If registration fails, verify:

- The UAD is set to **Active** with Auto provisioning = **Yes**
- The extension's **MAC address** matches the phone exactly
- The phone can reach the PBX on the network
- For HTTP: the server HTTP username and password are configured

The screenshot shows the 'Provisioning' tab in the PBX web interface. The 'Configuration Profile' section is active, showing various settings for HTTP provisioning. The 'Profile Rule' field is populated with the example format: `[--uid admin --pwd admin]http://10.1.70.150/prov/$MA.cfg`. Other settings include 'Provision Enable' set to 'Yes', 'Resync Random Delay' set to 0, 'Resync At Random Delay' set to 600, 'Resync Error Retry Delay' set to 20,30,60, 'Resync From SIP' set to 'Yes', 'Resync Trigger 1' and 'Resync Trigger 2' set to empty, 'Resync Fails On FNF' set to 'Yes', 'DHCP Option To Use' set to '66,160,159,150,60,43,125', and 'User Configurable Resync' set to 'Yes'.

HTTP profile rule