

Grandstream Networks, Inc.

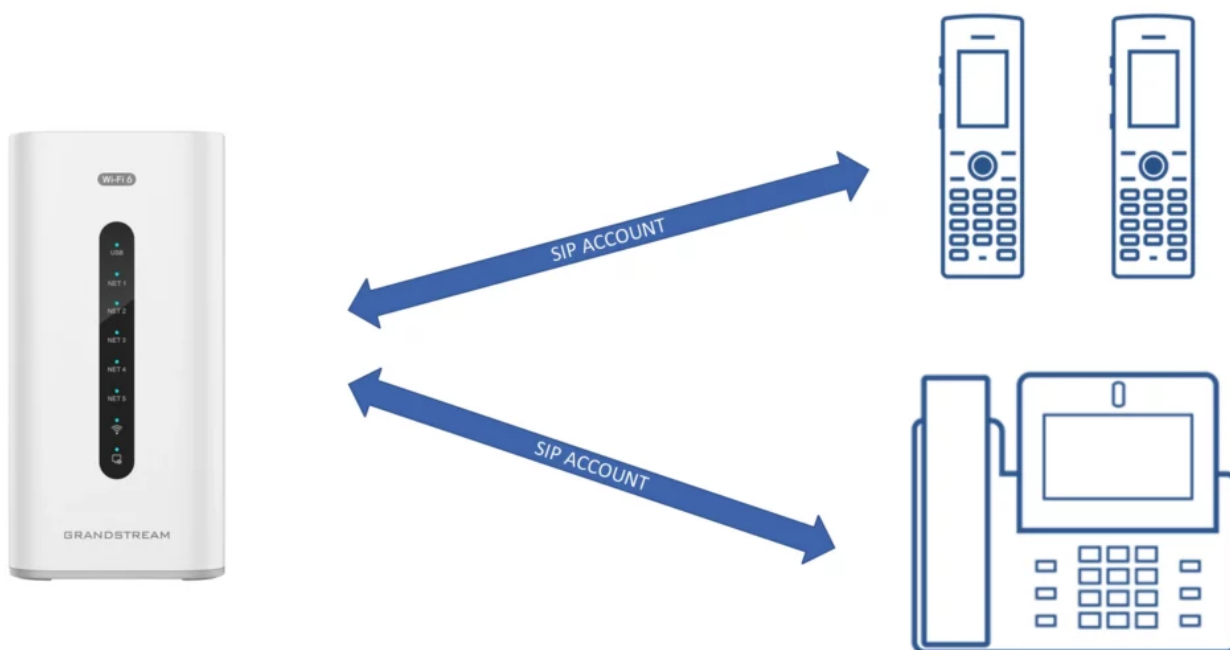
GCC Convergence Device - Fast Provisioning Guide



GCC Convergence Device - Fast Provisioning Guide

Introduction

Fast Provisioning is a feature available on the GCC6000 convergence devices, its main purpose is to facilitate the process of registering VoIP devices to the PBX module of the GCC6000 device, making it easier for administrators and system integrator to deploy SIP accounts to the desired installed endpoints, the process of pushing the account configuration from the GCC6000 device to the endpoints is straightforward. The below illustration describes the process.



GCC6000 Series Fast Provisioning

Prerequisites

Before starting the configuration, make sure the following conditions are met:

- The Grandstream VoIP devices and the GCC6000 unit are deployed under the same LAN, or the same VLAN.
- The GCC6000's PBX module is enabled.

Configuration Scenario

By default, 24 extensions are included for Fast Provisioning. If users upgrade the PBX plan, they can add up to 200 users.

Let's consider the following example:

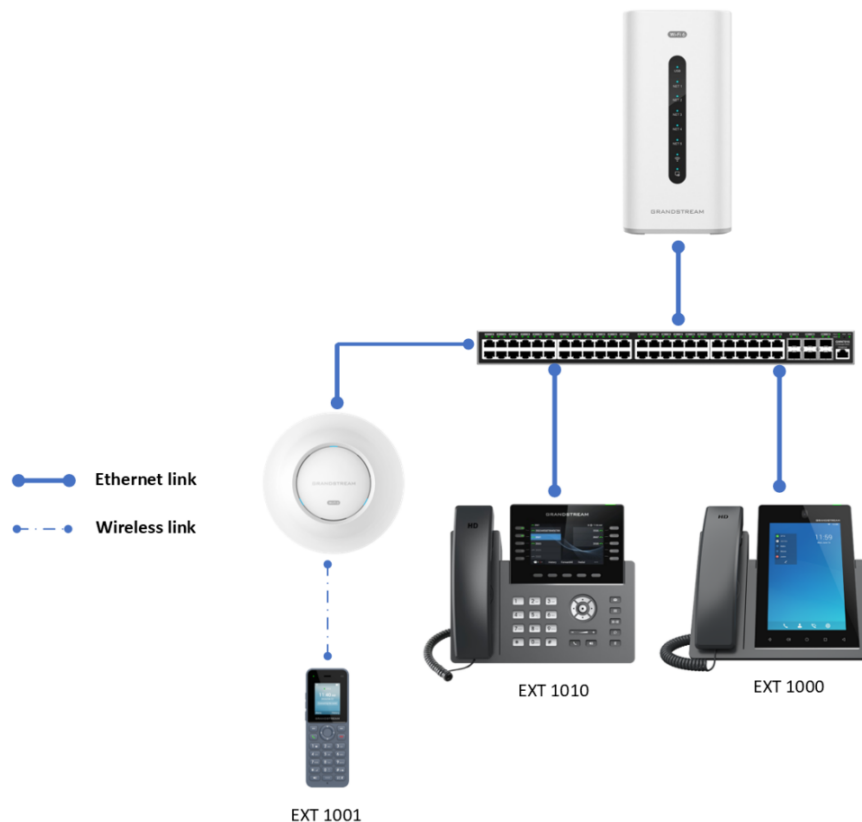
The GCC6000 administrator wants to deploy 10 extensions to his network, two of these extensions will be

used by a WP8x6 Wi-Fi phone, a WP856 mobile computing device, and a GXV34xx video phone, the rest will be used by other Grandstream VoIP devices such as the GRP26xx IP phones.

This can be done easily by following the below steps, we will split the configuration into three sections:

- [GCC6000 configuration](#)
- **WP816/WP826/WP836 configuration**
- [WP856 configuration](#)
- [GXV34xx configuration](#)
- [Initial Dial up Deployment](#)

Here is an illustration of the setup:



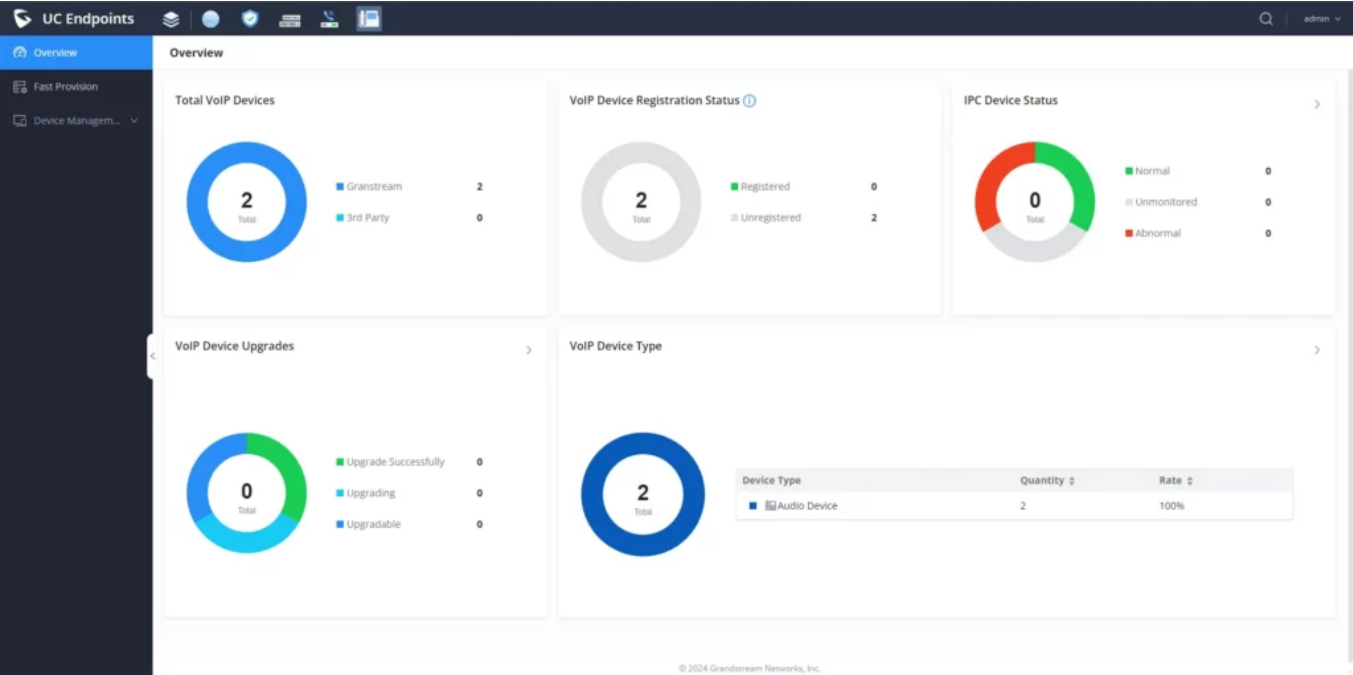
Set up

The GCC6010W model supports an embedded Access Point, and would not need an additional AP for the above setup.

GCC6000 Configuration

On the GCC6000, please perform the below steps:

1. Open the UC Endpoint Module of the GCC6000 device



UC Endpoints

2. Access to Fast Provisioning Tab

Fast Provision

⚠ When using Fast Provision, please ensure that DHCP options 66 and 141 are not enabled under the [\[Networking->LAN\]](#) page.

Sync DHCP Option Configuration ☐

Initial Dial-up Deployment ☒

Deployment List

Total: 11 ● Registered: 0 ● Unregistered: 11

Fast Provisioning

3. Depending on your preference:
Either add manually each extension and define its ID code.

Edit : 1011

Device Information

* Extension Number	1011
MAC Address	C074AD6A56D8
Profile Code	451211
Validity Period of Profile Code	Permanently Active Cancel
Profile Code Uses	☒ 3 ☐ Custom Cancel
Network Priority	Normal
Call Security Level	Normal
Call Voice Quality	Normal

Identity Information

Employee ID	1011
First Name	John
Last Name	Doe
Job Title	Engineer
Email	email@email.com

[Add Extension Manually](#)

Use a predefined Excel file to batch-create extensions and batch-generate their profile codes. Once created you can import the Excel file.

The template can be downloaded by clicking "Download Import Template" as shown below.

Fast Provision

ⓘ When using Fast Provision, please ensure that DHCP options 66 and 141 are not enabled under the [\[Networking->LAN\]](#) page.

Sync DHCP Option Configuration ☐

Initial Dial-up Deployment ☒

[Cancel](#) [Save](#)

Deployment List

Total: 10 ● Registered: 0 ● Unregistered: 10

[Import](#) [Add](#) [Delete](#) [Modify Levels](#) [Refresh](#) [Notification](#) [Export](#)

[All](#) [Extension Number / MAC Address...](#)

Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
Download Import Template					

[Import from template](#)

*Extension	Device MAC	Network Priority	Call Security Level	Voice Quality	Employee No	First Name	Last Name	Job Title	Mobile Number	Email	Profile Code	Profile Code Lifetime	Profile Code Use Limits
1000		General	General	General									3
1001													3
1002													3
1003													3
1004													3
1005													3
1006													3
1007													3
1008													3
1009													3

Excel file template

4. Once the extensions are added, they will be generated with a specific Profile code, each 6-digit code is mapped to an extension, this code will be used on the UC endpoints to automatically retrieve the SIP information and register the extension to the GCC6000's PBX module.

Fast Provision

When using Fast Provision, please ensure that DHCP options 66 and 141 are not enabled under the [\[Networking->LAN\]](#) page.

Sync DHCP Option Configuration ☐

Initial Dial-up Deployment ☒

Deployment List

Total: 10 Registered: 0 Unregistered: 10

All

☐	Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
☐	1000			128081	3 time(s) / Permanent		
☐	1001			414199	3 time(s) / Permanent		
☐	1002			215777	3 time(s) / Permanent		
☐	1003			107301	3 time(s) / Permanent		
☐	1004			118826	3 time(s) / Permanent		
☐	1005			104390	3 time(s) / Permanent		
☐	1006			261165	3 time(s) / Permanent		
☐	1007			187915	3 time(s) / Permanent		

Total: 10

Added Extensions

Once the extensions are created, they will be automatically added to the UCM module of the GCC6000 device.

Additional Fast Provisioning Parameters

Some additional parameters can be defined when manually adding an extension on the Fast provisioning app, or directly on the Excel file example, on the fast provisioning app, we can define the following:

- Device information:** In this section, we define the custom extension we would like to add, we can manually add the device's MAC address, and we can define Network Priority, Call Security level, and Call Voice Quality, for each parameter, three levels are available: Normal, Intermediate, and Advanced, and additionally, we can define the Profile code for the specific extension, The profile code defined can be set to be permanently active or expires after a certain period (1 day, 2 days, 7 days, 30 days, or Custom amount of days)

Add

Device Information

* Extension Number	1009
MAC Address	C074AD6A56D9
Profile Code	451210
Validity Period of Profile Code	Permanently Active
Profile Code Uses	☒ 3 ☐ Custom
Network Priority	Normal
Call Security Level	Normal
Call Voice Quality	Normal

Device Information

- **Identity Information:** In this section, you can define the user-specific information including Employee ID, First and Last name, Email, Mobile Number, Job Title.

Identity Information

Employee ID	1010
First Name	John
Last Name	Doe
Job Title	Engineer
Email	test@email.com
Mobile Number	+1 5555555555

Identity Information

Additional Fast Provisioning Operations

- **Delete:** This option is used to select and delete a specific extension, or extensions.

Deployment List

Total: 10 ● Registered: 0 ● Unregistered ⓘ: 10

Import ▾ Add Delete Modify Levels Refresh Notification Export

All ▾ Extension Number / MAC Address

Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
☒ ● 1000			128081	3 time(s) / Permanent	✉	

Delete Extension

- **Refresh:** This option allows the users to automatically change the 6-digit profile code for a specific extension into a newly generated code.

Deployment List

Total: 10 ● Registered: 0 ● Unregistered ⓘ: 10

Import ▾ Add Delete Modify Levels Refresh Notification Export

All ▾ Extension Number / MAC Address

Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
☒ ● 1000			128081	3 time(s) / Permanent	✉	

- **Modify Levels:** This option allows the user to change the extension's network priority, call security level, and voice call quality, these settings correlate directly with the QoS configuration on the router module.

Deployment List

Total: 10 ● Registered: 0 ● Unregistered ⓘ: 10

Import ▾ Add Delete Modify Levels Refresh Notification Export

Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
☒ ● 1000			128081	3 time(s) / Permanent	✉	
☐ ● 1001				3 time(s) / Permanent	✉	
☐ ● 1002				3 time(s) / Permanent	✉	
☐ ● 1003			107301	3 time(s) / Permanent	✉	

Modify Levels

Network Priority: Normal ▾

Call Security Level: Intermediate ▾

Call Voice Quality: Advanced ▾

Cancel OK

Modify Network levels

- **Notification:** Using this option, the administrator can send the ID profile code for a specific extension related to a specific user, he can be notified through SMS by using an SMS carrier service such as Twilio or Amazon, or through email by defining the corresponding email settings.

Deployment List

Total: 10 ● Registered: 0 ● Unregistered ⓘ: 10

Import ▾ Add Delete Modify Levels Refresh Notification Export

Extension	Full Name	MAC Address	ID Code	ID Code Uses / Validity	Notification Status	Options
☐ ● 1000			931258	3 time(s) / Permanent	✉	

Sent successfully, click to send again

Sending SMS or Email notification

[GCC6010W]Your Profile Code: 931258

[Tips]

If your VoIP device has a display screen, please enter your **profile code** on the device home page
 If your VoIP device does not have a display screen, please dial the profile code **"*931258#"** to register your device

You have 3 times left to use this code

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Email Example

- **Export:** The administrator can export all extension information into one Excel file by clicking the Export option.

Deployment List

Total: 10 ● Registered: 0 ● Unregistered: 10

Import Add Delete Modify Levels Refresh Notification Export							All	Extension Number / MAC Address...
☐	Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options	
☐	1000			128081	3 time(s) / Permanent			
☐	1001			414199	3 time(s) / Permanent			
☐	1002			215777	3 time(s) / Permanent			
☐	1003			107301	3 time(s) / Permanent			
☐	1004			118826	3 time(s) / Permanent			
☐	1005			104390	3 time(s) / Permanent			

Export Extensions

DHCP Option Configuration

When using fast provision, please ensure the DHCP options 66 and 141 are not defined under the [Networking->LAN->DHCP Options] page.

- First Scenario: Sync DHCP Option Configuration enabled

Sync DHCP option is a crucial parameter that will define how the SIP extension will be pushed to the endpoint devices. If the option is enabled, then option 66, responsible for defining the Config server path, and option 121, responsible for defining the SIP server address, will be automatically pushed to the router's DHCP options, with the crucial condition that there are no DHCP options 66 and 121 already defined; otherwise, it will not work.

Fast Provision

When using Fast Provision, please ensure that DHCP options 66 and 141 are not enabled under the [Networking->LAN] page.

Sync DHCP Option Configuration



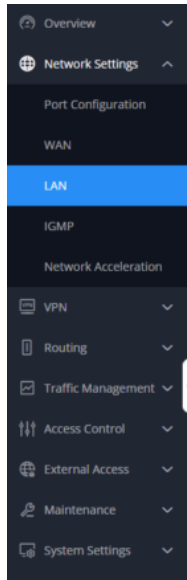
Initial Dial-up Deployment



Cancel

Save

Sync DHCP



LAN > Edit VLAN

*VLAN ID: 1

Name: Default (0-64 characters)

Destination: All x

VLAN Port IPv4 Address: ☐

*IPv4 Address: 192.168.80.1

*Subnet Mask: 255.255.255.0

DHCP Service: ☒

*IPv4 Address Allocation Range: 192.168.80.2 - 192.168.80.254

*Release Time(m): 120 (Default 120, range 60-2880)

DHCP Option	Option	Type	Service	Content
66	ASCII			https://192.168.80.2:8089/
141	ASCII			192.168.80.2:6060

Add

Sync DHCP Enabled

- Second Scenario: Sync DHCP Option Configuration disabled

The second option to push the SIP extension is when the sync DHCP option is disabled. In this case, the SIP extension will be pushed using a SIP subscribe message sent from the endpoint to the SIP server, by providing the ID code defined. It will bypass defining parameters such as the SIP user ID, SIP Auth ID, and SIP password, and will only require a unique 6-digit ID code to register the extension. Once the ID code is provided, the SIP server will provide back a SIP notify message with the configuration server path, and a message confirming that the account has been provisioned.

No.	Time	Source	Destination	Protocol	Length	Info
459	10.668847	192.168.80.184	192.168.80.230	Syslog	180	MP826 [c0:74:ad:25:25:4b]: GUI INFO [1.0.1.10][gs_mon]C3288130:464 - Profile code request success, start provision...in
490	10.715350	192.168.80.184	192.168.80.230	Syslog	155	MP826 [c0:74:ad:25:25:4b]: GUI INFO [1.0.1.10][gs_mon]C4FC1E98:953 - Provision running: 3815/sbin/new_provision.in
504	10.749199	192.168.80.184	192.168.80.230	Syslog	117	MP826 [c0:74:ad:25:25:4b]: PRODN INFO [1.0.1.10] Performing full provision.in
507	10.751859	192.168.80.184	192.168.80.230	Syslog	179	MP826 [c0:74:ad:25:25:4b]: PRODN INFO [1.0.1.10] get_url: server_path = https://192.168.80.2:8089/ucm/ccgsl_fastprov/cfgc074ad25254b.xml.in
508	10.751130	192.168.80.184	192.168.80.230	Syslog	188	MP826 [c0:74:ad:25:25:4b]: PRODN INFO [1.0.1.10] get_url: expanded_server_path = https://192.168.80.2:8089/ucm/ccgsl_fastprov/cfgc074ad25254b.xml.in
514	10.757246	192.168.80.184	192.168.80.230	Syslog	304	MP826 [c0:74:ad:25:25:4b]: GUI DEBUG[1.0.1.10][gs_mon]D3464483:326 - Receive dbus message: in signal: i:1.0:/com/grandstream/dbus/guicn.com.grandstream.dbus.signal.PRODNV1330W_REQUEST_PATH is in
517	10.757322	192.168.80.184	192.168.80.230	Syslog	300	MP826 [c0:74:ad:25:25:4b]: GUI DEBUG[1.0.1.10][gs_mon]D3464483:341 - dbus-send --session --type=signal /com/grandstream/dbus/guicn.com.grandstream.dbus.signal.PRODNV1330W_REQUEST_PATH int32:0 str
519	10.757400	192.168.80.184	192.168.80.230	Syslog	283	MP826 [c0:74:ad:25:25:4b]: GUI INFO [1.0.1.10][gs_mon]C4FC1E98:547 - Provision start download 0/https://192.168.80.2:8089/ucm/ccgsl_fastprov/cfgc074ad25254b.xml.in
547	11.182190	192.168.80.184	192.168.80.230	Syslog	177	MP826 [c0:74:ad:25:25:4b]: PRODN INFO [1.0.1.10] Downloaded CFG data: https://192.168.80.2:8089/ucm/ccgsl_fastprov/cfgc074ad25254b.xml.in
600	11.203328	192.168.80.184	192.168.80.230	Syslog	139	MP826 [c0:74:ad:25:25:4b]: PRODN INFO [1.0.1.10] CONFIG COMPLETE send_dbus_provision_success.in

Config Server Path pushed through Fast Provision

No.	Time	Source	Destination	Protocol	Length	Info
14	29.807324	192.168.80.2	192.168.80.184	SIP	526	Request: NOTIFY sip:192.168.80.184:34848
16	29.855475	192.168.80.184	192.168.80.2	SIP	432	Status: 200 OK (NOTIFY)
97	47.944781	192.168.80.184	192.168.80.2	SIP	652	Request: REGISTER sip:192.168.80.2 (1 binding)
98	47.946744	192.168.80.2	192.168.80.184	SIP	546	Status: 401 Unauthorized
99	47.968874	192.168.80.184	192.168.80.2	SIP	918	Request: REGISTER sip:192.168.80.2 (1 binding)
100	47.973913	192.168.80.2	192.168.80.184	SIP	654	Status: 200 OK (REGISTER) (1 binding)
101	47.984373	192.168.80.2	192.168.80.184	SIP	765	Request: NOTIFY sip:1000@192.168.80.184:12037
102	47.998982	192.168.80.184	192.168.80.2	SIP	521	Status: 200 OK (NOTIFY)
103	48.012083	192.168.80.184	192.168.80.2	SIP	601	Request: OPTIONS sip:192.168.80.2
106	48.016125	192.168.80.2	192.168.80.184	SIP	853	Status: 200 OK (OPTIONS)
107	48.016797	192.168.80.2	192.168.80.184	SIP	764	Request: NOTIFY sip:1000@192.168.80.184:12037
108	48.025193	192.168.80.184	192.168.80.2	SIP	521	Status: 200 OK (NOTIFY)

Account registered through SIP NOTIFY

It might take 1-2 mins for the the account to be registered and the SIP NOTIFY message to be automatically

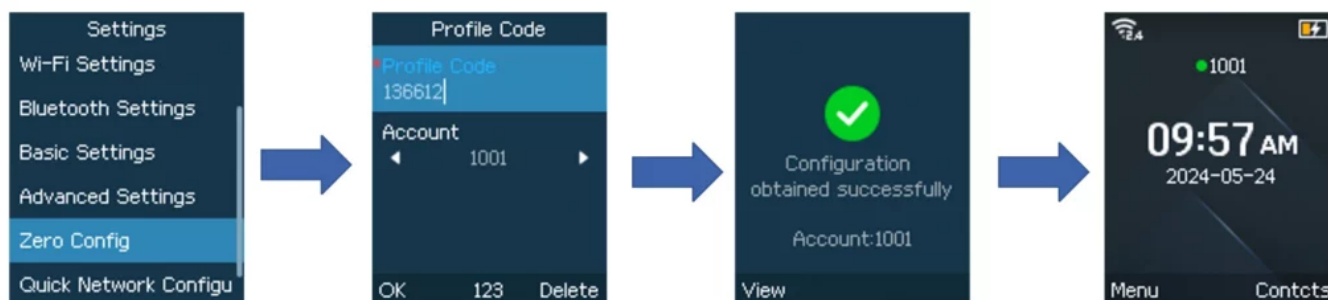
received by the endpoint.

Endpoint Configuration

WP816/WP826/WP836 configuration

On the WP8x6 Wi-Fi phone, you can deploy the extension by simply providing the profile code in the phone's internal settings, please follow the below steps to complete the configuration:

1. On your WP8x6, Access **Settings** -> **Zero Config**.
2. Open the **Profile Code** option, and select the user account you want to add the extension to.
3. Provide the 6-digit code received, and click connect. After this, the extension will be automatically deployed to the device, in addition, the device's MAC address will be automatically retrieved and added to the GCC6000 device.

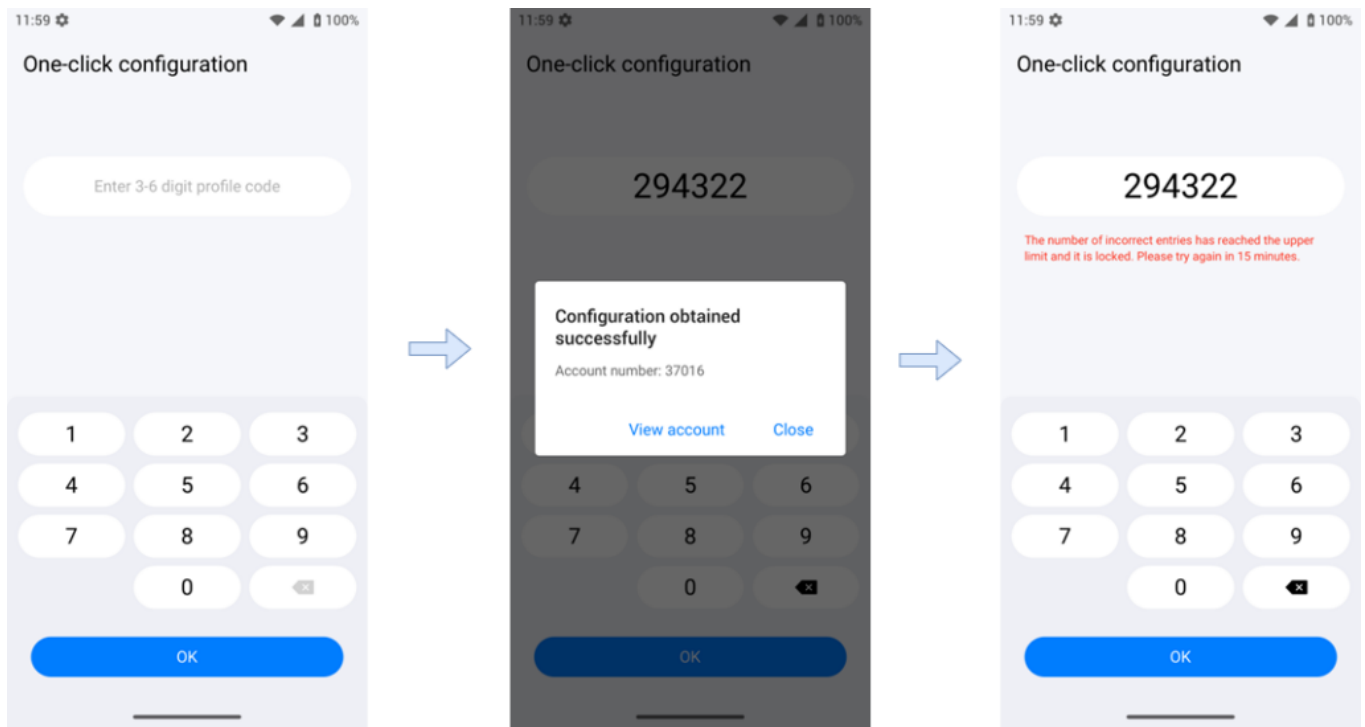


Configuration Steps

WP856 configuration

The WP856 is a mobile computing device, that supports SIP account registration, this allows the device to be integrated in a VoIP telephony system, by registering a SIP account to the device, this can be done easily using the "One-Click Configuration" App:

1. On your WP856 device, Open "One-Click configuration", as shown in the screenshot below
2. Provide the 6-digit ID code for your corresponding extension
3. Once the 6-digit code is provided, the extension will be automatically linked with the device, and the SIP account will be registered

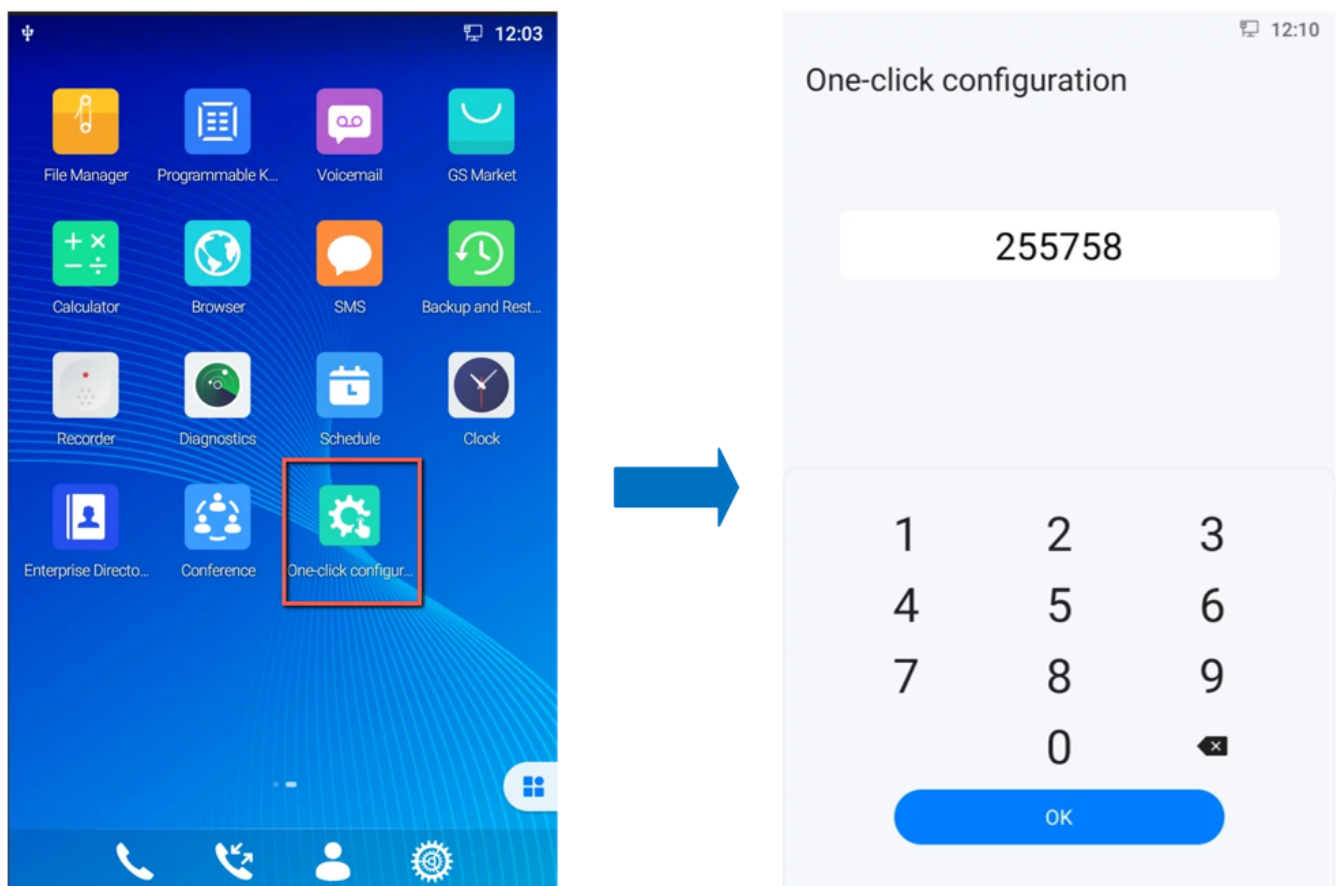


One Click Configuration

GXV34xx configuration

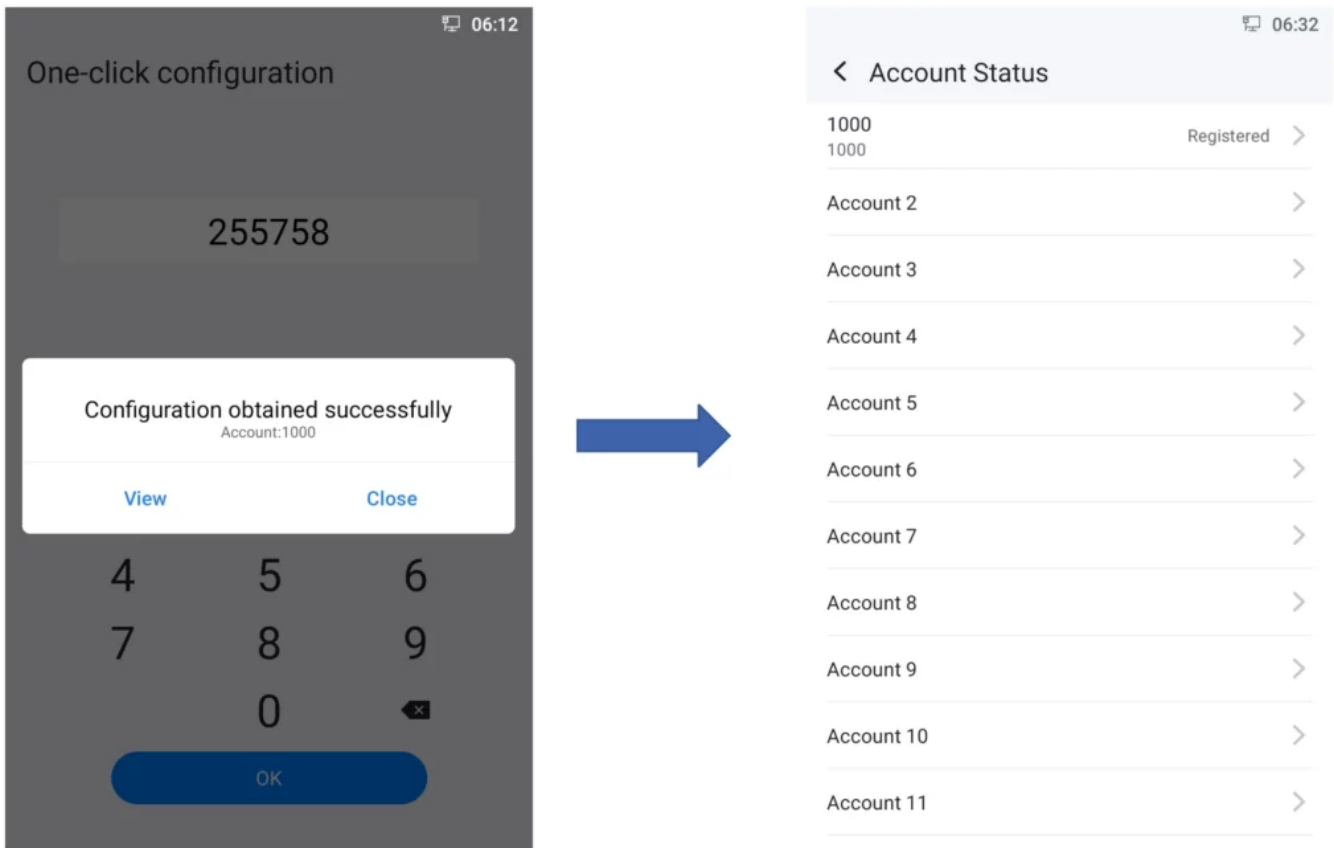
The GXV34xx device uses an application called "One-Click Configuration" to push the extension settings to a specified account, Please follow the below steps to achieve that goal:

1. On your GXV34xx, Open the **One-Click Configuration** App
2. Provide the 6-digit Profile code for your corresponding extension.



One Click Configuration

3. The extension will automatically be registered to the device, after showing the success message below, in addition, the device's MAC address will be automatically retrieved and added to the GCC6000 device.

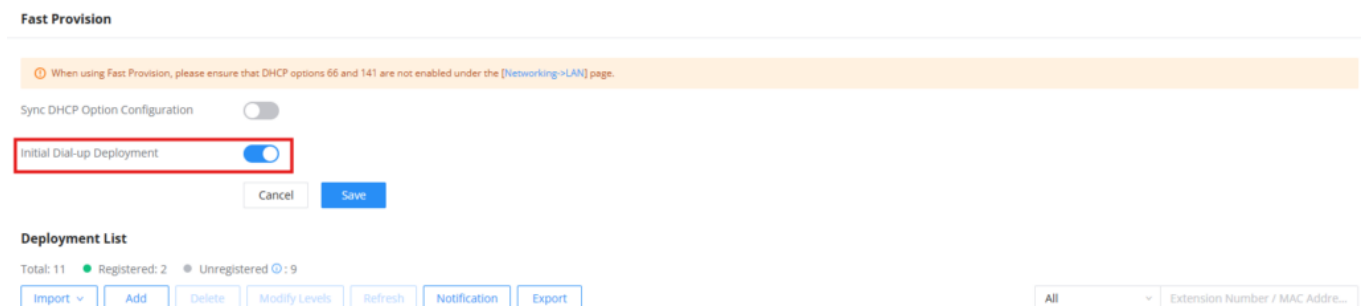


Configuration Completed

Initial Dial up Deployment

For other VoIP devices that do not support the one-click configuration application, or the zero config configuration, the process of provisioning the SIP account is done through the initial dial up deployment, the way to set this up is as follows:

1. Enable Initial Dial-up Deployment feature under **UC Endpoints Module-> Fast Provision**.



Initial Dial up Deployment

2. Under **UC Endpoints Module-> Device Management -> VoIP Devices**, select the devices that you wish to register with the SIP accounts created

3. Click the icon to push the a SIP Notify message with the account information.

VoIP Devices

VoIP Devices

Global Policy

Global Templates

Model Templates

Model Update

Firmware

VoIP Devices Settings

Total: 2Registered: 2Unregistered: 0

AllAll ModelAll VendorModel / Extension Number / MAC Address / IP Address

Auto Discover

Add

Delete

Edit

Upgrade

Update Config

Reboot

More

☒	No.	Model	Extension	Vendor	MAC Address	IP Address	Version	Create Config	Options
☒	1	GRP2634	1000	GRANDSTREAM	C074AD4BD09F	192.168.80.46	1.0.11.18	2024-12-17 15:38:20	
☒	2	GRP2670	1001	GRANDSTREAM	C074AD64A862	192.168.80.123	1.0.11.23	2024-12-17 15:39:21	

Send the NOTIFY to update the device settings?

Cancel

OK

Total: 2

1

30 / page

Goto

SIP Notify

4. On the endpoint, dial the profile code corresponding to the extension you wish to register, the account registration will be completed after that, (e.g: on the dial pad of the IP phone, dial the profile code **359814** to register extension 1000), the MAC address of the unit will be added accordingly.

Fast Provision

When using Fast Provision, please ensure that DHCP options 66 and 141 are not enabled under the [Networking->LAN] page.

Sync DHCP Option Configuration

Initial Dial-up Deployment

Cancel

Save

Deployment List

Total: 11Registered: 2Unregistered: 9

Import

Add

Delete

Modify Levels

Refresh

Notification

Export

AllExtension Number / MAC Address...

☐	Extension	Full Name	MAC Address	Profile Code	Profile Code Uses / Validity Period	Notification Status	Options
☐	1000		C074AD4BD09F	359814	3 time(s) / Permanent		
☐	1001		C074AD64A862	414199	3 time(s) / Permanent		
☐	1002			215777	3 time(s) / Permanent		
☐	1003			107301	3 time(s) / Permanent		
☐	1004			118826	3 time(s) / Permanent		
☐	1005			104390	3 time(s) / Permanent		
☐	1006			261165	3 time(s) / Permanent		
☐	1007			187915	3 time(s) / Permanent		

Total: 11

1

2

10 / page

Goto

Extension registered through Initial Dial up Deployment

Supported Devices

Device	Firmware required
GCC6010W	1.0.1.7+
GCC6010	1.0.1.7+
GCC6011	1.0.1.7+

Supported Devices