Manuals+ — User Manuals Simplified.

GCC6000
Series PBX
Module For
Device

GRANDSTREAM GCC6000 Series PBX Module For Device User Guide

Home » GRANDSTREAM » GRANDSTREAM GCC6000 Series PBX Module For Device User Guide

GRANDSTREAM GCC6000 Series PBX Module For Device

Product Information

Specifications

- **Brand:** Grandstream Networks, Inc.
- **Product Series:** GCC6000
- **Feature:** Fast Provisioning
- **Purpose:** Facilitate registering VoIP devices to the PBX module of GCC6000

Product Usage Instructions

Prerequisites

Before configuring, ensure Grandstream VoIP devices and GCC6000 unit are on the same LAN or VLAN, and GCC6000's PBX module is enabled.

Configuration Scenario

Setting up GCC6010W Model: This model has an embedded Access Point, eliminating the need for an additional access point for wireless device connections.

GCC6000 Configuration

1. Open the UC Endpoint Module of the GCC6000 device.
2. Access the Fast Provisioning Tab.
3. Depending on preference:
    - Add extensions manually and define their Profile code.
    - Use a predefined Excel file to batch-create extensions and their profile codes. Import the Excel file after creation.
4. Extensions will be assigned a 6-digit Profile code used on UC endpoints to retrieve SIP information and register to GCC6000's PBX module.
5. Added extensions will be automatically included in the UCM module of the GCC6000 device.

Additional Fast Provisioning Parameters

Users can define additional parameters when adding an extension.

- **Device Information:** User-specific details like Employee ID, Name, Email, Mobile Number, and Job Title.
- **Operations:**
    - **Delete:** Remove specific extension(s).
    - **Refresh:** Automatically change the 6-digit profile code for an extension.
    - **Modify** Levels: Adjust network priority, call security, and voice call quality.

Call Security Levels

Options: Normal (minimal encryption), Intermediate (Secure RTP), Advanced (TLS for signalling, SRTP for media).

FAQ

- **Q: Can extensions be deleted using Fast Provisioning?**
    - **A:** Yes, users can select and delete specific extensions using the Delete option in the app.
- **Q: How can I change the call security level for an extension?**
    - **A:** Use the Modify Levels option to adjust the security settings, including encryption protocols for voice calls.

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 integrators 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.
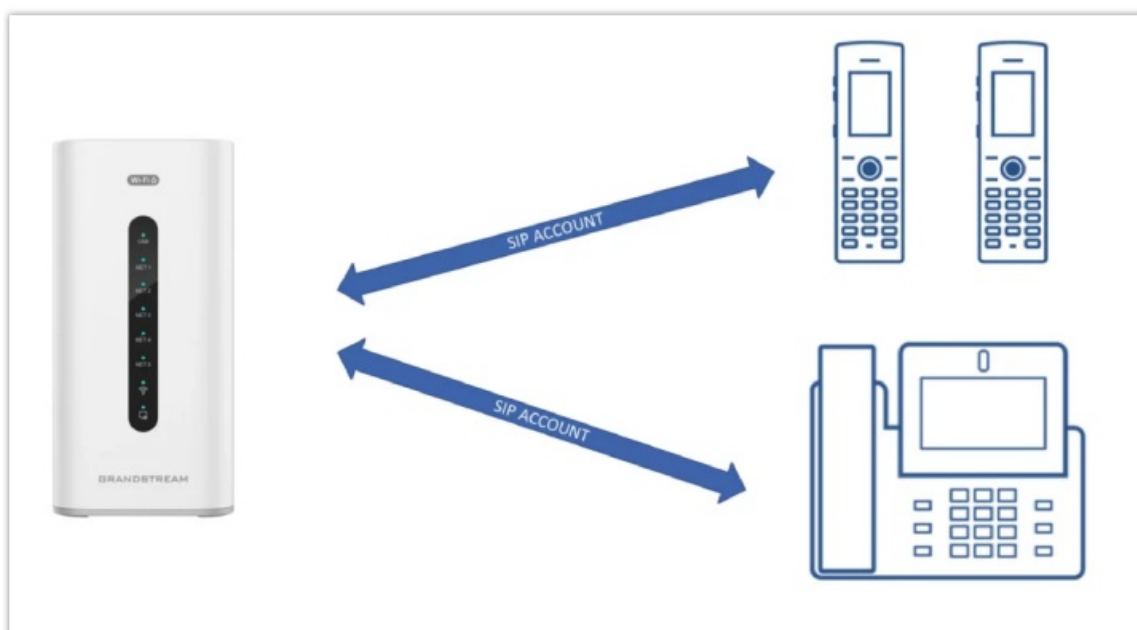
GCC6000 Series Fast Provisioning

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

- **Note** By default, 12 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, and a GXV34xx video phone, and 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
- GXV34xx configuration
- Initial Dial up Deployment

Here is an illustration of the setup:
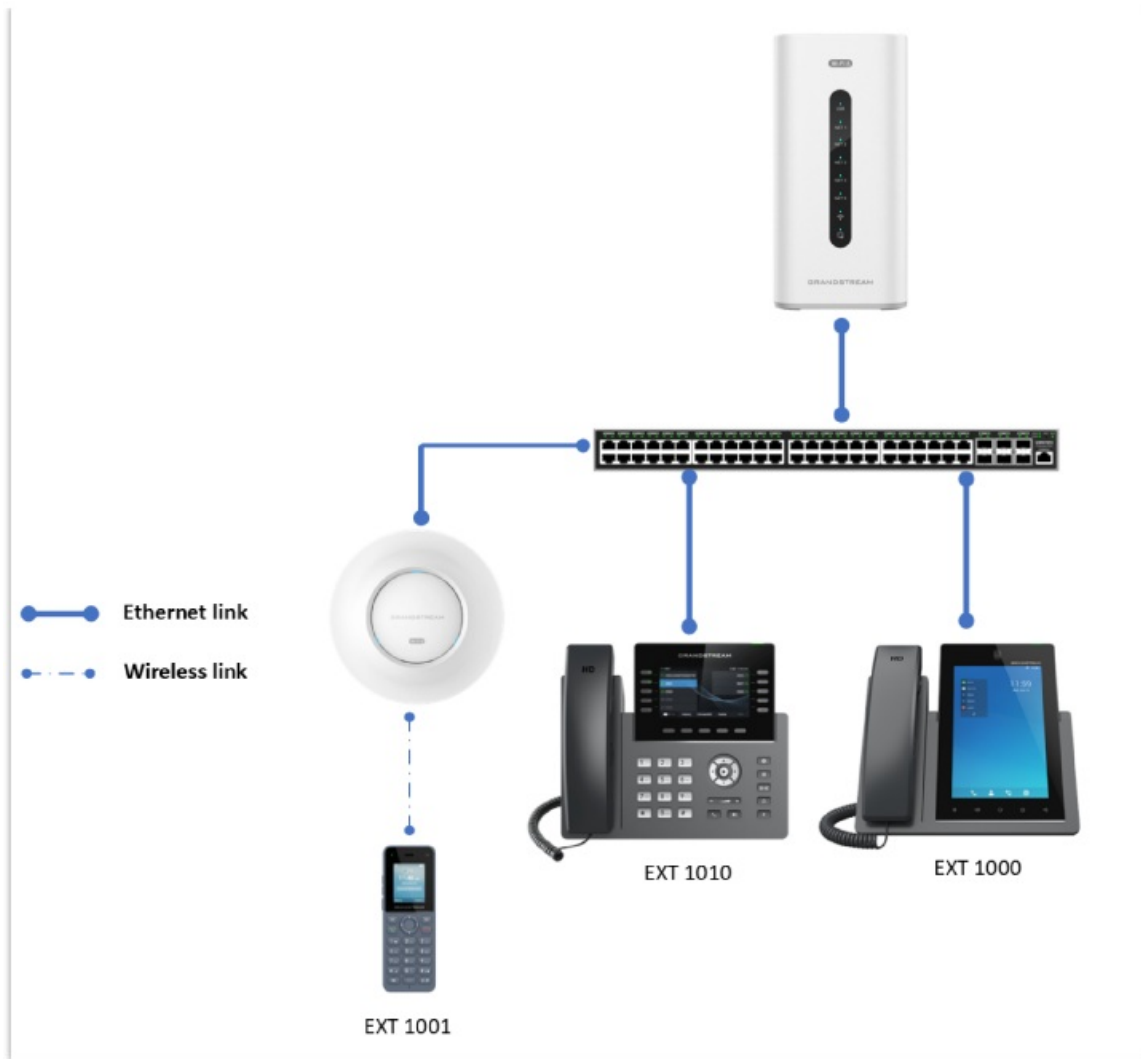
Set up

Set up

The GCC6010W model supports an embedded Access Point, and would not need an additional access point to connect wireless devices.

GCC6000 Configuration

On the GCC6000, please perform the below steps.

1. Open the UC Endpoint Module of the GCC6000 device
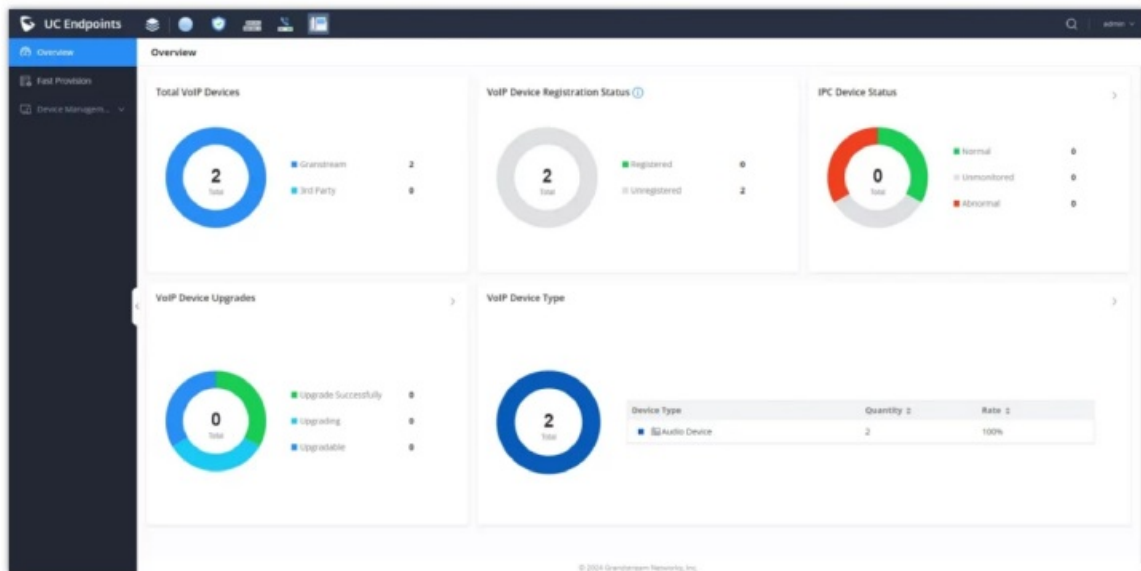
UC Endpoints

2. Access to Fast Provisioning Tab

Fast Provisioning

3. **Depending on your preference:**

   - Either add manually each extension and define its Profile 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.

Import from template

- **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.

- ○ **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, 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)

Device Information

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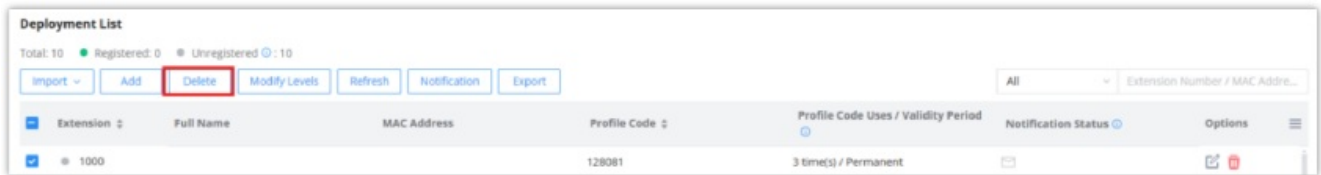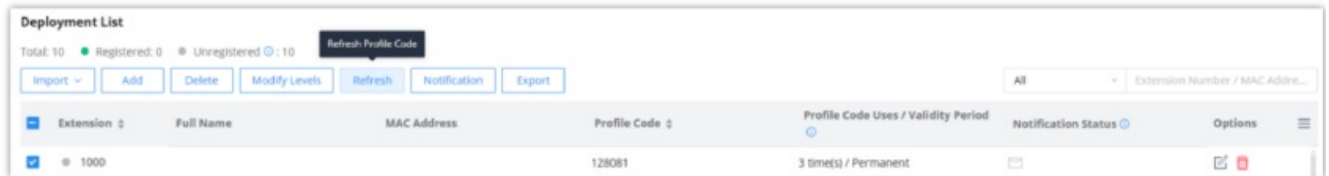

- Identity Information

Additional Fast Provisioning Operations

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

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.
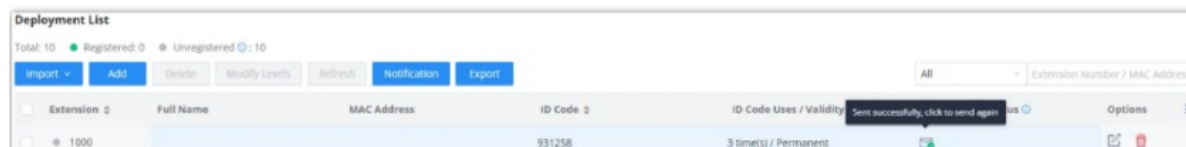

- **Modify Levels:** This option allows the user to change the extension's network priority, call security level, and voice call quality, these settings correlate directly with the QoS configuration on the router module.
    1. **Network Priority:** Defines how the system prioritizes voice traffic over the network for the specific extension, particularly when there is congestion or limited bandwidth,
        - **Normal:** Voice traffic is treated as regular data traffic with no special prioritization.
        - **Intermediate:** Voice traffic is given higher priority over other types of data traffic, like file transfers or browsing.
        - **Advanced:** Voice traffic is given the highest level of priority on the network, this is critical for environments with high congestion
    2. **Call security level:** Defines the call security level, and controls the encryption and security protocols applied to voice calls to protect them from interception or unauthorized access, three levels are available: Normal, intermediate, and advanced.
        - **Normal:** Minimal or no encryption is applied.
        - **Intermediate:** Moderate security measures, such as Secure RTP (SRTP), are applied.
        - **Advanced:** Maximum encryption and security features are applied, including TLS for signalling and SRTP for media.
    3. **Voice call quality level:** Defines the compression and encoding algorithms used to maintain voice clarity and reduce.
        - **Normal:** Standard codecs (e.g., G.711) with no special optimization.
        - **Intermediate:** Slightly optimized codecs (e.g., G.729) that balance voice clarity with bandwidth efficiency.
        - **Advanced:** High-quality codecs with advanced processing (e.g., Opus or wideband codecs).
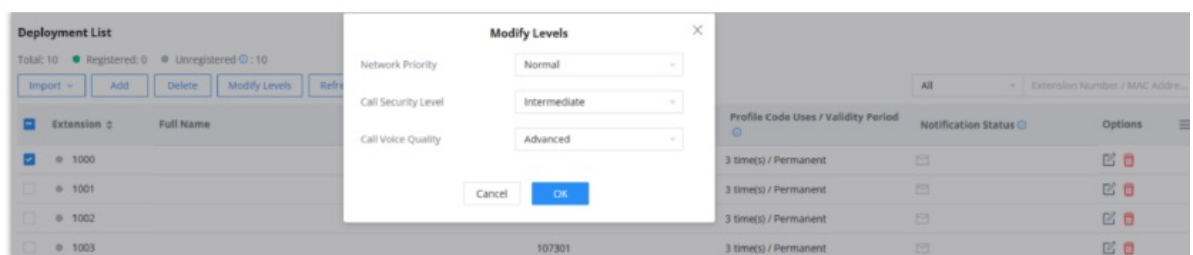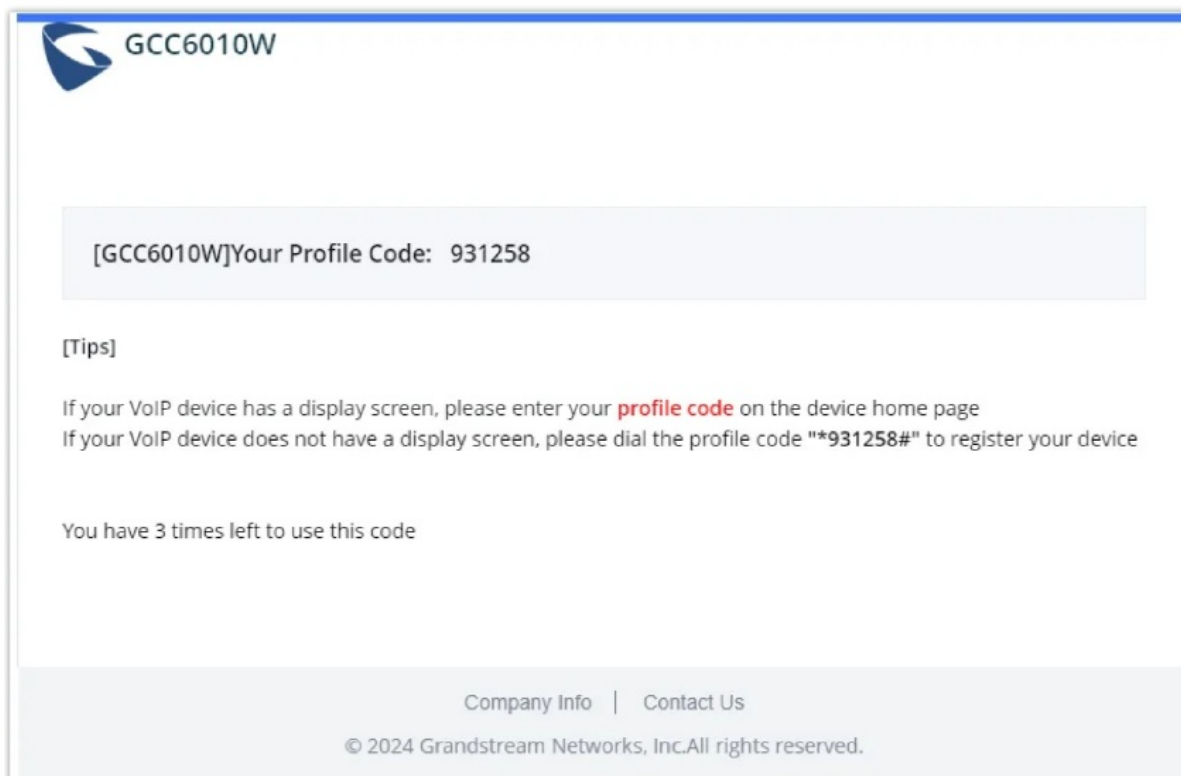

        - **Modify Network levels**
        - **Notification:** Using this option, the administrator can send the ID profile code for a specific extension related to a specific user, he can be notified through SMS by using an SMS carrier service

such as Twilo or Amazon, or through email by defining the corresponding email settings.

- ○ **Sending SMS or Email notification**
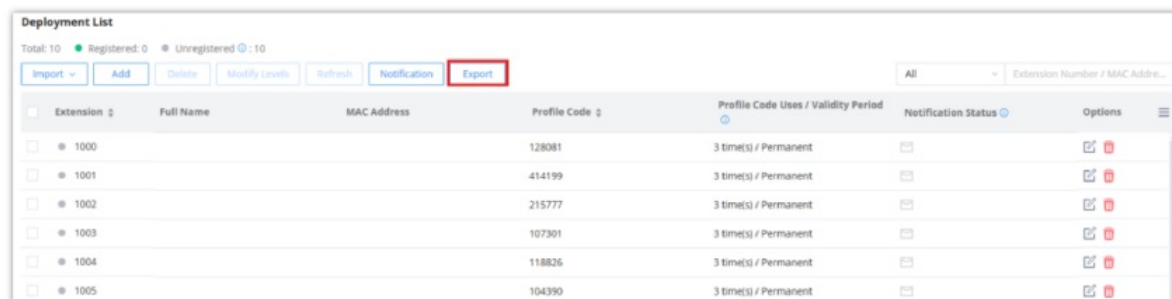
- ○ **Email Example**
- ○ **Export:** The administrator can export all extension information into one Excel file by clicking the Export option.

- ○ 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

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 Profile 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 Profile code to register the extension.
- Once the Profile 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.

**Config Server Path pushed through Fast Provision**

Account registered through SIP NOTIFY

Note 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.
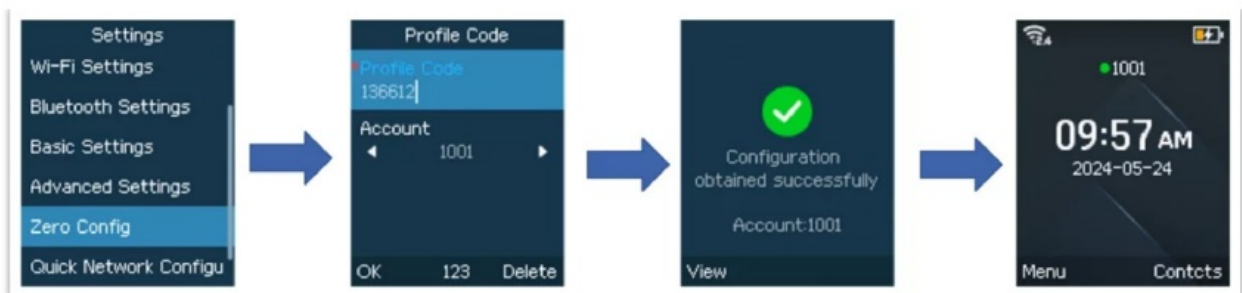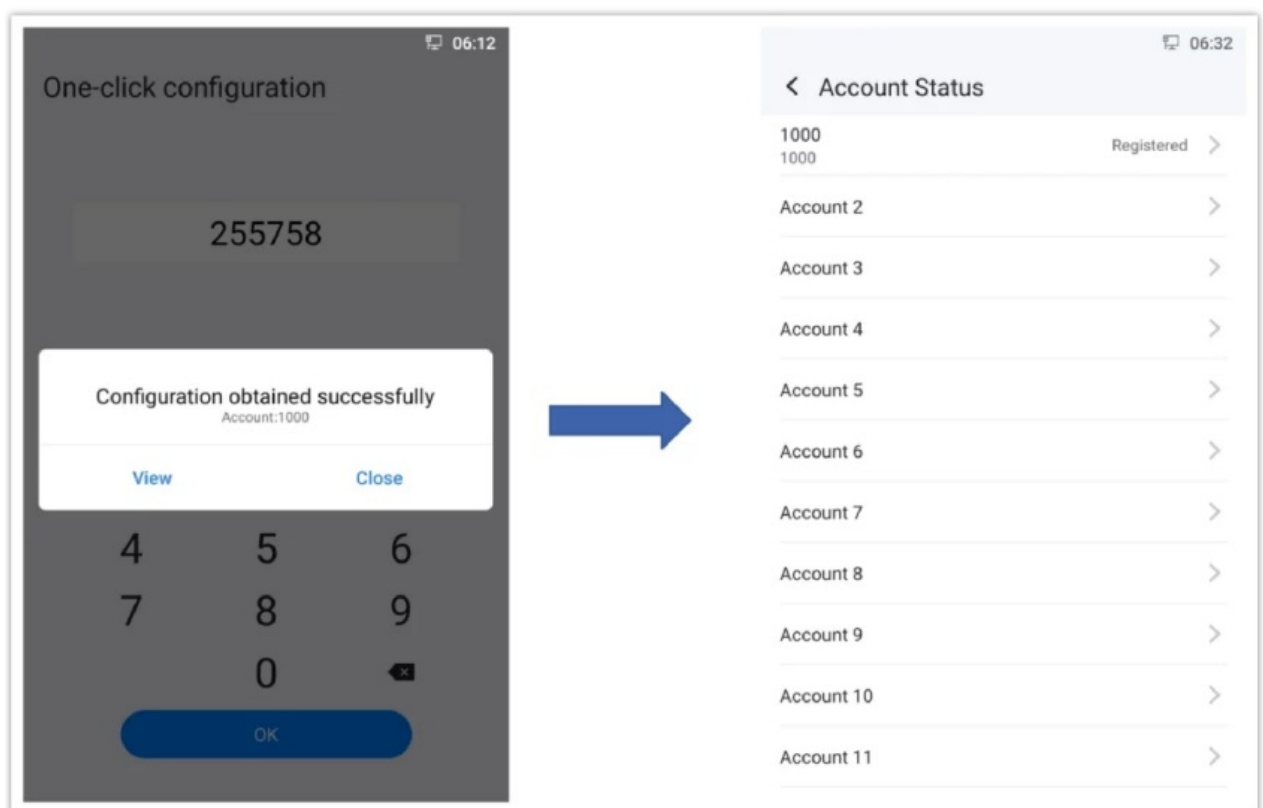

- Configuration Steps

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.
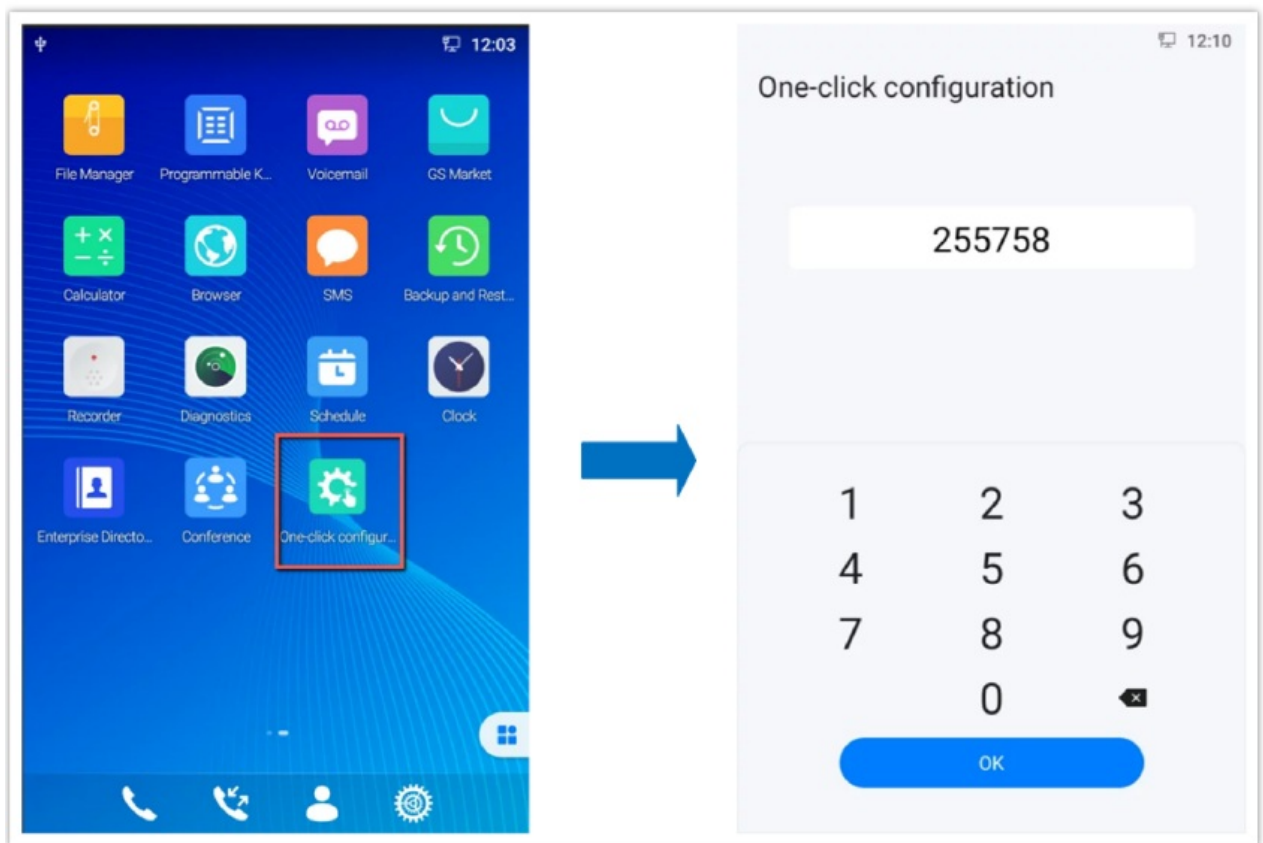
- ○ **One Click Configuration**

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 **Update Config** icon to push the SIP Notify message with the account information.

- ○ **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.

- 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**
- **Need Support?**
- **Can't find the answer you're looking for? Don't worry we're here to help!**
- **CONTACT SUPPORT**

Documents / Resources

GRANDSTREAM GCC6000 Series PBX Module For Device [pdf] User Guide
GCC6000 Series, GCC6000 Series PBX Module For Device, PBX Module For Device, Module For Device, Device

References

- 🌐 **documentation.grandstream.com/knowledge-base/gcc-convergence-device-fast-provisioning-guide/?hkb-redirect&nonce=04f52c5a7f&check=2nufl&redirect=helpdesk.grandstream.com&otype=ht_kb_article&oid=**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/2024-05-24_09-54-29.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/2024-05-24_09-59-46.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/2024-05-24_10-13-07.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/Drawing112-1.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/Drawing113.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/05/Fast-Provisioning-GCC-scaled.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/06/account-registered-through-SIP-NOTIFY.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/06/DHCP-SYNC.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/06/fast-provision-saved.webp**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Add-Extension-Manually.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Added-Extensions.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Delete-Extension.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Device-Information.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Drawing114_Set-UP.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Drawing124-_-GXV34xx-One_ClickConfiguration.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Email-Notification.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Extension-registered-through-Initial-**

Dial-up-Deployement-.png

- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Fast-Provisioning.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Identity-Information.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Import-from-template.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/initial-dial-up-deployement.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Modify-Network-levels.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/SIP-NOTIFY-SENT.png**
- 🌐 **documentation.grandstream.com/wp-content/uploads/2024/12/Sync-DHCP.png**
- **User Manual**