

zoomphone

Configuration Guide For Grandstream GRP260x series

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Revision History

| Version | Date | Change |
|---------|------------|---|
| 1.0 | 02/22/2022 | Created document for GRP2602 Configurations |
| 1.1 | 02/24/2022 | Update based on review comments |
| 1.2 | 02/25/2022 | Update minor comments |
| 1.3 | 03/14/2022 | Added Features supported section |

DUT and Zoom Software Versions

| | Equipment | Software Version |
|---------------------------------|------------------|------------------|
| Grandstream (Device Under Test) | GRP2602W | 1.0.3.42 |
| Zoom | Zoom app Desktop | 5.9.3 (3169) |
| | Zoom app Mobile | 5.9.2 (4247) |

Features Supported by GRP260x series

- Multiple Line Keys
- Multiple Users per Device
- Custom Time Format and Zone
- Sync time with NTP server
- Enable or disable phone web admin portal
- TLS and SRTP
- Make and Receive Calls
- Inbound and Outbound Call via Opus codec negotiation
- Call Hold and Resume
- Long Duration call
- SIP Session Timer
- Call Waiting
- Busy Lamp Field
- DND
- Call Forward Always
- Call Forward No Answer

- Call Forward Busy
- Blind/Cold Transfer
- Consultative/Warm Transfer
- 3-party Conference
- VoiceMail
- Call History
- Company Directory
- Speed dial
- Call Flip
- Shared Line - Call Delegation
- Call Monitoring
- Auto Receptionist IVR
- AES-256
- Call Park/Retrieve

1. Overview

This document outlines the configuration best practices for the Grandstream GRP260x as Zoom generic SIP phone.

2. Configuration Steps - Zoom Web Portal

This section provides instructions on how to configure Grandstream GRP2602W in Zoom Web Portal.

This section is mainly for adding phone devices (GRP2602W) and assign Zoom users to the devices.

Prerequisites:

- Zoom Phone account: a valid Zoom Phone subscription is required in order to assign an GRP2602W endpoint.
- Zoom approval for provisioning of GRP2602W as Generic SIP devices. Administrators should contact Zoom Account Executive to start an approval process.

Login to Zoom Web portal at <https://zoom.us/>.

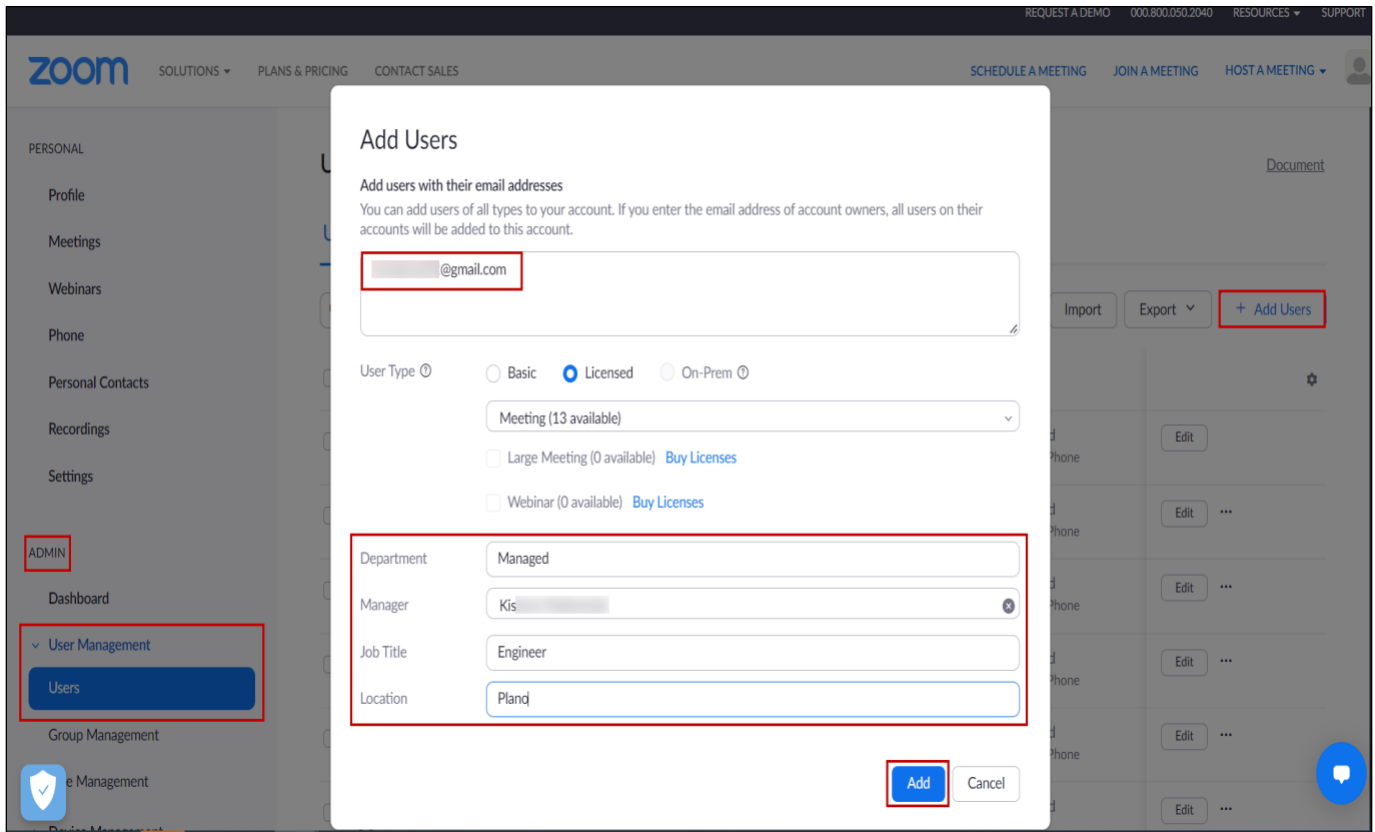
The following Zoom SIP Device configurations are included in this section

1. **Create Zoom Users**
2. **Add Device**

2.1 Create Zoom Users

Zoom Users are created in order to login to Zoom clients on desktop or mobile, it can also be assigned to SIP Device. The steps for creating a user are as follows:

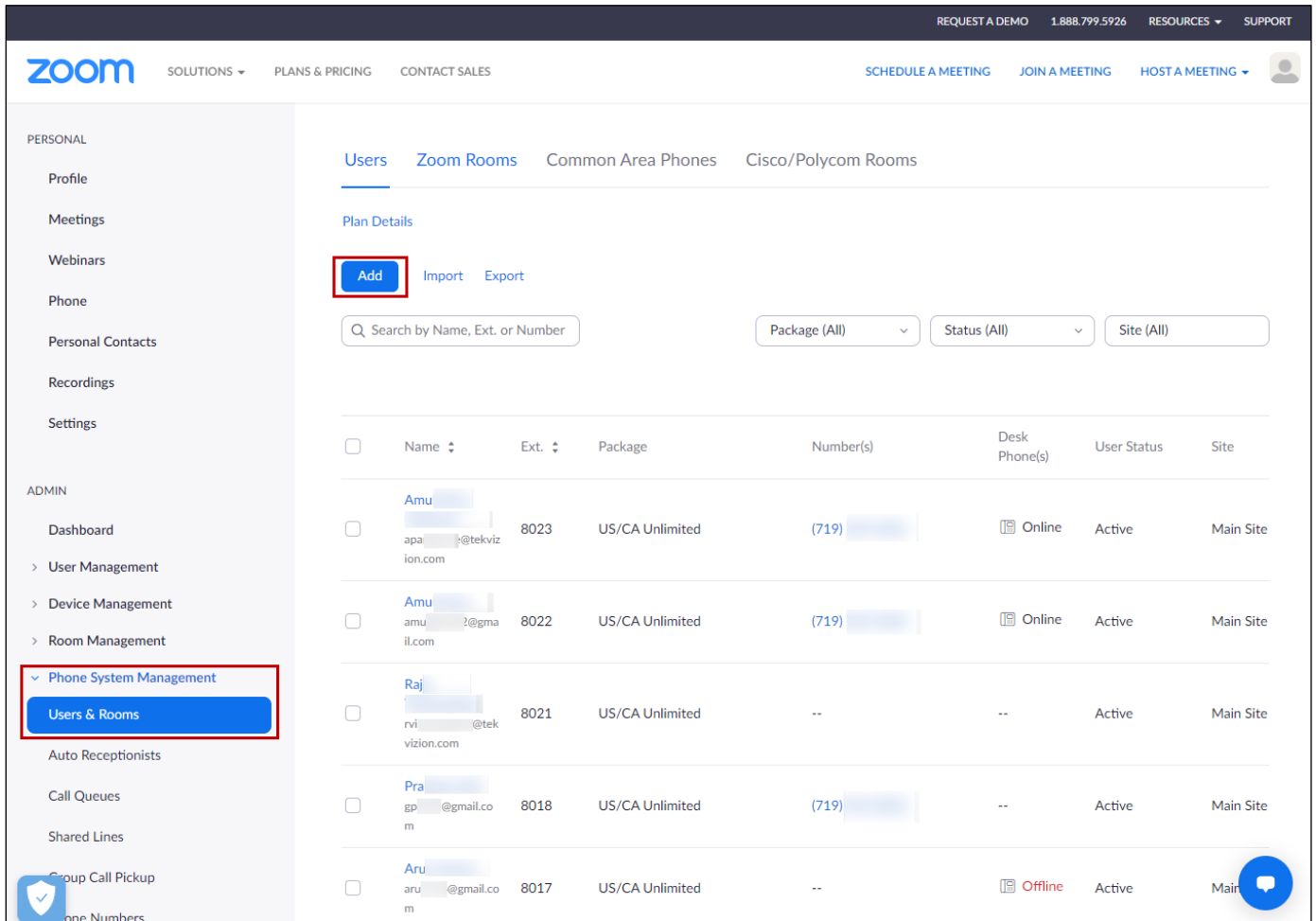
1. Navigate to **User Management > Users**. Click **+ Add Users** to create new Zoom users.



The screenshot displays the Zoom Admin console interface. On the left sidebar, the 'ADMIN' section is expanded, and 'User Management' is selected, with the 'Users' option highlighted. The main content area shows the 'Add Users' modal form. The form includes a text input field for email addresses (containing '@gmail.com'), a 'User Type' section with radio buttons for 'Basic', 'Licensed' (selected), and 'On-Prem', and a dropdown menu for 'Meeting (13 available)'. Below these are checkboxes for 'Large Meeting (0 available)' and 'Webinar (0 available)', both with 'Buy Licenses' links. The form also has fields for 'Department' (Managed), 'Manager' (Kis), 'Job Title' (Engineer), and 'Location' (Pland). At the bottom right of the form are 'Add' and 'Cancel' buttons. In the background, a table of users is visible with an '+ Add Users' button in the top right corner.

Figure 1 : Add Users

2. A Zoom activation email is sent to the email address used in creating the user, follow the instruction to active the zoom account.
3. Navigate to **Phone System Management > Users & Rooms**. Click **Add**.



The screenshot shows the Zoom Phone System Management interface. The left sidebar contains a navigation menu with 'PERSONAL' and 'ADMIN' sections. Under 'ADMIN', 'Phone System Management' is expanded, and 'Users & Rooms' is selected. The main content area shows the 'Users' tab with a table of users. The 'Add' button is highlighted with a red box. Below the table, there is a search bar and filters for Package, Status, and Site.

| | Name | Ext. | Package | Number(s) | Desk Phone(s) | User Status | Site |
|--------------------------|---|------|-----------------|------------------|---------------|-------------|-----------|
| <input type="checkbox"/> | Amu [redacted] apa[redacted]@tekvizion.com | 8023 | US/CA Unlimited | (719) [redacted] | Online | Active | Main Site |
| <input type="checkbox"/> | Amu [redacted] amu[redacted]@gmail.com | 8022 | US/CA Unlimited | (719) [redacted] | Online | Active | Main Site |
| <input type="checkbox"/> | Raj [redacted] rvi[redacted]@tekvizion.com | 8021 | US/CA Unlimited | -- | -- | Active | Main Site |
| <input type="checkbox"/> | Pra [redacted] gp[redacted]@gmail.com | 8018 | US/CA Unlimited | (719) [redacted] | -- | Active | Main Site |
| <input type="checkbox"/> | Aru [redacted] aru[redacted]@gmail.com | 8017 | US/CA Unlimited | -- | Offline | Active | Main Site |

Figure 2 : Add Users and Rooms

- Click **Choose** beside Users and when the pop-up window opens, select the proper user and **Confirm**.

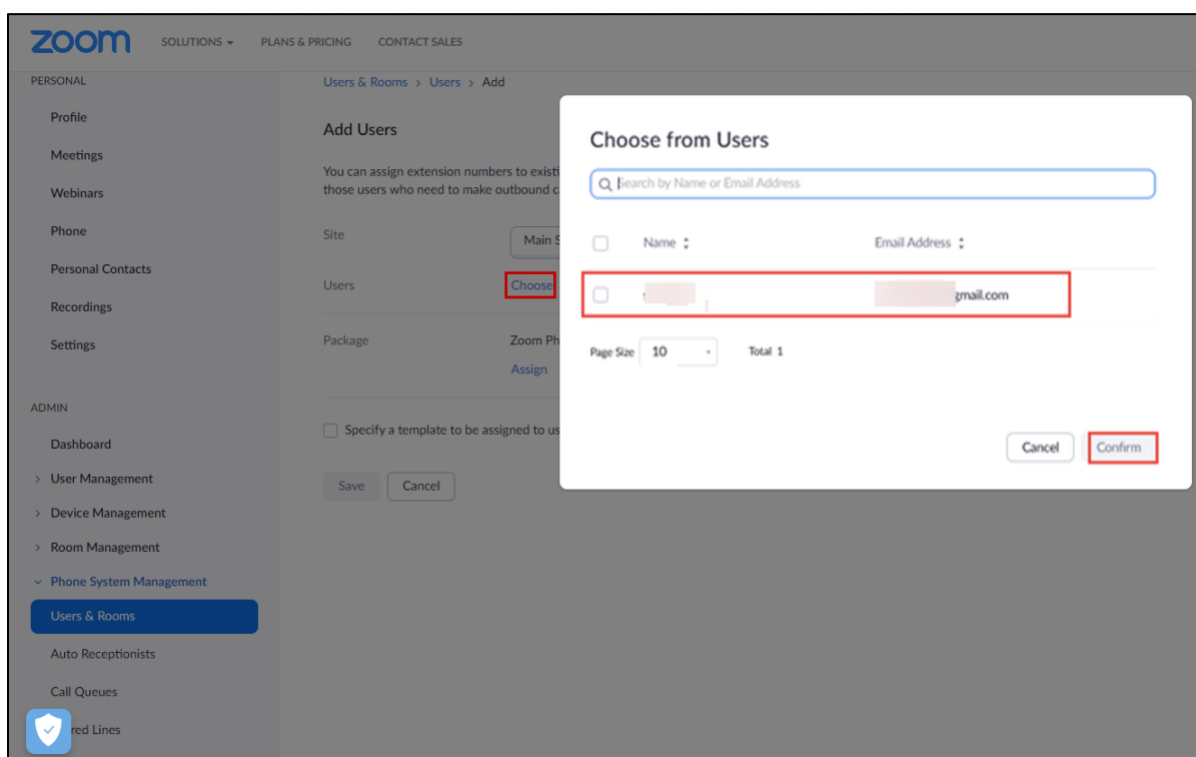


Figure 3 : Choose user

- Click **Assign** beside Package and at new window, select proper Calling plan, **US/CA Unlimited Calling Plan** was picked up, click **Save** to complete adding users under phone system Management.

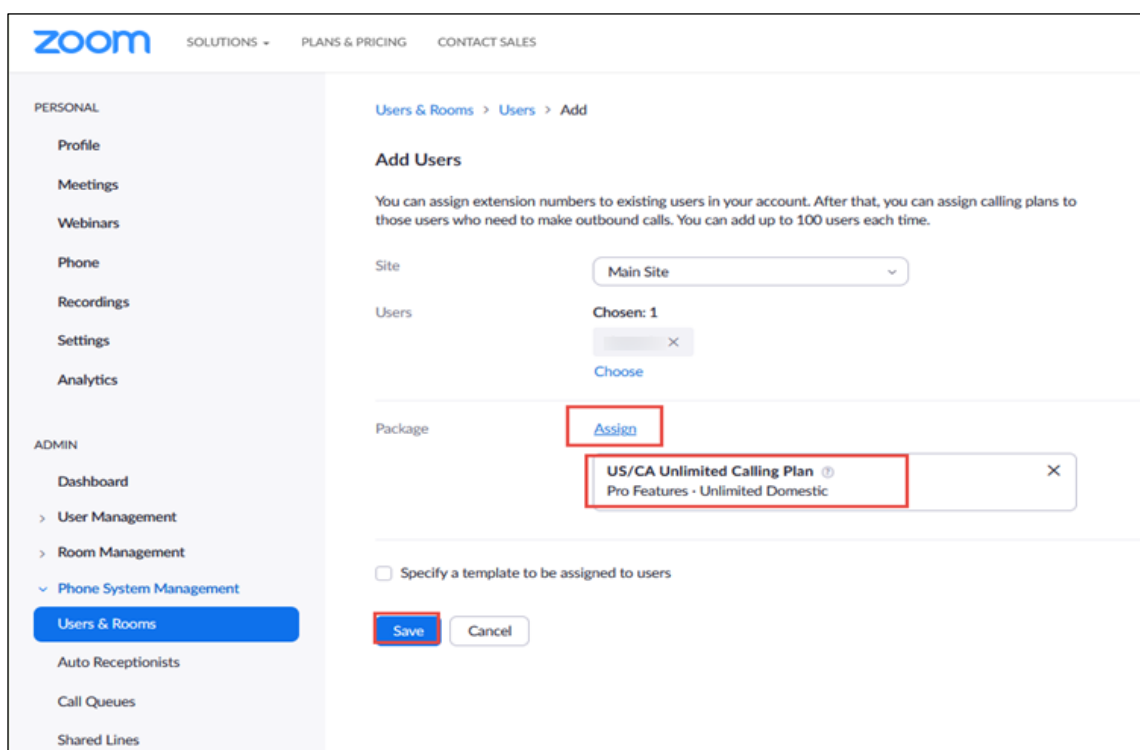


Figure 4 : Assign Calling Plan

6. Select the newly added user, click **Assign** and select **Assign Numbers**.

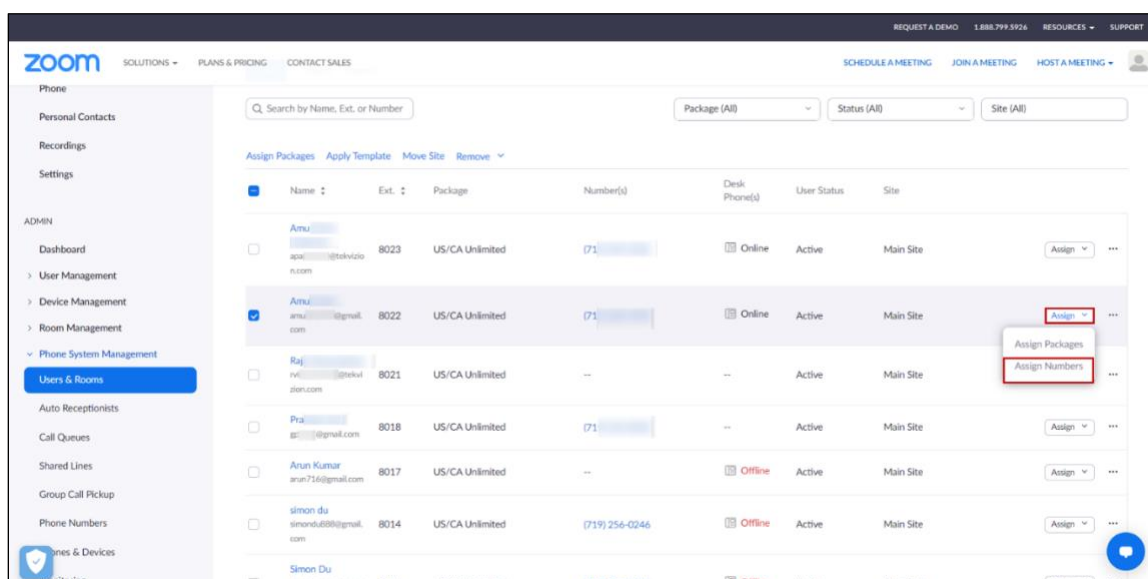


Figure 5 : Assign Number

7. Select the desire DID and click **confirm** to assign the DID to the user.

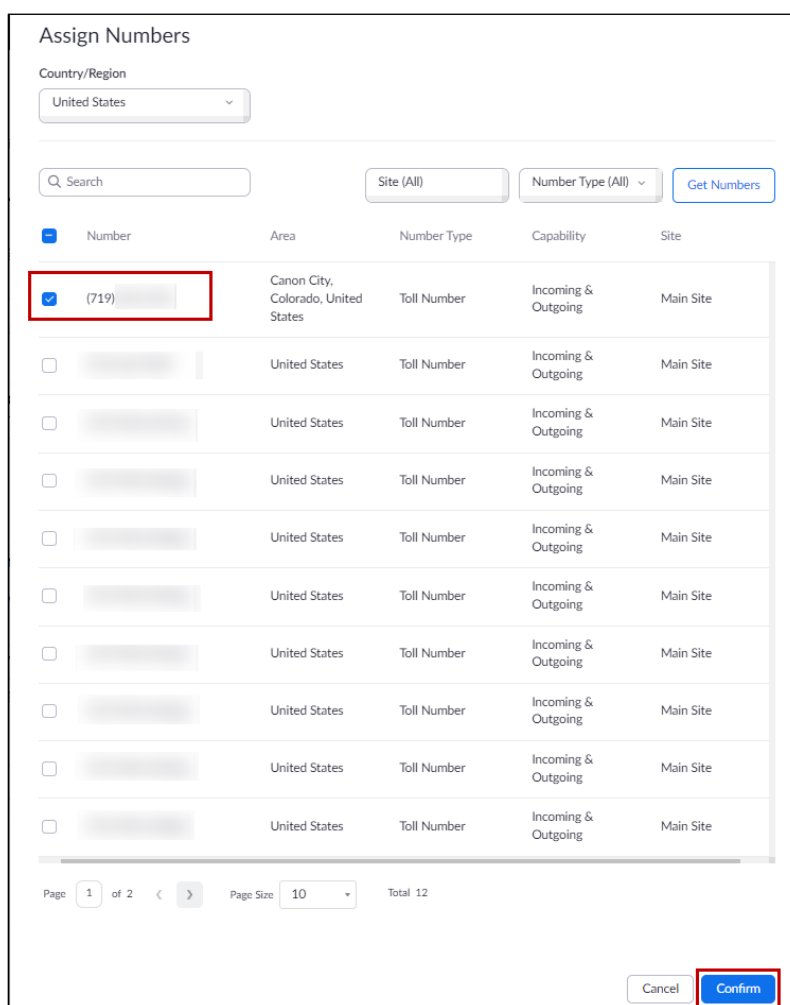


Figure 6 : Select DID Number

2.2 Add SIP Devices

1. Navigate to **ADMIN -> Phone System Management -> Phones & Devices**. Click **Add**.

- Set **Display Name**: GRP2602W-Extn-8022 is set as an example.
- Set **MAC Address**: add the GRP2602W-Extn-8022 MAC Address here.
- Set **Device Type**: select **Other** as the phone type is not certified yet.
- Click **Assign** under **Assigned To** and select the newly created user in previous steps.
- Click **Save**.

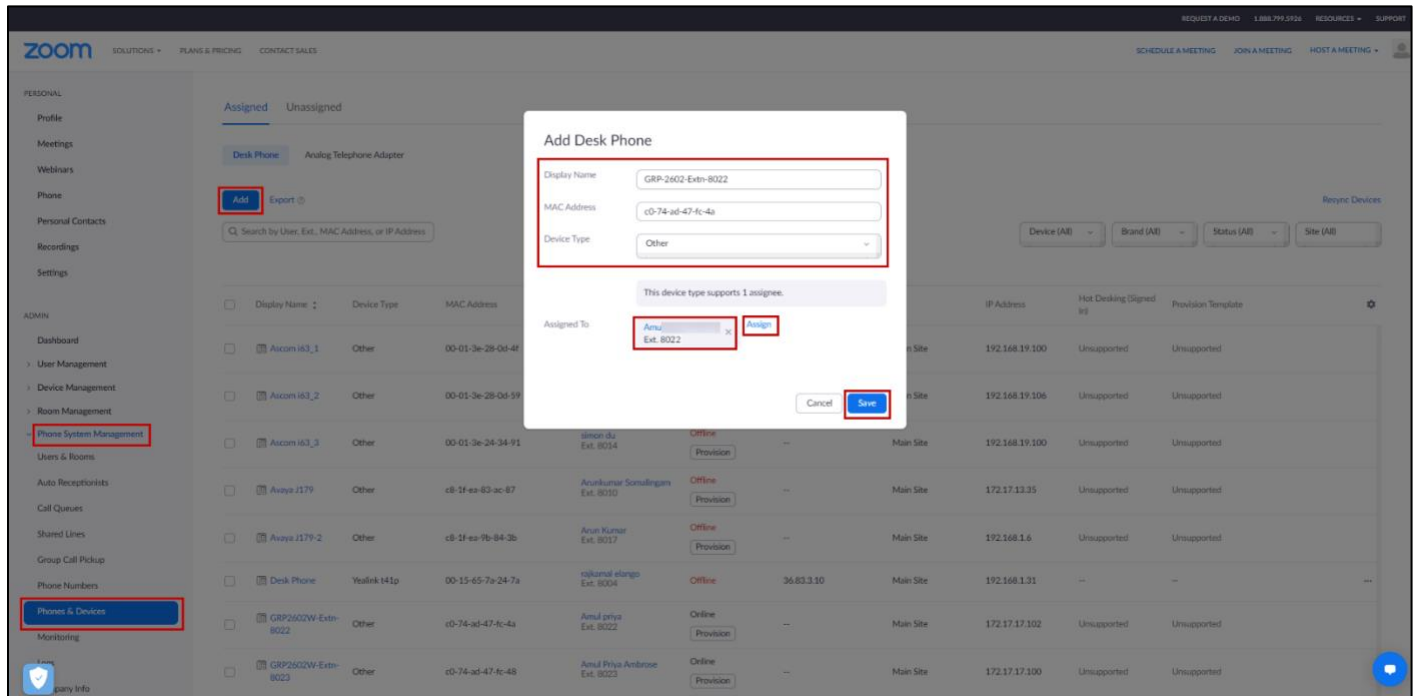


Figure 7 : Add Desk Phone

2. Select the Display Name of the newly created Desk Phone to navigate to its profile and click the **Provision** button. The SIP Account detail is displayed which will be used in the GRP2602W-Extn-8022 provisioning ([section Provisioning through Phone's Web Interface](#)).
3. Download the Certificates and import to the device, so that device will be considered in the trust list. (Importing the certificates to the phone is described later in [section 3.4.3 Apply trusted certificates](#)).

The screenshot shows the Zoom Admin interface. In the background, the 'Phones & Devices' section is visible, with a list of devices. One device, 'GRP2602W-Extn-8022', is highlighted with a red box. Below the list, there are 'Provision' and 'Remove' buttons, with 'Provision' also highlighted by a red box.

The foreground shows a 'Provisioning' modal window. It contains the following information:

- MAC Address:** c0-74-ad-47-fc-4a
- Device Type:** Other
- Profile:** GRP2602W-Extn-8022
- Site:** Main Site
- Assigned To:** Admin p...
- Ext. 8022**
- IP Address:** 172.17.1...
- Device Type:** Other
- Firmware Version:** --
- MAC Address:** c0-74-ad-47-fc-4a
- Provision Template:** Unsuppor...
- Status:** Online

Below the device details, there is a 'Provision' button (highlighted with a red box) and a 'Remove' button.

The 'Provisioning' modal window contains the following text:

You will need to enable TLS1.2 for SIP registration and enable SRTP for secure calling on your IP phone. Please refer to your manufacturer's instructions for these processes.

You'll need following information for manual provisioning.

SIP Account 1:

1. SIP Domain: 7000766863.zoom.us
2. Outbound Proxy: us01sip0h.sc.zoom.us:5091
3. User Name: 69979
4. Authorization ID: 265
5. Password: 3r L

Please download **DigiCert Global Root CA, DigiCert Global Root G2, DigiCert Global Root G3** and import to your IP phone if they are not in the trust list of the device.

Note: Please note that Zoom support team will not be able to troubleshoot or configure IP phones that are provisioned in this manner. Some Zoom Phone features may not work on manually provisioned phones. It may vary depending on your desk phone model.

Close

Figure 8 : Provisioning

3. Grandstream GRP2602W Provisioning

This section provides instructions on how to configure Grandstream GRP2602W to register to Zoom Phone Services.

3.1 Deployment Topology Diagram

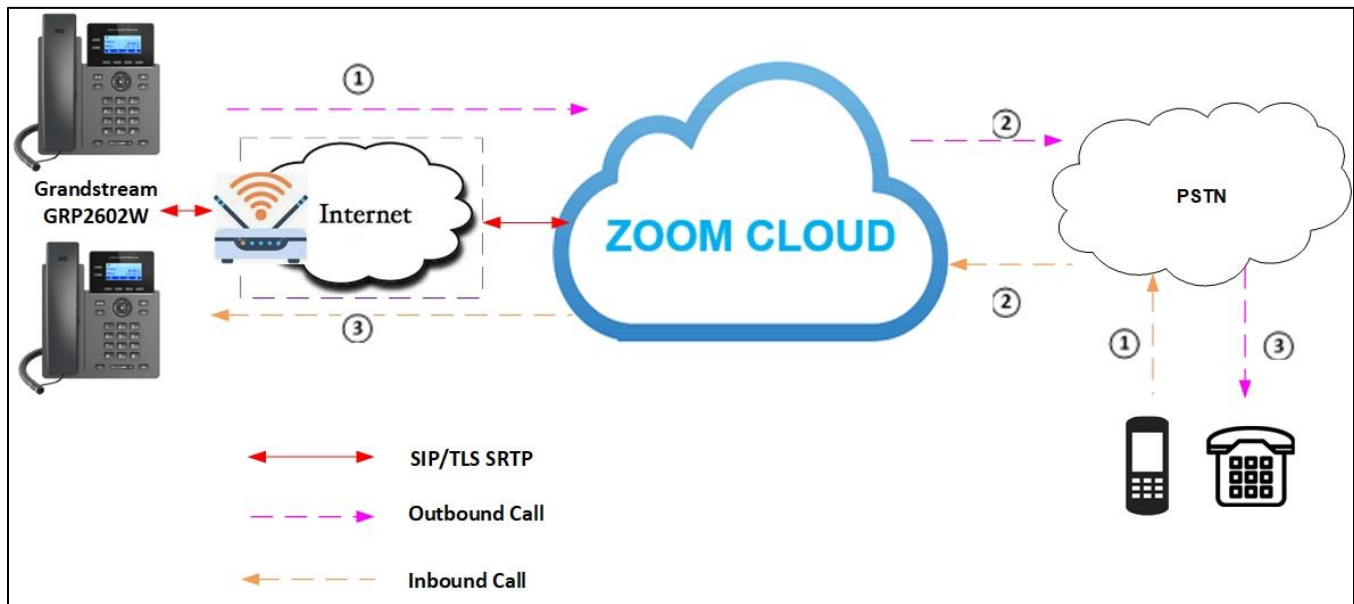


Figure 9 : Network Diagram

3.2 Network

By default, GRP2602W has DHCP mode enabled, if the router to which phone is connected does not support DHCP, you can configure static IP manually. You can find the IP address of GRP2602W by navigating the physical phone: **Menu -> Status -> Network Status -> Ethernet**.

3.3 Firmware Upgrade

This section ensures the phone is upgraded with the required firmware. The firmware used for this test is **1.0.3.42**. From the phone's home page, Navigate to: **Maintenance -> Upgrade and Provisioning**.

- Select **Firmware** tab.
- Under **Upgrade via Manually Upload**: Upload Firmware File to Update - Click **Upload** to upload the firmware file from the system.
- Selected firmware file will be upgraded to the system.
- From Phone's LCD screen, Select **Yes to Reboot and switch to (1.0.3.42)** (Phone may have to restart to get applied with the changes).

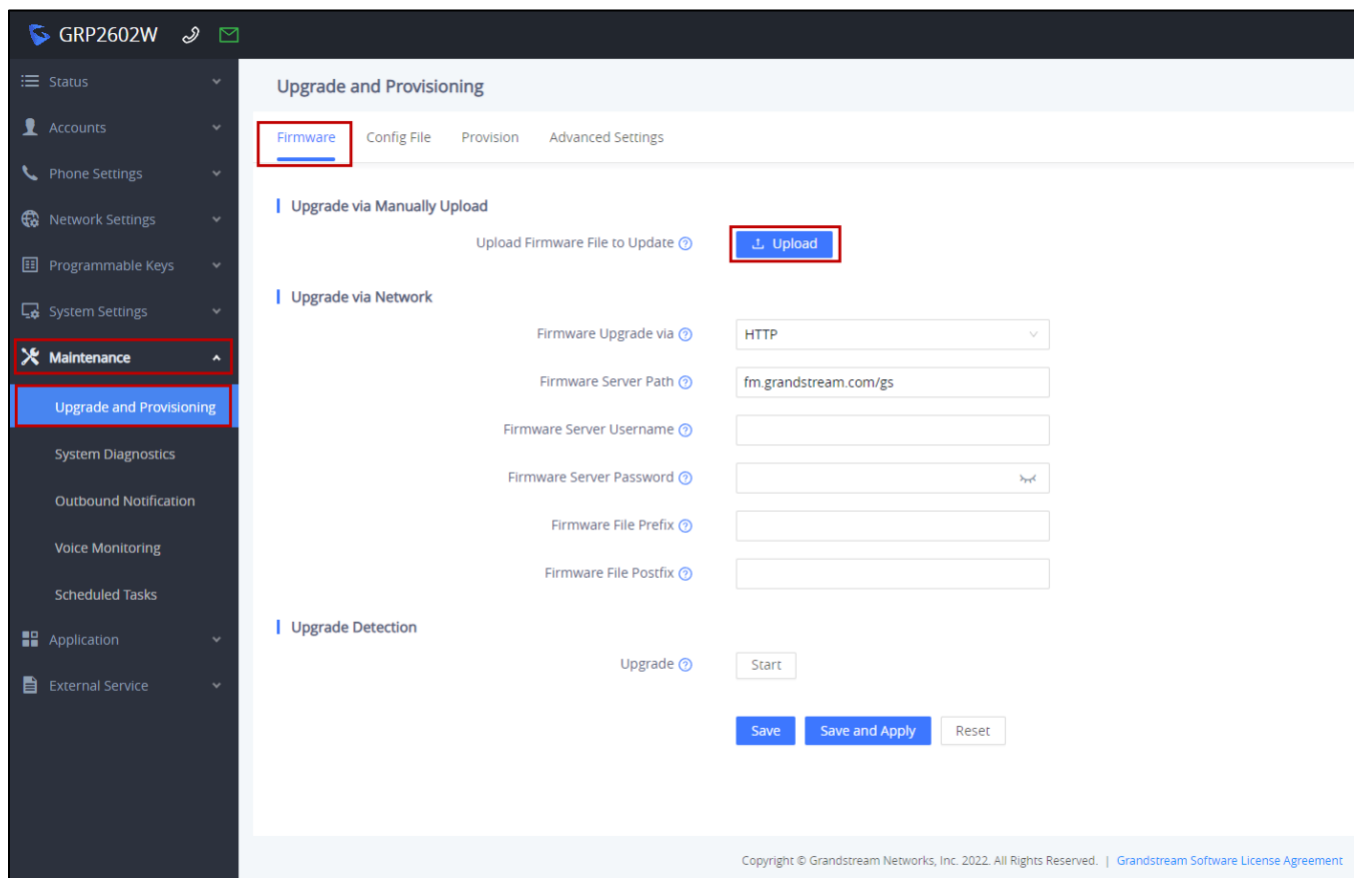


Figure 10 : Firmware Upgrade

3.4 Provisioning

The GRP2602W can be provisioned in two ways:

1. Provisioning through a HTTP Server
2. Provisioning through Web Interface

3.4.1 Provisioning through a HTTP server

1. In a HTTP Server, upload the below file in order for the phone to download the necessary configuration files and get provisioned. They are,

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- Zoom IOT Provisioning Template - 2 Accounts-->
<gs_provision version="1">
<config version="1">

<!-- Upgrading and Provisioning Settings -->
<!-- Firmware Upgrade Protocol. 0 - TFTP, 1 - HTTP, 2 - HTTPS -->
<P6767>1</P6767>
<!-- Config Upgrade Protocol. 0 - TFTP, 1 - HTTP, 2 - HTTPS -->
<P212>1</P212>
<!-- Firmware Server Path -->
<P192>http://172.XX.XX.XXX:90/Folder Path</P192>
```

```

<!-- Config Server Path -->
<P237>http://172. XX.XX.XXX:90/Folder Path</P237>

<!-- Syslog Server -->
<P207>172. XX.XX.XXX </P207>
<!-- Syslog Level. 0 - NONE, 1 - DEBUG, 2 - INFO, 3 - WARNING, 4 - ERROR. Default is 0 -->
<P208>1</P208>
<!-- Send SIP Log. 0 - No, 1 - Yes. Default is 0 -->
<P1387>1</P1387>

<!-- Use Random Port. 0 - No, 1 - Yes. Default is 1 -->
<P78>0</P78>

<!-- Account Settings -->

<!-- Account 1 -->
<!-- Account Active (In Use). 0 - No, 1 - Yes -->
<P271>1</P271>
<!-- Account Name. -->
<P270>7FC48</P270>
<!-- SIP User ID -->
<P35>25813XXXXXXXXXXXXX313</P35>
<!-- Authenticate ID -->
<P36>3575XXXXXX08</P36>
<!-- Authenticate password -->
<P34>f4XXXXBo</P34>
<!-- Display Name (John Doe) -->
<P3>8023</P3>
<!-- SIP Server -->
<P47>7000766863.zoom.us</P47>
<!-- Outbound Proxy -->
<P48>us01sip0h.sc.zoom.us:5091</P48>
<!-- DNS Mode. 0 - A Record, 1 - SRV, 2 - NAPTR/SRV. -->
<P103>1</P103>
<!-- DNS SRV Failover Mode. 0 - Default, 1 - Saved one until DNS TTL, 2 - Saved one until no response, 3 -
Failback follows failback expiration timer. -->
<P26040>2</P26040>
<!-- SIP Registration. 0 - No, 1 - Yes -->
<P31>1</P31>
<!-- Register Expiration (in minutes. default 1 hour, max 45 days) -->
<P32>60</P32>
<!-- SIP Transport. 0 - UDP, 1 - TCP, 2 - TLS/TCP. Default is 0-->
<P130>2</P130>
<!-- SRTP Mode. 0 - Disabled, 1 - Enabled but not forced, 2 - Enabled and forced, 3 - Optional. Default is 0 -->
<P183>2</P183>
<!-- SRTP Key Length. 0 - AES 128&256 bit, 1 - AES 128 bit, 2 - AES 256 bit. Default is 0 -->
<P2383>0</P2383>
<!-- Enable Session Timer. 0 - No, 1 - Yes. Default is 0 -->
<P2395>1</P2395>

```

```

<!-- Caller ID Display. 0 - Auto, 1 - Disabled, 2 - From Header. Default is 2 -->
<P2324>0</P2324>
<!-- NAT Traversal. 0 - No, 1 - STUN, 2 - keep alive, 3 - UPnP, 4 - Auto, 5 - VPN. Default is 4 -->
<P52>0</P52>
<!-- Enable Local Call Features. 0 - No, 1 - Yes -->
<P191>1</P191>
<!-- Special Feature. 137 - Zoom -->
<P198>137</P198>

</config>
</gs_provision>

```

2. From Web UI of phone, Navigate to **Maintenance** -> **Upgrade and Provisioning**.
3. Select **Advanced Settings** tab: Click **Start** to Factory Reset.

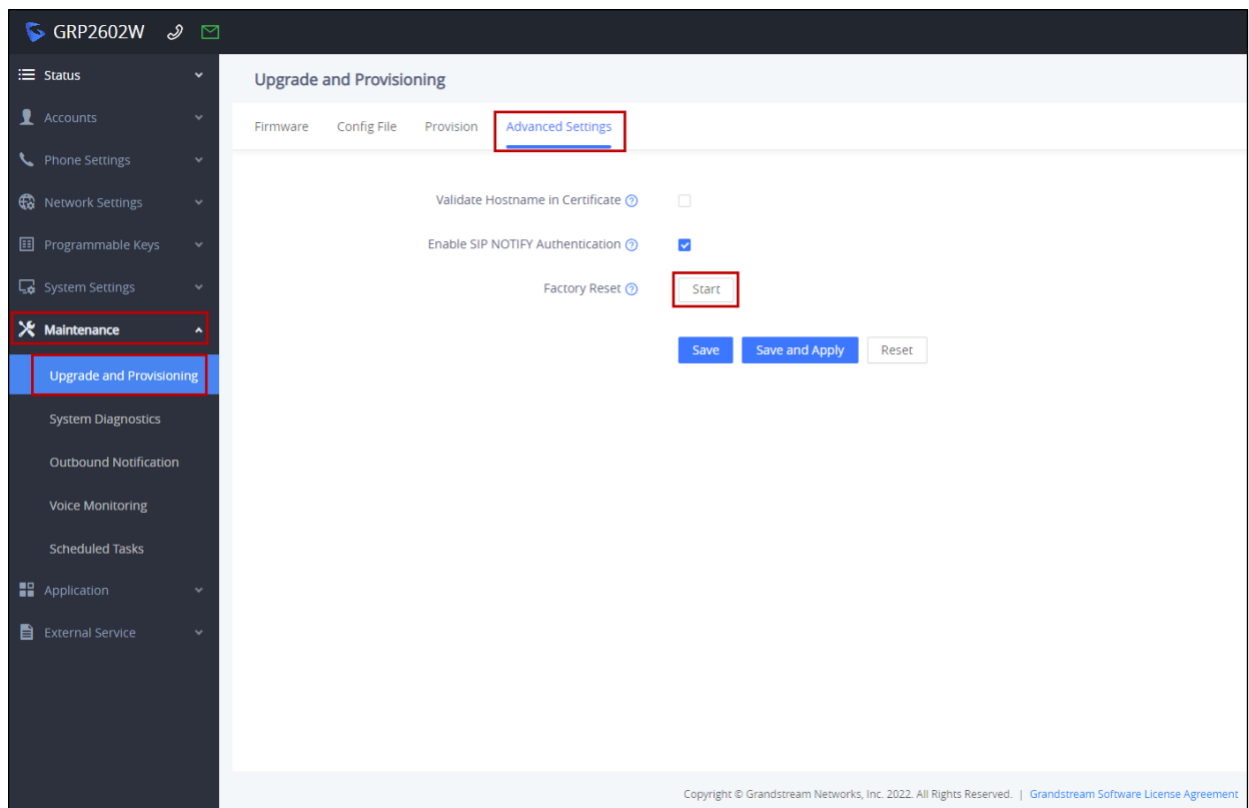


Figure 11 : Factory reset

4. Give **OK** to confirm to factory reset the phone.



Figure 12 : Factory reset - (Cont.)

- Once the Phone reboots, enter the phone's IP address in the browser's address bar (**https://ip-address**) and enter, input phone's **username** and enter the **password** displayed in the phone's LCD screen and click **Login**.

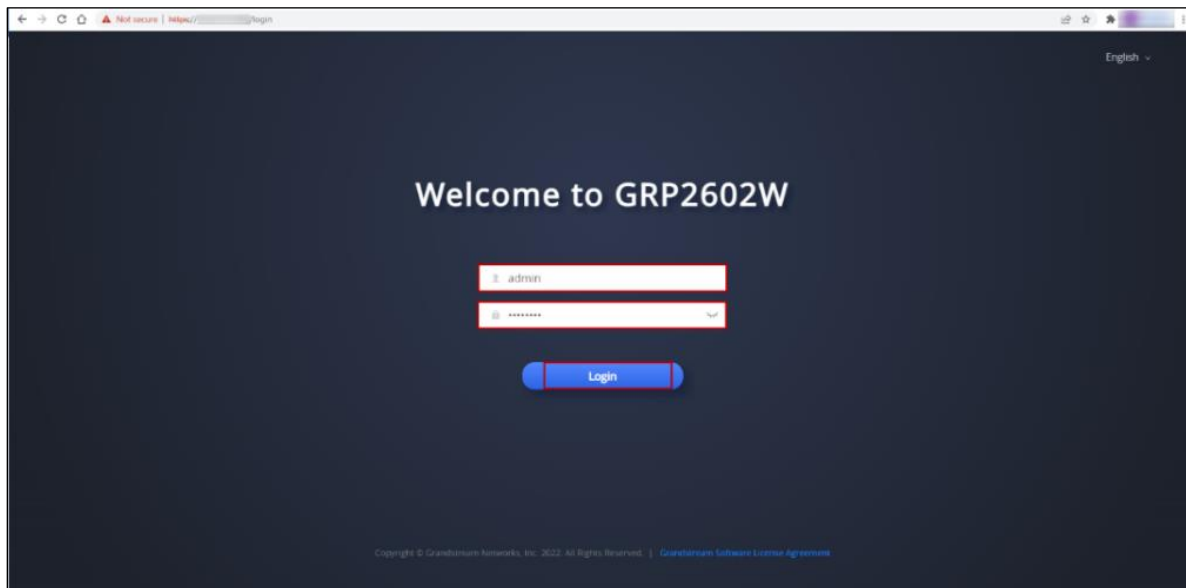


Figure 13 : Login details

- Phone prompts to update with the **New Password** instead of Default password. Enter the **New Password** and **Confirm Password**. Click **Modify**.

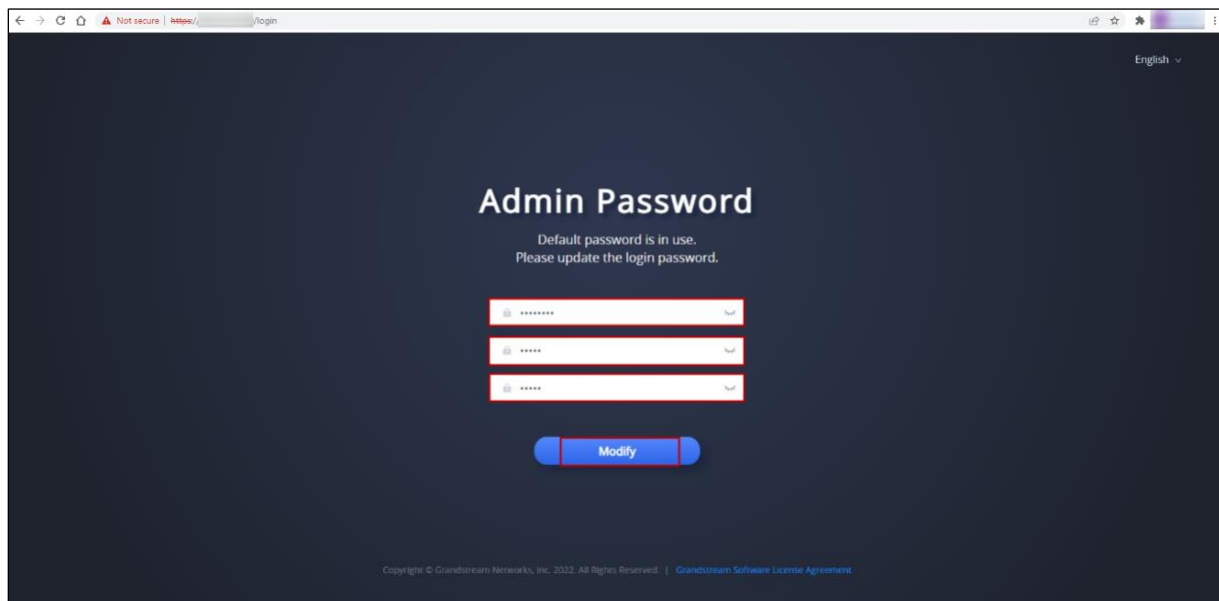


Figure 14 : Login details - (Cont.)

- From the Web UI of phone, Navigate to **Maintenance -> Upgrade and Provisioning**.
- Select **Config File** tab. Under **Configure via Network**: Set **HTTP** in Config Upgrade via and enter (**http://ipaddress:90/Folder Path**) in Config Server Path.
- Click **Save and Apply**.

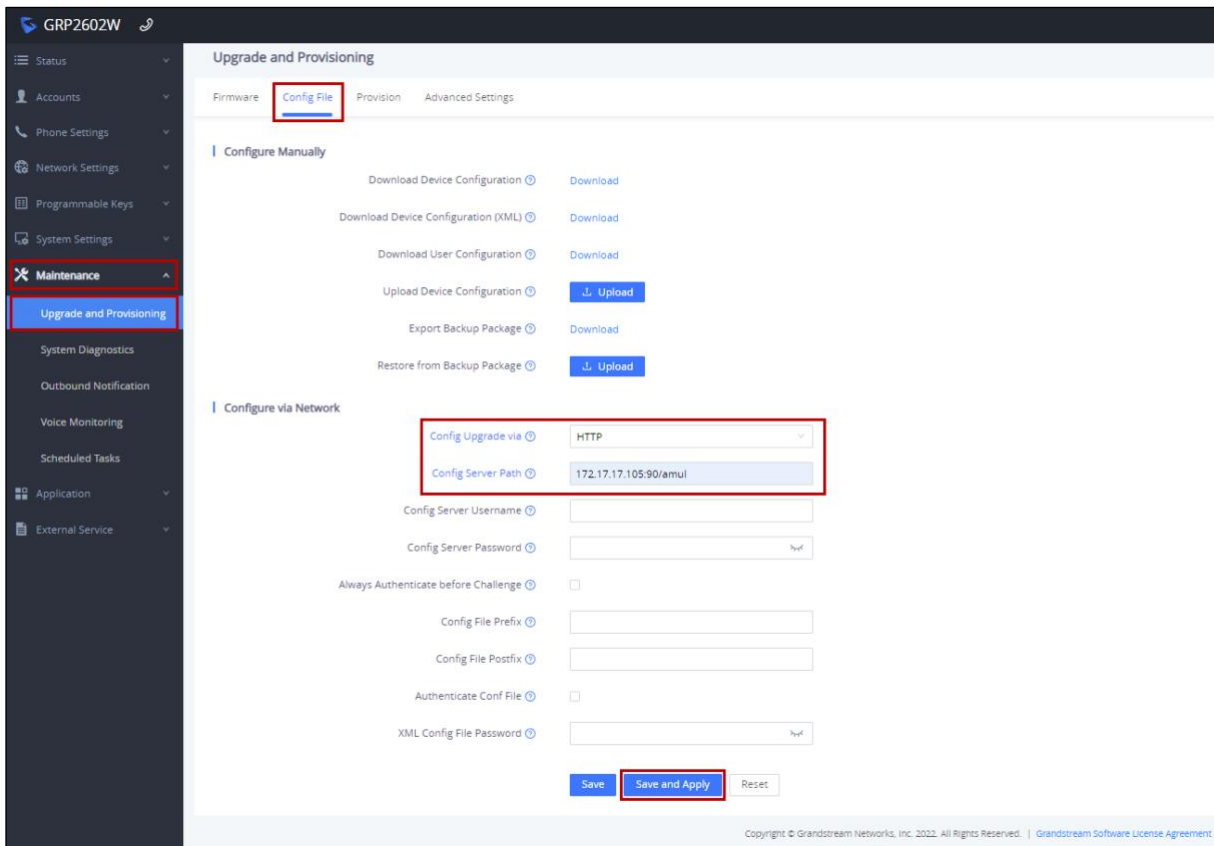


Figure 15 : Provisioning through a HTTP server

10. After the phone restarts, the phone will start downloading the necessary configuration files from the HTTP server and get provisioned.
11. Navigate to **Status -> Account Status** to verify the provision status.

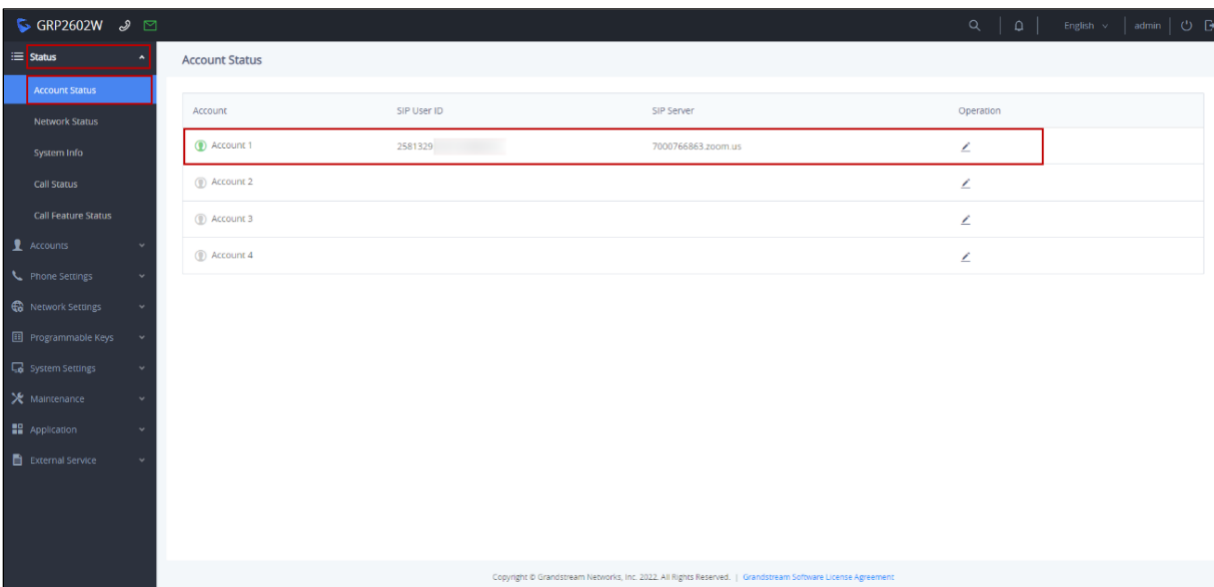


Figure 16 : Account Status

3.4.2 Provisioning through Phone's Web Interface

This section explains how the device can be registered in Zoom portal using SIP Account details that is populated in Zoom portal (explained earlier in [2. Add SIP Devices -> Provisioning](#)).

- GRP2602W configuration is done via web interface, enter the phone's IP address in the browser's address bar (https://ip-address) and enter, input phone's username and password and click Login.
- Navigate to **Accounts -> Accounts -> Account 1**.
- Under Account 1 -> **General Settings**. Ensure the below parameters are set.
 1. Account Active: **Check**
 2. Account Name: Enter Account Name of your choice. Here, **7FC4A** is used
 3. SIP Server: **7000766863.zoom.us** (Provided by Zoom)
 4. Outbound Proxy: **us01sip0h.sc.zoom.us:5091** (Provided by Zoom)
 5. SIP User ID: **Provide the SIP User ID** (from Zoom provisioning)
 6. SIP Authentication ID: **Provide the SIP Authentication ID** (from Zoom provisioning)
 7. SIP Authentication Password: **Provide the SIP Authentication Password** (from Zoom provisioning)
 8. Name: Enter the Name of your choice. Here, **8022** is used
 9. DNS Mode: **SRV**
 10. DNS SRV Failover Mode: **Saved one until no response**
 11. NAT Traversal: **No**
 12. Click **Save and Apply**

The screenshot displays the GRP2602W web interface for configuring Account 1. The left sidebar shows the navigation menu with 'Accounts' selected. The main area is titled 'Account Register' and contains two sections: 'Account Register' and 'Network Settings'. The 'Account Register' section includes fields for Account Active (checked), Account Name (7FC4A), SIP Server (7000766863.zoom.us), Secondary SIP Server, Outbound Proxy (us01sip0h.sc.zoom.us:5091), Secondary Outbound Proxy, SIP User ID (25813295167141860313), SIP Authentication ID (357573630608), SIP Authentication Password (masked), Name (8022), Tel URI (Disabled), Voicemail Access Number, BLF Server, Account Display (Username), and UCM User Password (masked). The 'Network Settings' section includes fields for DNS Mode (SRV), Maximum Number of SIP Request Retries (4), DNS SRV Failover Mode (Saved one until no response), Register Before DNS SRV Fail-over (unchecked), NAT Traversal (No), Support Report (RFC 3581) (checked), Proxy-Require (unchecked), and Use SBC (unchecked). At the bottom, there are buttons for Save, Save and Apply, and Reset. The footer contains copyright information for Grandstream Networks, Inc. 2022.

Figure 17 : General Settings

- Under Account 1 -> **SIP Settings**. Ensure the below parameters are set.
 1. SIP Registration: **Checked**
 2. Register Expiration: **60**
 3. SIP Transport: **TLS/TCP**
 4. Enable Session Timer: **Checked**
 5. Click **Save and Apply**

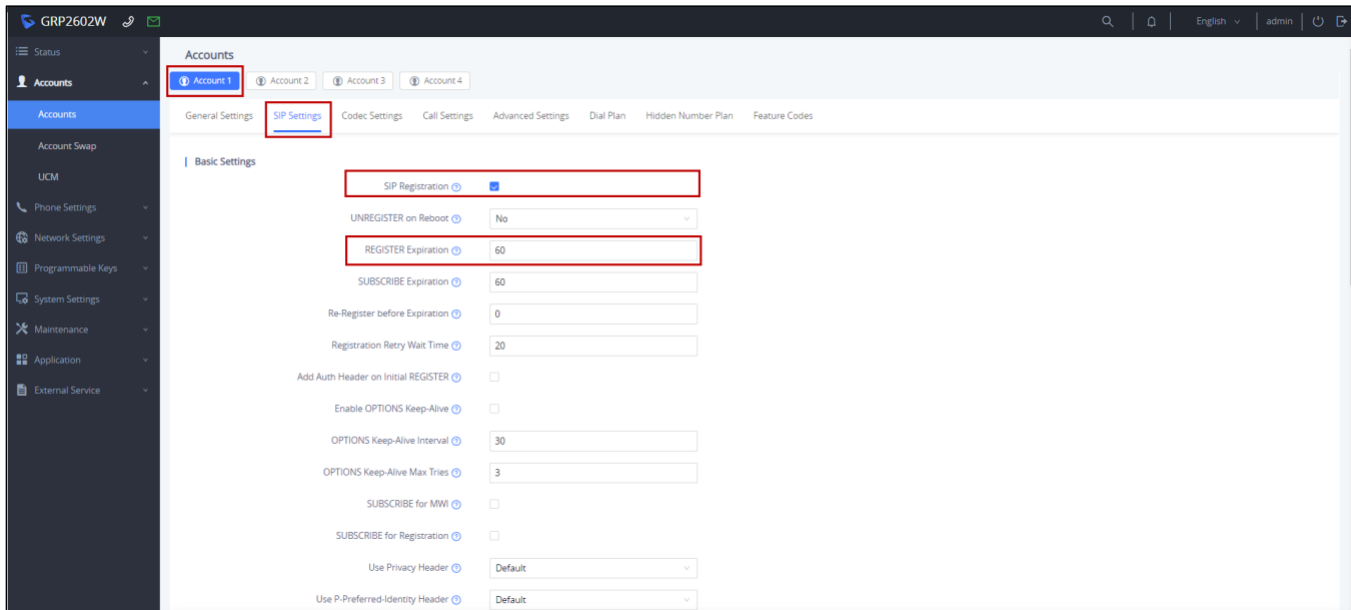


Figure 18 : SIP Settings

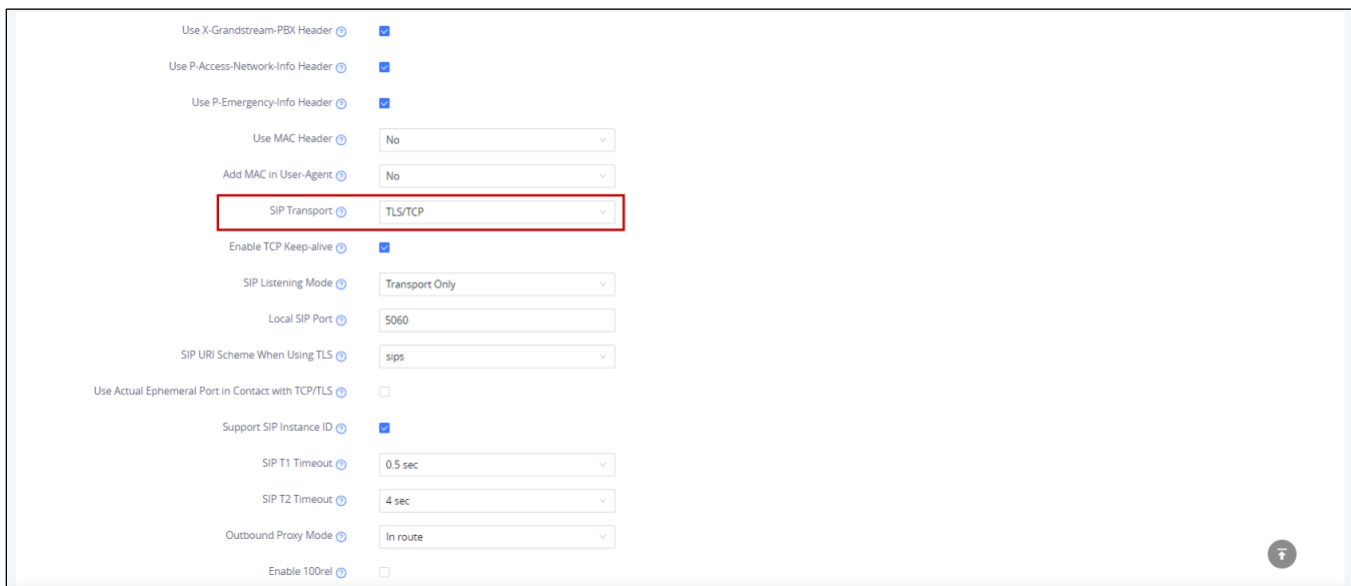


Figure 19 : SIP Settings - (Cont.)

Use Route Set In NOTIFY (Follow RFC 6665) ☒

Session Timer

Enable Session Timer ☒

Session Expiration

Min-SE

Caller Request Timer ☐

Callee Request Timer ☐

Force Timer ☐

UAC Specify Refresher

UAS Specify Refresher

Force INVITE ☐

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Figure 20 : SIP Settings - (Cont.)

- Under Account 1 -> **Codec Settings**. Ensure the below parameters are set.
 1. SRTP Mode: **Enabled and forced**
 2. SRTP Key Length: **AES 128&256 bit**
 3. Click **Save and Apply**.

GRP2602W

Accounts

Account 1 Account 2 Account 3 Account 4

General Settings SIP Settings **Codec Settings** Call Settings Advanced Settings Dial Plan Hidden Number Plan Feature Codes

Enable Audio RED with FEC ☒

Audio FEC Payload Type

Audio RED Payload Type

Silence Suppression ☐

Jitter Buffer Type

Jitter Buffer Length

Voice Frames per TX

G.723 Rate

RTP Settings

SRTP Mode

SRTP Key Length

Crypto Life Time ☒

RTCP Mode

RTCP Keep-Alive method

RTP Keep-Alive method

VQ RTPC-XR Collector Name

Figure 21: Codec Settings

- Under Account 1 -> **Call Settings**. Ensure the below parameters are set.
 1. Caller ID Display: **Auto**
 2. Click **Save and Apply**.

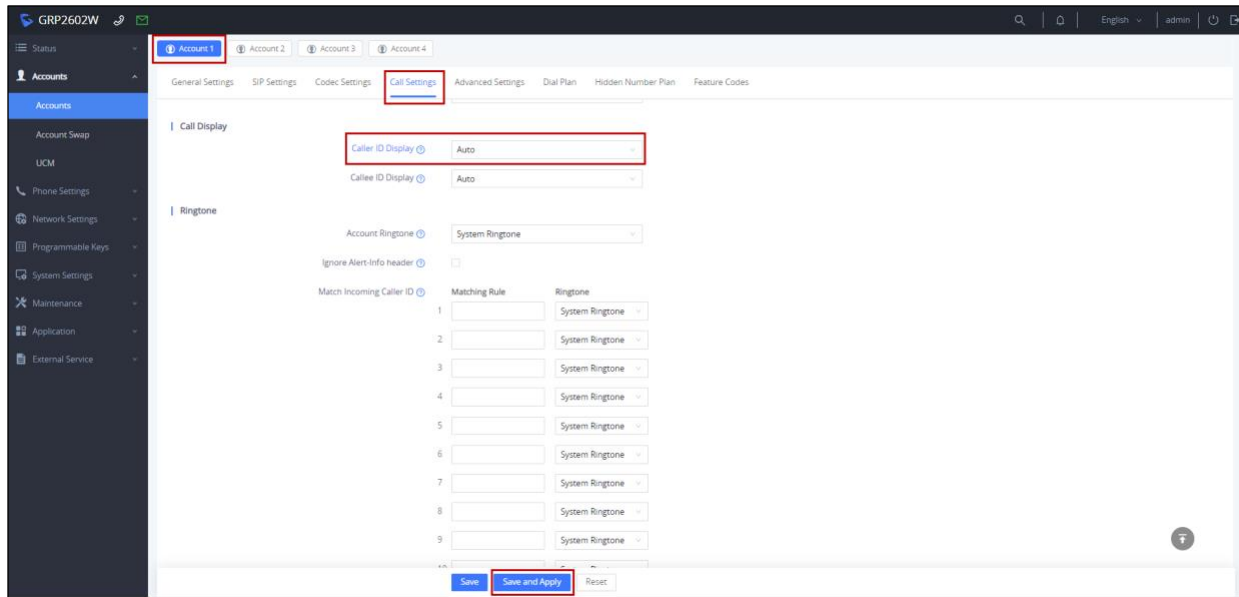


Figure 22: Call Settings

- Under Account 1 -> **Advanced Settings**. Ensure the below parameters are set.
 1. Special Feature: **Zoom**
 2. Click **Save and Apply**.

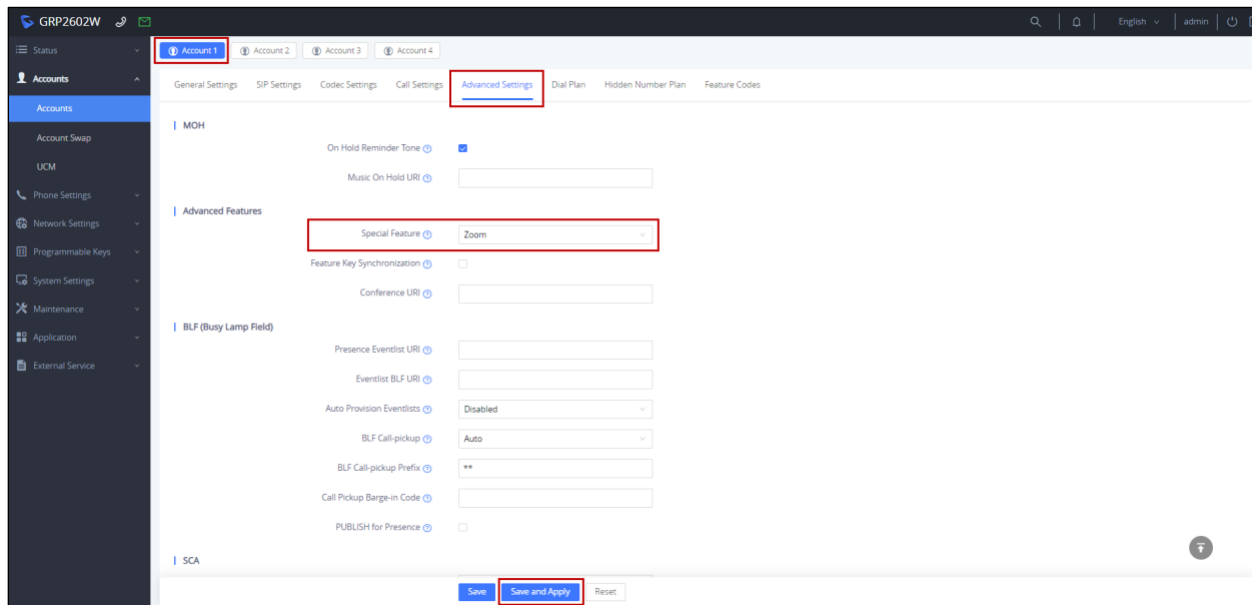


Figure 23: Advanced Settings

- Under Account 1 -> **Feature Codes**. Ensure the below parameters are set.
 1. Enable Local Call Features: **Yes**
 2. Click **Save and Apply**.

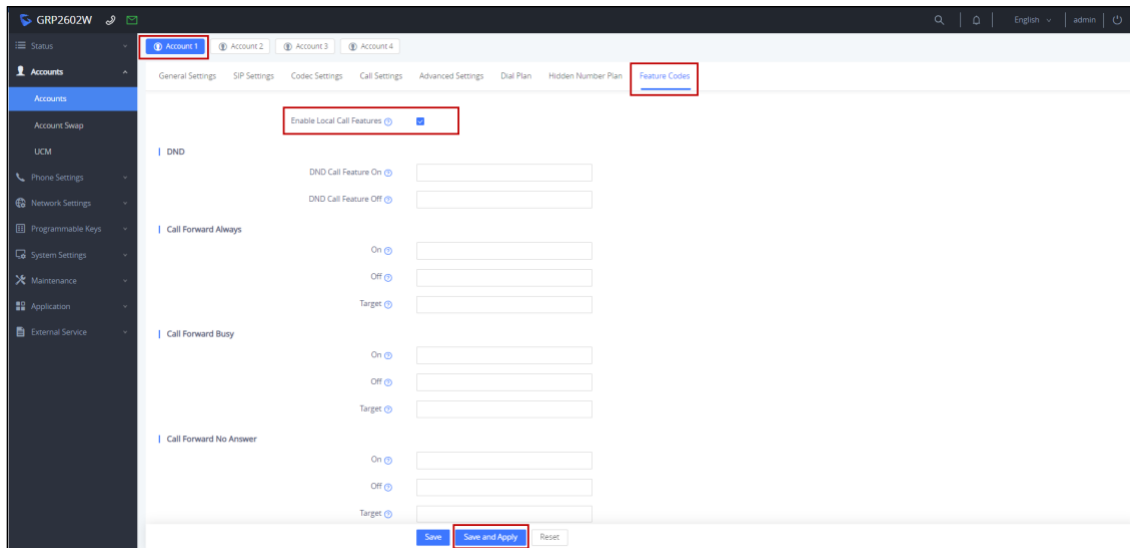


Figure 24: Feature Codes

- Navigate to **Phone Settings** -> **General Settings**. Under **Basic Settings**: Use Random Port is **Unchecked** (By Default this would be Checked).

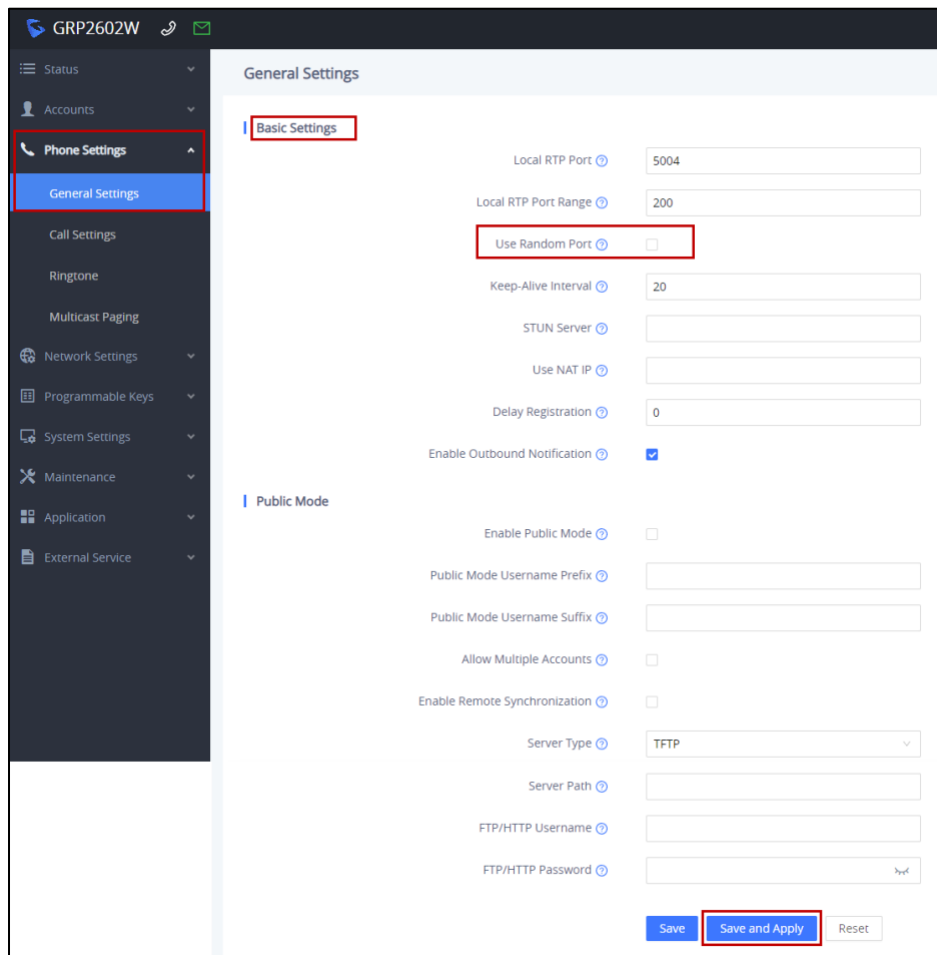


Figure 25: Phone - General Settings

3.4.3 Apply trusted certificates

In order to register the phone to zoom portal, ensure that the following certificates are uploaded in the phone successfully.

- From phone's Web UI, Navigate to **System Settings** -> **Security Settings**.
- Select **Trusted CA Certificates** tab.
- Click **Upload** and upload the following certificates: DigiCertGlobalRootCA.crt.pem, DigiCertGlobalRootG2.crt.pem, DigiCertGlobalRootG3.crt.pem, sbc_ca.pem.

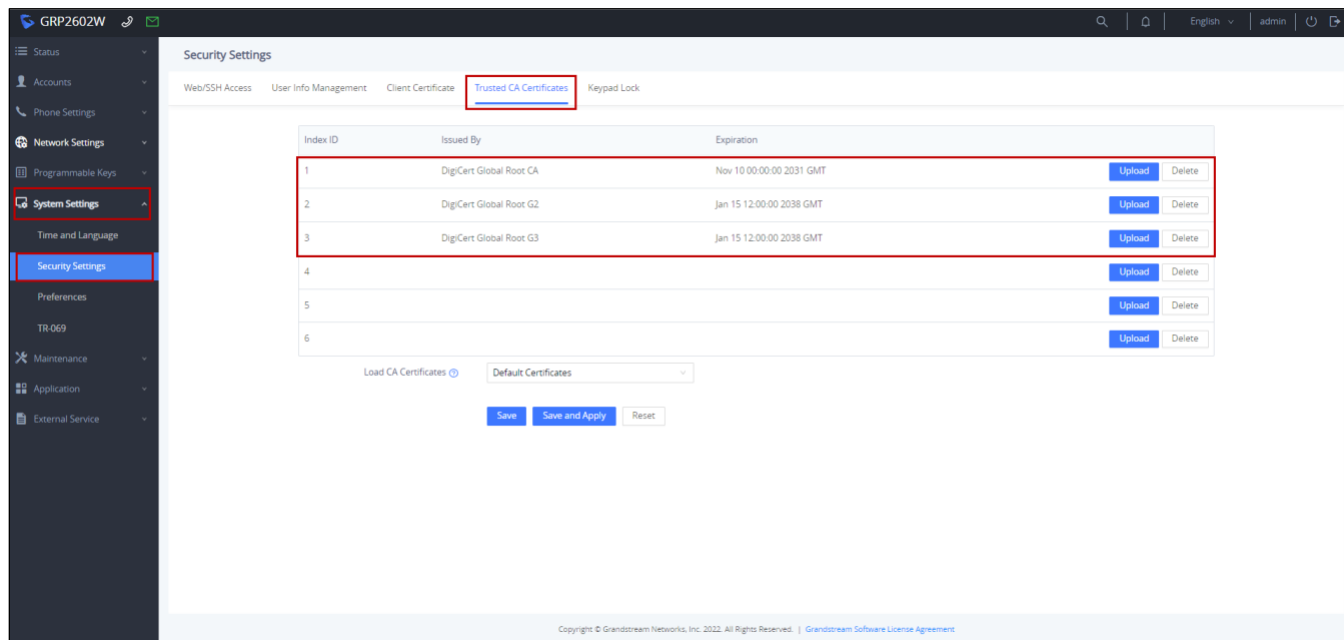


Figure 26: Trusted CA Certificates